

NOTE: 44.PDF AND 45.PDF were not able to be translated into WORD; they are to be read first: 44.pdf, then 45.pdf .

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Are the concepts of metacognition and executive processes good and are they necessary at all?

If one had a better assessment of animals' knowledge/representation/memory/experience would the concepts of metacognition and executive processes be necessary at all? Are those valid concepts?

Asked in project:

Human Ethology and Development (Ethogram Theory)

My own answer would be 'no' on both counts: not necessary and not good. You get a full sense of this if you read the 3 main papers (References) associated with the "Human Ethology and Development" Project:

<https://www.researchgate.net/project/Human-Ethology-and-Development>

Dear

Actually, I do not think there are good definitions of meta-cognition and executive processes; they appeared (historically) and appear now when the people trying to model cognition need something like this for their model (in good part, given the nature and constraints of the model); it has little to do with the actual behavior at hand. No particular clear, general behavior is behind the generation of the concept and it does not appear to be necessary in an account of behavior; it is quiet conceivable that just better assessment of the subject's knowledge, representation, memory, and experience could show the needed imagery or consciousness to yield the [(let's call it ->)] the further thinking [(<- to leave it more open)] of the subject.

P.S. The 'needed imagery or consciousness' involved (in the last sentence of my last reply) would involve some sort of additional information-seeking (broadly conceived), including more use of perceptual processes or of memory - ALL ultimately based in present or past experience and development (including identified, or yet-to- be-identified species-typical perception/categorization -- all, too, at some time related to overt behavior). This, friends, is the ultimate empiricism of ethology (where there is much inductive work involved before one develops their hypothetical-deductive systems). Also, we can fully end the dualism of 'innate' and 'learned', with all significant behavior always very, very likely involving BOTH, AT THE SAME TIME (if we just get 'real' about things).

One "upshot" of what I am talking about here (in this present post), would be the total realization of an empiricist and scientist that there's nothing "abstract" in way often imagined - rather ALL skills are developed with/via key overt behavioral aspects.

(Unfortunately, meta-cognition and executive processes involve a disconnect with the organism totally consistent with a view of a sort of truly arbitrary abstraction and a kind of abstraction which is fictional -- and, actually, the 'hypothesized' executive processes related to "information processing theories" necessitate such a view.)

Another quick P.S.: All explanatory perspectives must conform to the established limitations of working memory (and have conscious and deliberate development occur there, by its increments). Outside of the

episodic memory context and other well established contexts/procedures, working memory basically is like short-term memory, limited to 7 + or - 2 "chunks". AND, in an important way: All that has to be done has to be done there; if too much is necessary and is new one can expect some innate guidance, which (in my view) can be as minimal as perceptual biases (conceived broadly and conforming to major necessary patterns 'seen').

One thing that may limit the ability to test/measure "meta-cognition" may be, except for social purposes, any such things (as a "meta" anything) may typically not exist. Rather, in most real life, usually, you may know what you know and how to apply it without having to "put it together in your mind" routinely; and, most of the "putting it together in one's mind" may occur as a cognitive and behavioral response to circumstances and only therein be (in any sense) an express matter -- and not much expressly processed (except in very small bits, incrementally **), even when "abstract".

I am not the only one who basically "doesn't believe in" meta-cognition OR any of the "meta"s. I certainly do not see any justification for this being a central process operating in thinking, generally (I also don't "buy" the need for a "central executive" -- that is the homunculus, in my view). The "central executive" may simply be: life (the way the world has become 'structured' for you, or (okay) the way you have structured it (you can experience a lot and affect a lot of experience, even when processing rather little at a time -- and end up with richly structured experience)).

** FOOTNOTE: This may be the "oh, that, WOW!" experience at times, where things COME TOGETHER, rather than YOU (or the Subject OR THE ORGANISM) putting it together -- the latter is the homunculus (the person-within-the-person).

Have you realized and appreciated the likely problematic nature of the continued extreme dualism of 'learning' and 'innate factors'?

Have you realized and appreciated the likely problematic nature of the continued extreme dualism of 'learning' and innate factors? What if (as can be argued), in most significant instances it is almost always BOTH at the same time? (If it is usually and importantly BOTH at the same time, the characterization as "extreme" holds true.)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Let me say just a bit:

All explanatory perspectives must conform to the established limitations of working memory (and have

conscious and deliberate development occur there, by its increments). Outside of the episodic memory context and other well established contexts/procedures, working memory basically is like short-term memory, limited to 7 + or - 2 "chunks". AND, in an important way: All that has to be done has to be done there; if too much is necessary and is new one can expect some innate guidance, which (in my view) can be as minimal as perceptual biases (conceived broadly and conforming to major necessary patterns 'seen').

Only my developmental psychology theory (ethology) credibly integrates 'innate factors' & 'learning' so BOTH simultaneously have effect (see all my writings available via researchgate.net). The BEST other dev. psyc. theories do is talk about 'learning' involved & talk about 'innate' involved & do so separately, back & forth repeatedly. PLUS: My ethological cognitive-developmental psyc. THEORY (innate/learned) does it with absolutely the most empirical (grounded-in-observable) approach possible. It only recently has become totally possible to verify the hypotheses.

Also see: https://www.researchgate.net/post/Have_you_seen_my_papers_yet_seen_the_relevance_of_them (posted in "Theory of representational mechanism" Project)

And, perhaps also see: https://www.researchgate.net/post/What_could_be_the_identifiable-and-definable_components_of_Operational_AI (under "Operational System of Artificial Intelligence" Project)

Should it soon become clear that the term 'ethology' came into much disuse (authors opting for alternative terms) FOR NO GOOD REASONS?

My answer is a hardy YES. Instead of striving to retain the use of the word, 'ethology', pressures (unrelated to any deficiency in what this term means/meant) 'forced' ethologists themselves to become "evolutionary psychologists" or speak about such things as fields of 'evolutionary cognition'. Because of giving into nothing of value, the word 'ethology' declined in use, especially during the last 10 years. [Heck, if you search Google, you are just about as likely to come across the Ethology company, having NOTHING to do with ethology, OR you may well come across the gospel singing group, calling itself "Ethology". I will say it sharply: FOR SHAME!]

Now, let's get back to ethology (BIG TIME)! [If you can do ethology -- esp. defining behaviors in terms of surrounding behaviors (or what are likely such) -- then you will be coming back to ethology, because you will be

DOING ethology] :

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

(Soon, like the classical ethologists, you may realize that ONLY the SUBJECT defines behavior -- never YOU, EVER -- that is: you will become an empiricist, in a rational, realistic way.)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Some have said ethology neglects or greatly de-emphasizes learning. In all my years of reading and studying research in ethology, I never, ever saw that. What I did see is that learning was always contextualized, within a reliable, likely valid context, related to innate behavior patterns. (I do find the term 'fixed action pattern' unfortunate, because there is no reason it need be fully fixed; in my view that sort of thing and learning are hand-in-hand SIMULTANEOUSLY. Yes, there is some invariant aspects of innate behavior patterns, but NOT the whole pattern itself.)

Given the needs of the field of cognitive psychology, ethology very much needs a revival.

Would it take quite little extra "seeing" or "looking around" in real-time to get the information needed for the next level of conceptualization?

Have you ever considered that given a certain level of conceptualization (aka 'abstraction'), you have already: it would take quite little extra "seeing" or "looking around" in real-time to get the information needed for the next level of conceptualization? [If this has not occurred to you, just think about apes coming (during their ontogeny) to different levels of social understanding ("of the social structure"). It is my perspective, that in well-defined terms for "levels of abstraction", apes have between 3.5 and 4.5 out of our five levels! (You must separate flexibility of a behavior-use from the matter of its basic complexity and basic nature; as I have said before, much of what humans do is NOT complicated, but rather using abilities that have become more "free floating" (i.e. flexibly used).) I challenge someone with some courage and a bit of insight and eye-tracking

technology to study this -- doesn't it seem worthwhile? It is both plausible and basic and important. Will it be AI or a psychologist, etc?.; hopefully it will be a behavioral scientist, because it would be quite embarrassing to have computer models inform cognitive 'scientists' yet again, like in the "bad old days" of information-processing theories.]

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Have you seen my papers yet & seen the relevance of them?

This is pieced together from about a dozen replies to questions, where just parts of this grand perspective were presented at a time. I now try to piece them together to give you the full perspective: (Most of this was originally presented to artificial intelligence people, and you can see that in some of the writing.):

If I was to try to make an AI human, which at its core involves a complete understanding of REPRESENTATION and its development, part of what I would model is all the basic capacities: basically all of the several types of memory, at their most developed levels and at their lower levels, but call upon their use only at the level of conceptualization where they are needed or MAY be active. Specifically, the basic cognitive-related capacities of the human -- other than the emotions (which are simpler and easier to model, and not addressed here) are: (1) short-term memory (STM)(pretty much limited to thinking about 7 + or - 2 "chunks"); (2) working/active memory (expressly used, i.e. deliberate): this is pretty much the same thing as STM, but with the background/context of the thought coming from long-term memory: being imagery, etc. (the context which is not deliberate) including human spacial representation, episodic representation, personal memory (sub-part of episodic), sequencing facilitator (which may be considered part of episodic, and includes the marking of time and basis of number understanding), declarative memory, procedural memory and auto-rehearsal loops (e.g. a major one for rehearsing language to remember). The episodic memory is also a buffer to what is recalled and activated from long-term memory (i.e. declarative and procedural memory and the other capacities). There is also the first brief aspect of memory, known as "sensory store" (holds a lot but very briefly). [I will leave AI programmers to look up all the terms, like episodic declarative and procedural , since decent definitions exist. Model all these, in their proper relationship (which is not hard because they become active as appropriately triggered).] Do NOT use any of the "meta" concepts in the literature (meta-cognition, central executive, executive functioning/processing, "mind reading", "future seeing" (aka "time travel" aka special forward thinking), theory of mind, etc.), since these are both artificial and unnecessary concepts (and basically involve a 'homunculus' -- i.e. a man within the man). More regarding the "metas":

It is not necessary to postulate such things and they can easily be explained by "more of the same". Let me tell you what I mean by "more of the same": once you understand the thinking

(conceptual/representation/memory) process <-- just more of that, with more "information-seeking" as a result, accounts for all the supposed products of these metas, etc.

This does not mean we do not occasionally talk to ourselves or that we do not occasionally think about our thinking -- just that this is no kind of over-arching control system needed or likely.

Again, all those meta-type concepts are basically a 'homunculus' (a man within the man) and thus clearly a fiction. Let me make a Buddhist-type statement from which you might find a bit of inspiration, here: "To know that you know things is simply part of knowing things; to control what you do is simply part of doing." This kills the 'homunculus'.

The main thing that is left is understanding the basic and similar nature of the objects of perception (and attention) which are the foundations for each of the 5 levels of conceptualization (aka representation AKA abstraction): each which is more than what was before AND uses the well-established memory (LTM) of the key or core of the previous stage of conceptual development as its units. (The first stage of conceptual development has a totally sensori-motor basis.) The nice thing about these stages (and the associated levels of conceptualization) is that all of them continue to be able to operate, even after the more abstract levels have developed (e.g. it has even been recently shown that physics professors when under great mental load irrationally fall back on earlier types of representation just like lay-people, which results in errors). (Levels of representation, levels of concepts, and levels of abstraction are pretty much the same thing.) The upshot of this is that you can try an instantiation of a higher level of conceptualization and, if that is not appropriate or does not work, fall down to the next lowest, or the next lowest again ... etc. Also it might be good to have your AI machine work up from each low stage to the next higher, etc. to see what is most properly applied.

Noting a limited capacity is very important; except for the very significant "background" contextualizing memory stuff: working/active memory is limited to 7 ± 2 "chunks" (in that way, much like short term memory (STM)).

The one big thing I have yet not told you is the differential nature of the beginning of each level of concepts created -- from the perceptual (perceptual/attentional) shifts, which are innate action patterns, as are the emotions. The differential nature of the 5 levels of things (concepts, "chunks") created are outlined in my paper, "A Human Ethogram ..." (available on researchgate.net). The contents of the "capacities" develop with these.

One thing that makes this all hard to understand is that you have to "go against" things which have you been taught to believe (but were never proven and are just Western or natural false beliefs and misconstructions):

- 1) It is FALSE that all that is innate is present at birth. It is very likely that significant innate action patterns establishing the different levels of conceptualization become active, significantly more active and/or properly active at ages: 3mo., 2yr, 4yr, 7-8 years, and 12 years (5 stages)
- 2) We are taught: The more complex the organism, the less innate aspects and the more learning. This is FALSE (and again is in no way proven and has no basis in fact). The correct perspective is: all significant behavioral change (esp. clear universal "shifts") involve both innate and learning AT THE VERY SAME TIME (literally). (1) That which is established as context (see above) had significant innate action patterns involved in the execution and development. And, (2) each new big (universal) shift also involves innate action patterns (these, again, in terms of perceptual (perceptual/attentional) shifts): amenable to discovery via the new eye tracking technology (and, of course this is true of EACH stage). Both (1) and (2) are with "learning".

You do now have to work in the emotional responding, which affects motivation (and thus a lot else). The basic patterns at work which are there is well-described in the literature. (The one thing not always appreciated is that later emotions often develop from earlier emotions via interaction of the earlier ones with cognitive development. (Thus, for instance, there is a progression from some distress, to shame, to guilt -- all just distress transformed as related to concepts).)

AND:

Get very little side tracked by social relationships and social cognition (these are much more instances of application of the principles you will find rather than the major determiners); same for language: conceptual development is much less reliant on language than language is on cognitive development -- and much language usage, as it is actually used functionally is dependent on the cognitive developments which occur first.

Social cognition, to me, is just an instance(s) of the use of the same sort of conceptual system that develops stage-wise in understanding the physical world -- ultimately related to the 'perceptual shifts' (perceptual/attentional shifts) in stages of development. Speaking of the cognitive stages and how they manifest themselves, unlike emotions, these are not well understood.

In evolutionary terms we cannot underestimate the importance of social behavior and the social hierarchy:

It appears there is no good theory for an evolutionary precursor to our having progressively developing patterns in perception/attention and then thought leading to conceptualization OTHER than such being very much evolutionary founded in patterns our fore-runners SAW in their hierarchical social structure. I see other conceptual ("abstraction") abilities as almost literally the same thing -- but very "free floating", i.e. flexibly applied to the physical world (resulting in great thinking and cooperative advantages).

In addition to the abilities to acquire and apply knowledge (structured information) (basically a matter of memory ("the mind") AND things that are newly developing, perhaps in an easy manner), there is also the matter of inhibiting action to "consider what to do" and thus have a new view (learned/developed) and perhaps a new overt response. Thus, much doing appears to be not doing (at least not doing other things that would be and have been readily available in one's repertoire). This kind of ability to inhibit [normal OR other alternative] actions must be "part of the story" and thus somehow explained. Inhibition of at least certain types is much related to intelligence.

Unless you conceived of some actions as not-doing, which is fine and good (properly contextualized and properly motivated), this may be something that may need more prominence in your theory.

Inhibition helps bring the questions of WHAT is motivated (a least with respect to some new, different or complex things) into focus (and HOW that has come to happen) -- matters of big interest (new motivated discriminations, so you do not respond as usual and DO 'see' new things or things anew).

Work with people that know physiological _functional_ brain science areas (including those who use and study the new kinds of functional (fMRI) scans) and who ALSO know behavior to flush out the STM, active, and LTM (with its many aspects), and sensory store understandings. Anyway, these particular brain and behavior science people are very careful and only give well-justified conclusions. And, work with people using the new eye-tracking technology to research cognitive development. Outside of that, hopefully my 3 papers plus the work you have already done so much of and done so well will suffice.

Unless a researcher establishes the use of guiding innate action patterns during a number of stages of coming-to-be AND realizes and implements learning associated with past OR past and present innate guiding patterns, they will be doomed to failure.

Knowledge of the basic memory processes is not hard to get and is very necessary (these are the basic capacities which are tools the developments I just described use -- and which develop "to different 'levels'" BASED ON such stages and standard learning). Several of the aspects of learning are aided by simple, basic functional (helping) features of these basic memory capacities (e.g. auto-repetition loops), and while they are always operating in similar ways, their content (developing "chunks") are qualitatively different at each stage.

Outside of the 2 unique characteristics of my view and my view of the basic capacities (very much shared with others), I posit then: within those contexts only associative (/dissociative) learning -- basically the type of learning seen for decades by behaviorists, but experimented with foolishly BY them (looking for general patterns and laws based on on their "rewards", given the organism (as they imagined him to be), and given their "schedules of reinforcement" -- thought to be meaningful per se).

P.S. The in-stages "perceptual shifts" (perceptual/attentional) are discovered longitudinally using the new eye-tracking technology. You can see how this is just finding things as they are -- pure discovery, very much inductive. And, the changes to the basic capacities and the learning that occurs also are not presupposed in any way, but also discovered as they are (again, clearly a primarily inductive, naturalistic observational process).

P.P.S. Some in efforts to model the human, demand a good working definition of consciousness.

Active consciousness is using deliberation and deliberateness on that of which one is aware, all ultimately grounded -- for its activation or responding -- in the environment (and related to environment, past and/or present). Consciousness otherwise is just awareness (with what one is aware of having the same nature): the processing or response here may not be clear; perhaps it is just rehearsal for memory (strengthening what they call declarative or procedural memory or episodic or personal memory or sequences or automatically rehearsing sound patterns or spacial information). Yet, again, all this awareness (that of which one is aware) is related to the environment (like consciousness, acted upon).

If it is impossible to rationally/realistically describe consciousness as any "more" than this, then AI will be able to show consciousness. Again, many would say: what of emotions? These are just patterns of reaction to qualitative types of things in the environment (or to the the representation (and awareness) thereof), the basic ones: quick and often automatic (for adaptation). Basic emotions are not very complex; the more interesting emotions develop following (or with) [other] cognitive developments (and may be much less quick or automatic). Thus, these too would not inherently limit AI.

"Consciousness" , at least any particular instances of it, need not be ill-defined.

Epilogue

The core science assumptions for cognitive behavior, as for all behavior, MUST (a) be BIOLOGICAL principles (behavior is biological, at its very roots) and (b) one must discover definitions and better definitions by inducing (inductive reasoning) from raw complete-enough naturalist observations of the organisms itself. No unfounded analogies and no presumptions based on pre-conclusions of one's ad hoc hypothetical-deductive lines of thinking (and over- quick concluding, which especially goes on with deductive systems, by their definition -- and, in these cases, their premature definition).

My system of develop in "A Human Ethogram ..." is BIOLOGICALLY based and correspondingly all the most major behavioral developments are defined in the terms of classical ethology (using the full set of the terms of this science).

Some say: "... behavior analysts are not interested in cognitive phenomena. This is not because they reject the existence of private events, but because they argue that cognitive events cannot be observed; only its behavioral outcomes." We must over-come such an outlook.:

In a MAJOR WAY I say this is not likely true. I believe they reject wrongfully and shortsightedly and, really, their objection is not on objective (empirical) grounds. While you cannot see all aspects of cognition you CAN see each new major aspect as it develops with ontogeny (this is a VERY reasonable argument). These may well "show" in only subtle perceptual (perceptual/attentional) shifts, but with modern eye-tracking technology, they can be discovered. If longitudinal studies are done, after finding all the "bits" of conceptual representation related to clear perceptual shifts (and taking the very reasonable assumptions in my human ethogram paper), then you can basically know all of the nature of the covert cognition (even of an adult).

I am totally in agreement with the view that "the conscious human being that perceives, thinks, creates and acts does so according to its immediate environment" -- even if a person is sitting, doing nothing, and yet doing a lot of thinking. Once we better understand conceptual development (representation) and the results, we can have some idea of the possibility of his thoughts, knowing the type of concepts possible/likely. We will also find that though the immediate environment is a trigger, that past experiences, especially past experiences very close in time are involved (because of the humans very good conceptual and memory capabilities).

It may be hard to see how particulars could be in themselves the bases of conceptual development, but we must recall much representation/memory comes into the environment with the perceiver. Presently there is a misconception that thoughts can be "purely abstract" and that stages of abstraction (conceptual) abilities cannot be grounded in simply new particulars in the present environment. There is absolutely no reason to

believe this and it is counter to being an empiricist. We can imagine literally seeing new particular aspects of our environment and thus begin the development of a new level of conceptualization.

Whether we have things that look like stages or they develop smoothly from one to another -- either way we have STAGES of development. The idea (any idea) of "'pure' learning" is preposterous. We can totally eliminate the nature/nurture debates by realistically accepting that in great likelihood any significant learning involves innate guidance, whether new or whether well internalized as patterns in our responding (and likely usually both). This is the only empirical stance.

Do read all 3 of my papers in the "Human Ethology and Development" Project, starting with the shortest (summary), then "A Human Ethogram", and then finally, "Information Processing Theories and Perspectives on Development". (Actually, if you read this present paper, you can skip the short summary paper and proceed directly to reading "A Human Ethogram" .)

To find out more of what is accomplished with this perspective I have presented, see the Project Goals of my "Human Ethology and Development" Project and any information (additions) in the timeline (updates) of that Project.

Asked in project:

Theory of representational mechanisms

What could be the identifiable-and-definable components of Operational AI?

As one with a graduate degree in developmental psychology and as a long-time graduate student of cognitive psychology and cognitive science (and its theory, myself offering major critiques of such), and with some general knowledge of brain science development, I do have some proposals for things that can be reliably identified in the human and defined for an operational system of AI.

- 1) There are basic memory processes that have notable constant features (e.g. working/active memory and short-term memory). Other aspects of memory (long-term memory, including the contextualizing background effects to working memory) do always change (sometimes even in big ways -- in stages -- qualitatively) with learning/development, but they do retain and have distinct types of characteristics. Thus we have a couple clear definables and other capacities which have more-or-less definable natures plus definable qualitative changes.

- 2) What leads to the qualitative changes in the content-mutable aspects of memory (in particular long-term memory aspects) are the very factors (perceptual/attentional) that cause shifts in stages and that work hand-in-hand with all major conceptual learning (literally occurring at the same time). At first, these "embedded" aspects of perception/attention and some new major learnings are only sensorimotor, that is in the first year of so of life. Other stage-shifts involve perceptual (or perceptual/attentional) shifts and there are about 4 more of these but they are not just sensori-motor, as now conceptualized. These would be definable through eye-tracking research (just now possible) and would be expected to occur at approximately 2 yr., 4 yr., 7 yr. and 12 years of age. These perceptual/attention shifts not only intimately affect learning (occurring simultaneously with new, most-significant learning) but they [also (correspondingly)] alter the nature of the most-mutable LTM (e.g. episodic memory and spacial memory) .

These things, and somehow working in emotional patterns (less complex), would allow for an operational AI system to be much like a human (that is what is meant by AI, afterall). To learn more see my "A Human Ethogram and Development" Project -- esp. the 2 newest updates -- and see the major references of that project.

Asked in project:

Operational System of Artificial Intelligence

Dear

That was a good, interesting over-view of the beginning processes of your AI machine. Perhaps my writings might help you "pin down" the pattern recognition and concept identification aspects. But, your description sounds good . [I guess the most interesting aspect of my view might be that all major types of "patterns", no matter how abstract, have some NEW concrete (real, in-the-world) elements (or type of element) at there inception; specifically, you might like to read my stuff to come to understand and see something about the nature of the type of new key part of each new level of concept, and with another key type of element as you go from one level of conception (concepts) to the next, and then similarly to the next ... (up to 5). (Concepts, of course, are hierarchical and memory, including episodic memory, and declarative, procedural, etc., brings forward the abilities and developments (learnings) associated with the last level of concept as part of what comprises the next level of concept.) This might give you clues as to what and when key new aspects (of recognition) should enter your system (and perhaps help you with ideas on their nature and the nature of their eventual products -- concepts and related abilities).]

Thanks for sharing.

Dear

Of course the most serious limitation to what my view can offer you is that the stage* shifts (yielding new ways of conceptualizing), which I strongly argue can be just perceptual (perceptual/attentional) "shifts" , have NOT yet been discovered. They should most certainly be discoverable with the new eye-tracking technology (and computer assisted analysis); but, until these discoveries, they are in many senses not a sure thing. [I did try, based on empirical findings seen by major classic theorists, try to define some nature to these 'shifts' (or at least, in summary: associated observable effects) which I hope will be helpful.]

I am not in the position to do this research, so we all will just have to wait and see. I look forward to the hypotheses being proven or disproven. (Either a psychologist or someone in another field who studies cognition and development should be able to do this research.)

* FOOTNOTE: The shifts in ways of seeing yielding qualitative changes may or may not be rather abrupt; there may be some very notable common thread(s) to them. Thus, it is possible, for those who highly question 'stages' to see the developments as more continuous, and not-so-much stages (but, in any case, there are qualitative changes in conceptualization abilities -- and an empiricist finds some important observable concrete bases for them, though they may be subtle). Fortunately, from my perspective, neither the continuous/discontinuous debate or the nature/nurture debate are really relevant any longer. Neither of these old 'debates' keep us from moving forward (they no longer need to be settled a priori and we need not have certain dualisms at all, in this basic context). This is helpful.

P.S. Dear

To put it in the least words (one long sentence): The saving grace for seeing and understanding developmental psychology and for advances in other fields (like AI) as well is: the great likelihood that each major level of abstraction (conceptualization) has some clear concrete (in-the-environment, observable) aspect(s) and they will not be hard to see as patterns, because: given their context of development (the context that previous development provides), they are likely rather simple (specifically: perceptual shifts).

Today, with eye-tracking technology we can find them, if they exist (and I believe it is very likely they do). Already we can somewhat know their nature by clearly patterned associated observable effects (empirical observations already existent, related to existing historic and major theories -- described in "A Human Ethogram ... "), but the ultimate, essential nature (and necessary "trigger") for each successive level of cognitive

development may very well just be perceptual (perceptual/attentional) shifts: This is BECAUSE (to put what I said before in other words) , very conceivably, this is all the more required in an adaptive complex of behavior, including the significant memory capabilities that carry the key representations of experience forward.

There is NO evidence against this position and it is more biologically-likely than positions taken by other modern modelers and theorists. Other approaches do not work for explanation, understanding, or for good research. All the concepts, language and terms, of classical ethology can be used if one starts from this ethogram theory perspective and necessarily applicable biological principles can be adhered to. The ethogram theory position is as empirical as possible (and provable/disprovable) and will exclude no good existing findings

Dear

I hope you give it a lot of thought. You do not really want to impell your robot along the course of development with just the key behaviors it starts out with nor (as an alternative) do you want to have the robot just trained by people or imitating them.

For inspiration: Think of the largely fixed patterns in universal language development or think about true guilt and how it reliably appears only about 3-4 yr. of age; think of the routinized courtship displays of some birds which only occurs with adulthood; think of the calls of birds, which no matter how notably stereotyped, come only with development and does require learning (and otherwise do not appear in some species if the birds are isolated). With such thoughts you might see how it can/could be very good to keep innate factors AND learning and development together.

Paraphrasing Lorenz (from some text): "This means that to predict behavior in natural conditions it is necessary to know what the animal's innate perceptual and behavioral instructions are (as in Uexküll). In the same spirit, he claimed that without the notion of innate blueprint it would be impossible to study learning (Lorenz, 1965; Lorenz in Schaffner, 1955, p. 144). His argument is that stimulus association needs a releaser to which a conditional stimulus can be associated, and that random response variation alone is improbable because learning almost always results in adaptedness."

Dear

I have given my responses to the system you outline elsewhere and will repeat them here, since they are so pertinent to this thread:

I am quite supportive of the view (outline) in your very short paper. I have only 2 things to add: (1) You must come up with a way of understanding all the qualitatively different sorts of abstract conceptual thoughts; the KEY is, it is widely agreed, they are hierarchical and use main aspects of earlier levels (types) of abstract thought as components [in some way] in later "more advanced" levels of abstract thought. And, (2) I believe we must come to see what is added from the environment (input) to the end-stage earlier thought, that triggers (and is, in a sense) the inception of the next stage -- by empirically finding major subtle but overt perceptual/attentional shifts and biases (likely using eye-tracking technology and sensibly programmed computer-assisted analysis).

The various types of memory and their natures and roles is another important matter (what has to be represented and in what form, with what accuracy, ETC.). Then, emotions -- not that hard a matter, since these really are very basic patterns -- yet functionally noteworthy. And, then: PERHAPS language OR, more specifically, tips we can get from language about the nuances of thought-processing. (Language aids thought, but it is NOT thought to be core to coming to have different types/levels of conceptual (abstract) understanding or thought; and, even given its toughness to USE, one should still not fail to find any usefulness it has in providing key clues ("tips") about very specific aspects of processing and how they vary with development. This should not be overlooked -- especially since this may be both a more basic matter and an easier type of matter,)

Perhaps the same main outline you have of the types of "seeing"/processing WILL DO, but it will have to at points shift ITSELF, accommodating to the shifts in their conceptual subject matter's 'abstraction' level AT ALL POINTS AND in ALL WAYS of processing (in/of ALL the major sorts you outline): specifically at 5 different progressive conceptual thought levels. I believe if we can learn enough about humans (esp. the major perceptual/attentional shifts), then we shall have the knowledge to know when and how to have qualitative transitions.

Your outline, in any case, is a good start and thank you very much for sharing that.

P.S.: The NATURE and qualitative difference of the 5 hierarchical levels of conceptual thought is roughly indicated in my longest paper, "A Human Ethogram ...". (The associated paper on "Information-Processing Theories ..." is also worthwhile. And, no doubt, the 100s of pages of my essays on researchgate could be of some help.)

P.P.S. I would also advise that you keep the "steps" in your processing as situation-driven (or situations-driven) as possible (so it is more like one big process, with phases OR elements). Quite amazing things should be possible within the capabilities using the very substantial capacities of the types of memory. In other words: avoid the merely mechanistic: this would be analogous to having an [artificial] homunculus ("man-within-the-man"), something many psychological models are guilty of. Behavior should flow and transition as it really does in human phenomenological reality.

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

The hierarchical system: You just have to decide when your Subject (in your case a machine) has developed ("learned") enough, actually conceptualized enough, at the first level of perception/action/memory/representation that it could use (to great benefit) applications of some of THAT, at least some of those select entire systemS (groups of overall formulated knowledge) as units in a higher level of conceptualization (_YES_, there are more than one system at each level ; AND: the units, which themselves ARE the previous systems, may be in some sense "trimmed"). IN short, essentially your outline of the process (which you can already program) can be used at EACH level, but with different units (AGAIN the units at each level are themselves systems -- systems, in a very, very real sense, even during in the first level of development).

The precise nature of what is described (outlined) IS NOT KNOWN, but roughly the nature of these systems and units are indicated in my paper, "A Human Ethogram ...", enough for you to see the systems _and_ systems of systems as the hierarchy they are (hypothetically) and as qualitatively different (each, a REAL SHIFT from earlier thought). Knowledge of the real nature of the systems AND the "perceptual/attentional shifts" that are the inception of the next level requires longitudinal, developmental research with humans, very likely requiring eye-tracking and computer-assisted analysis technologies (and this research may be done by AI people and/or psychologists).

But the programming at each level can use YOUR basic system, just using different units at each level, and somehow knowing when (and seeing how) to transition.

By the way earlier levels of conceptualization continue to operate, as appropriate, even as more "abstract" systems of thinking are developed. ALSO: not all previous systems will progress to the next level. Also, you should recall, there are a total of 5 conceptual levels (aka, levels of "abstraction"), all roughly hypothesized and describe in "A Human Ethogram ...". (Unfortunately, this may not be a simple case where if you can do one level-change in your programming, the next will be easy -- it surely won't be easy, but perhaps may be easier. Likely significantly easier would be to do a "proof-of-concept", having your machine progress through all 5

levels in a limited and clearer "problem space".):

I believe FIRST and most important you should try to approximate this entire hierarchical conceptual development system and make it work in a program. Understanding the various types of memory and their nature and roles is a very important matter (what has to be represented and in what form, with what accuracy, ETC.) These memories are considered CAPACITIES, basically (but perhaps not completely) similar in their natures at each level (obvious the content or content accessed differs). Only then worry about emotions and what clues can be abstracted from language usage. You do not care as much what may be a joy or threat to your subject (the machine) as you may for a human, but it is true you might well need to push those things which are an interest or which are surprising. You only really need language, if your computer needs to communicate with humans (this is a VERY complex add-on to human abilities, and of course aids some learnings, etc.; maybe someone else can do (or has done) this and you can use it as an add-on too -- but you will have to set up the interface as well (on all appropriate levels).

[MAKE SURE YOU READ THE MATERIAL BELOW THE FOLLOWING LINE:]

GENERAL FOOTNOTE:

If you have to or if you want to view the levels in a mechanistic way, you could see each subsequent level as involving, in some way, a larger collections of conditions (including some KEY new environmental aspects, or the salience thereof) AND where that collection is VERY notably important _AND_ yet earlier levels are still also very important and thus identifiable or distinguishable from other levels. Perhaps such mechanisms may still essentially have the natures of the levels. NOTE: we cannot fail to consider "aspects of the environment" that exist only by virtue of a temporal/spacial relationship or difference (anything one of the various memories can "keep track" of may be the "aspect of the environment").

There is no doubt some gain in efficiency and/or other advantages to adaptation** having the levels of conceptualization, so your system should also display this (in my human examples, in my big pager, this shows).

** section FOOTNOTE: adaptation may include "needed for adaptation, given limitations" (but no limitations should be presumed, they should be seen or necessarily so).

Dear

In some correspondence (Messages) some have been concerned with getting emotions properly into AI, without "borrowing" the models or theories of psychology directly. I will address this matter below :

Outside of major study on the various memory capacities and their natures and capabilities (which is THE most important thing to do, along with creating a machine that develops types of concepts/behaviors and thought in a stage-like hierarchical matter -- previously addressed (above)) : the other thing which people (esp. some psychologists) often think is very important is emotions. Let me address the matter of emotions for AI, here now:

Do not make too much of emotions (as some psychologists certainly do). If you can make hierarchical learning mechanistic AND devise proper storage capacities (representations/internal models (memory capacities and abilities)) [which also determine the "environment" (circumstance(s) or set of circumstances) responded to], which are the most important things, then adding in basic emotions (OR THEIR FUNCTIONAL EQUIVALENTS) will not be something very hard. Emotions are highly patterned: meaning that they are clearly triggered by a TYPE of circumstance* (NOT one circumstance or situation, in particular) AND the responses which they are IN THEMSELVES are very simple until put into cognitive terms (which everything ends up in): it just amounts to orienting to the trigger and providing a certain general sort of motivation ("energy" or activation) and THEN everything a rational being (or machine) does after that will be largely a sort of cognitive response (OF THE SORTS PREVIOUSLY DISCUSSED) appropriately matching the circumstance: With the cognition, you have a matching of the circumstance CLEARLY BETTER THAN THE EMOTION ITSELF DOES.

It is possible to view emotions as cognitive helpers (for us poor creatures, just as they are for other mammals), helping to prompt an appropriate TYPE of orientation and TYPE of response. It is conceivable that these could be mimicked , adding on types of orienting and types of motivation, BY adding such properties to THOUGHT processes. (IN short, as long as what the emotions DO gets DONE, you, in effect, will have provided the guidance aid which emotions are.)

Certainly do not get "lost in the woods" of emotion (which to say it another way: it is a superficial sort of response, by itself (that is, without cognition)). I recognize emotion as important, but it is not a huge problem and gives you no reason to get off your basic, present AI track.

You also do NOT have to mimic the full range of emotions (all the emotions) and certainly not all the emotional STATES, IF your machine has a way to examine all possible alternatives in a challenging circumstance and pick the best one (perhaps being much more effective at that than a human -- needing less "help"). On the other

had the machine does need to know if it is really in any way confused or lacks information.

Certainly many of the nuances of human life DO NOT HAVE TO BE MATCHED -- there are simpler and more efficient functional equivalents. (Also emotion responses often have to do mainly with problems in social relations; the relevance of these are related to how much you are going to have your machine have social relations (if just for practical work, the emotions will surely be a more restricted set and I doubt you are going to have your machines seek every sort of intimate relation).

* FOOTNOTE: The fact that emotions may come into play in "very complex" circumstances is NOT due to a feature of the emotion(s) itself. The "very complex" stuff is a function of the 'seeing' of the environment, via perception and cognition and memories -- THAT is the setup. The emotion is still triggered by just the basic type of the circumstance. NOTE: This is NOT to say that the experience of the emotion(s) may not be qualitatively different (perhaps partly due to an admixture of emotions) NOR (correspondingly) does it say that the emotion would not get a different label (this might well account for at least many of the various STATES of emotions -- for example, see: <http://atlasofemotions.org/#states:anger>). This perspective KEEPS YOU FROM thinking you may have to individually program many different emotional states.

A personal P.S. : The reason why I am taking such an interest in AI is that I am not ruling out the possibility that AI will SHOW in their modeling of human behavior a more impressive ability to predict behavioral patterns and sequences and actual realistic behavior changes under circumstances, than the models of psychology itself. (And THAT will really show -- since robots do ACT (actually instantiating operational definitions!)).

Do the previous updates THROW THE "GAUNLET" DOWN on modern and historic views of Learning and of 'the innate', and show them to be presumptive myths?

No more details need to be provided. You have only to read the Jan 26th "Human Ethology and Development" Project Update (in the LOG) and perhaps a few other updates to the "Human Ethology and Development" project -- where all the needed details are "spelled out". [Simply click "View Project", below, and scroll to the "Log" OR CLICK HERE: <https://www.researchgate.net/project/Human-Ethology-and-Development>]

Can you clearly, fully, validly see yourself as an ape (YET)?

In my view, we owe it to ourselves, others (incl. other sentient beings), science and the Earth to have a full, real and justified perspective, so we can actually see ourselves completely, objectively, empirically, AS AN APE. I do not think you have any handy thought system (or "science") commonly available that would see you as anything other than something separate-by-nature. You owe it to all, in my view, to change that. Find/adopt a scientific perspective, so you can put yourself in-this-world as an APE. As you may know, my Project has offered some perspective here; do you have any good other alternatives? The Earth and our fellow apes are dying. Are most of us "fiddling while Rome burns"? I believe for rational ecological [(yes, and science)] reasons we must be able to do this! (Here's a test: can you look in a mirror and immediately see a creature very, very much like other apes and when you see other apes, which admittedly may be rare, do you see someone that is very much like you?)

Won't research confusions about investigated aspects of cognition be diminished if they came to be known to reliably sub-serve some greater behavior?

Think of what it would mean if there are: overall-important necessarily-seen (species-typical) behavioral achievements, and these are not only very important BUT also they would need explanation about how they "build up" and fully come to be (since they appear during ontogeny and aren't present at birth NOR are they inflexible, and thus clearly involve sub-capacities and learning). Wouldn't, then, the nature and bounds of these greater behavioral patterns help the study of all else?

I see a lot of researchers discussing the measurement of one important sub-aspect of cognitive functioning or another. Plus (of course), there is great concern about eliminating, balancing or measuring confounds or one might have [perhaps] irrelevant effects on the behavior indice of concern. Then there are other persons researching other likely major, important sub-aspects of pertinent cognition (for some important similar questions of interest).

What would makes things better: (1) to avoid the inevitable additional [(unnecessary)] confusions for/of such research (as mentioned above) ; (2) also help the challenges of judging the relative merits and importance of these and other seemingly relevant sub-aspects of cognition, independently investigated, AND (3) lessen the challenge of yet combining -- properly integrating/interpreting -- the various results. Don't all of these problems and challenges diminish, if indeed all the various particular sub-aspects investigated are likely to be functioning together to create a certain major species-typical behavioral pattern?

Wouldn't it help if you know some actual outer-bounding, "containing" achievement which DOES (must) occur (because it is species-typical) AND seems necessarily related to the particular abilities (aspects of cognition) you and others are investigating? The answer would be yes if the over-all achievement is such as described, i.e. actually "containing" (i.e. using) the aspects you all are investigating, to come into existence in the first place (AND, remember, it is known that this greater accomplishment occurs for-sure). You would have less of a question of what each individual sub-aspect of cognitive functioning would seem to need to have to accomplish, as shown in research; and you would no doubt have some idea of the possible relations (though hypotheses they be) between these and findings about other pertinent functioning aspects of cognitive behavior (found in others' research). You would have a better idea when you get a good result (a "top-notch" result, a would-be-necessary result) for a possible component to act THEN in some presumed role for a greater achievement. (Now the value, and some interpretation, need not stand on just the optimism or presentation of the findings of more-minor achievements shown/seen, one-by-one, in isolation.)

[Also, helpful, is the necessary fact that the species-typical behavior pattern must have some beginning form to BE and to draw the use of memory capacities and learning to it: THIS TAKES A LITTLE AS A NEW PERCEPTUAL (perceptual/attentional) BIAS. I have outlined the likely nature of these in my "A Human Ethogram ... ". If indeed they come into existence in their nascent form in subtle (but researchable) ways, as just described, then we would see the way they change by involvement of these other things (learning and memory, which "build them up"), and it would be possible that it would help one see each involved capacity show some changes in ITS potential (e.g. change in the nature of "chunks" in working memory).]

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

P.S. to my answer, provided above:

As explained in the long paper, "A Human Ethogram ... " the results of the hypothesized perceptual (perceptual/attentional) shifts account for some of the main phenomenology the other major theories address. Thus, once the deficiencies in those theories (actual logical deficiencies -- serious errors of logic, I found) are revealed, then an alternative explanation is needed. I provide one that I believe is most NOT unlikely : the

"perceptual shifts" -- not unlikely because it is patterned on the exact same classical ethology approach* used with several other mammals (and fishes, etc.). The reason only results the shifts could have are noted is that, though hypothesized, the actual perceptual (perceptual/attentional) shifts have not been found and that is because the eye-tracking technology needed to see the "shifts" is very new (and unfortunately, I am retired and not able to do this needed work). Clear, needed research could find these perceptual shifts, that guide the development of levels of abstraction in representation (and involve many of the aspects of memory and cognition thought most important).

FOOTNOTE

* Perceptual biases are also not unlikely because they conform to the what is often proposed as the evolutionary fore-runner of our abstract categorization abilities: the LIKELY social patterns observed by our common evolutionary ancestor (with most of the concept patterns quite possibly just "content-free-up" versions of the social understandings needed by ape-like folks). ALSO, it is not an unlikely "scenario" (that is, the perceptual biases) because of the one-way influence seen/found between basic innate perception and cognition (they influencing cognitive processes, but not the other way around).

Maybe it's beyond "not unlikely": In my mind, some perceptual (perceptual/attentional) biases are about the only likely type of innate guidance for cognition during ontogeny or, at least, later in ontogeny. It seems to me, your only choices are to believe that adult humans reliably 'engineer' children into adulthood (which frankly is ridiculous) OR conceive of the children guiding the guiders (which also seems preposterous -- because THAT is much the same ridiculous thing!).

[I suggest you see the other Questions (and Answers) under this Project.

This involves clicking the Questions link under the Project each time (after reading each Q and A) to return to the list and thus be able to go and see the next question.]

ALSO: see: https://www.researchgate.net/post/Have_you_seen_my_papers_yet_seen_the_relevance_of_them (posted in "Theory of representational mechanism" Project)

And, perhaps also see: https://www.researchgate.net/post/What_could_be_the_identifiable-and-definable_components_of_Operational_AI (posted under "Operational System of Artificial Intelligence" Project)

How about the role of context for attention?

Have you considered looking at things a different way: how about the role of context in the providing FOR attention in complementary interactions?

Let me elaborate:

See my new addition to my comment under the project reference entry, "What would you look for in a new cognitive-developmental theory?" , which is under the "Human Ethology and Development" Project . But in that Comment there I just refer you to a comment I made to an Article (of others): So, to make things more direct, see my newly added-to Comment under the ARTICLE, PRIVATE SPEECH AND COGNITIVE DEVELOPMENT: A REVIEW OF THE TWO THEORIES:

https://www.researchgate.net/publication/310766805_ARTICLE_PRIVATE_SPEECH_AND_COGNITIVE_DEVELOPMENT_A_REVIEW_OF_THE_TWO_THEORIES

Let me go ahead and repeat a portion of the comment I made under the above article; it does make more sense, though, in the full context of my entire Comment (see via link above):

In some way I believe the social environment is critical, BUT this can go well beyond what is involved in social learning -- it is the context within which social learning can occur!! Let me be more descriptive: An ape, in order to engage in social learning, has to have an idea of the status of the one showing/demonstrating some ability. Plus social conceptual skills (likely well beyond anything expressly learned) allow for understanding which alliances to have and who is the "boss" and who gets what and who does what: <-- Understanding the social hierarchy as a whole may well be THE major accomplishment (but this is not credibly a product of social learning OR any simple non-innate-guided learning). If you see things that way, then imagine the more flexible application of these social structure concept-forming capabilities, becoming "free-floating" as I have described them (but certainly not completely "free-floating"). Anyway, with such major contextualizing abilities (beyond

any given social learnings AND BEYOND ANY learning-by-itself) and then generalized, THEN you have what points to THE existence of innate perceptual (or perceptual/attentional) shifts which allow for the formation of (for the 'seeing' of) EVERYTHING (in 5 human stages): concepts, relations between concepts, relations between relations, a developing system, and coming to individualized systems. These are our 5 levels of concepts AKA 'abstractions' -- but I do not like the term 'abstraction' because I believe the basis of moving on to each higher level of conceptualization is actually 'seeing' (usually literally seeing, since we are so visual) something new about a pattern or structure of happenings. [Think this way: given the memory and representation you bring forward, it takes ONLY somethings that can 'fit' within the capacity of working memory (with its 7 + or - 2 "chunks") to move on, such is the nature of the concrete bases for each of the 5 stages of cognitive development. (I get 5 stages because I see the Pre-Operational Period as 2 stages -- Piaget himself saw it sort of that way.)]

---- PERCEPTUAL (perceptual/attentional) shifts is all that have to be to get the necessary, additional sort of content to move on to a greater conceptual level !!

If this makes sense to you, read all my papers, including the long ones.

Article [ARTICLE PRIVATE SPEECH AND COGNITIVE DEVELOPMENT: A REVIEW O...](#)

P.S. Re: research confusions about investigated aspects of cognition would be diminished if they all came to be known to reliably sub-serve some greater behavior (continuing from the Question):

Think of what it would mean if there are: overall-important necessarily-seen (species-typical) behavioral achievements, and these are not only very important BUT also they would need explanation about how they "build up" (since they appear during ontogeny and aren't present at birth NOR are they inflexible, and thus clearly involve sub-capacities and learning). Wouldn't ,then, the nature and bounds of these greater behavioral patterns help the study of all else?: Wouldn't you see the full importance of whatever behavior you are investigating and wouldn't you more likely see all the learning?

I see a lot of researchers discussing the measurement of this important sub-aspect of cognitive functioning or another. Plus (of course), there is great concern about eliminating, balancing or measuring confounds or one might have [perhaps] irrelevant effects on the behavior indice of concern. Then there are other persons

researching other likely major, important sub-aspects of pertinent cognition (for some important similar questions of interest).

What would makes things better: (1) to avoid the inevitable additional [(unnecessary)] confusions for/of such research (as mentioned above) ; (2) also help the challenges of judging the relative merits and importance of these and other seemingly relevant sub-aspects of cognition, independently investigated, AND (3) lessen the challenge of yet combining -- properly integrating/interpreting -- the various results. Don't all of these problems and challenges diminish, if indeed all the various particular sub-aspects investigated are likely to be functioning together to create a certain major species-typical behavioral pattern?

Wouldn't it help if you know some actual outer-bounding, "containing" achievement which DOES (must) occur (because it is species-typical) AND seems necessarily related to the particular abilities (aspects of cognition) you and others are investigating? The answer would be yes if the over-all achievement is such as described, i.e. actually "containing" (i.e. using) the aspects you all are investigating, to come into existence in the first place (AND, remember, it is known that this greater accomplishment occurs for-sure). You would have less of a question of what each individual sub-aspect of cognitive functioning would seem to need to have to accomplish, as shown in research; and you would no doubt have some idea of the possible relations (though hypotheses they be) between these and findings about other pertinent functioning aspects of cognitive behavior (found in others' research). You would have a better idea when you get a good result (a "top-notch" result, a would-be-necessary result) for a possible component to act THEN in some presumed role for a greater achievement. (Now the value, and some interpretation, need not stand on just the optimism or presentation of the findings of more-minor achievements, shown/seen, one-by-one, in isolation.)

How much knowledge and understanding is needed for social relationships?

It would be helpful for me, and likely others, to see a formal analysis of all the specific information and implicit (and explicit) conceptual [(structural)] knowledge (with effective understanding) that is needed to successfully

engage in social relations: Either an analysis of our species on this matter or, perhaps better, an analysis of some other thought-to-be-similar social species.

Of course, it would be my view and my prediction that much is involved, even though it seems to come naturally to us and several other apes. (It seems to basically almost "just be there", but isn't; an analysis would indicate what all is involved, regardless of how easily it seems to, or does, come to be.)

I would highly recommend we research these details by observing and evaluating the social behavior of a similarly social species (i.e. doing the discovery and analysis with some species other than humans).

[If something develops fast, yet it is complex (upon analysis), then this neither means that "it's really simple" (which simply would be false) NOR does it indicate the 'great power' of some mythological [pure] learning (because you like to think of 'learning' like that). What it does indicate is clearly some innate guidance is involved (and reminds us again that perhaps, indeed, innate guidance and learning OCCUR SIMULTANEOUSLY with all the most significant sets of learning during ontogeny).]

Dear

Knowledge is a construct (a useful one), reflected in and defined by behavior.

If you look into my perspective, you would see I am totally an empiricist and more of a behaviorist than B.F. Skinner (or any of that lot) -- there was room for a LOT of improvement to any old-time behaviorism (including social learning 'theory').

P.S. Andrew, how is it that you discover and see behavior? In the case of one giving a response such as yours, this is a very important big question(s). "Behavior" should not be just intuited or what you want it to be like (but without more real perspective, that is what it will be).

[The only organism on which old-time 'reinforcements' work best is those who follow the party line of the old-time behaviorists and simply believe what they believe -- though it is, in actuality, very ill-defined. (I was under them as a student for many years).]

Is human cogn.-dev. ethology/ethogram theory the only way to actualize a belief in being able to discover everything & also rid us of the homunculi?

Is a human cognitive-developmental ethology/ethogram theory the only one that posits (at least at its inception) that we can discover everything? AND, does only it show all the things that really are just made-up people-within-the-person (homunculi) as such, and show they are totally unnecessary? I believe so (on both counts). It does both BECAUSE perception (perception/attention) is always a major focus (of experience and learning) and will always be UNLESS it becomes untenable -- and then we will fix it PROPERLY. (True ethology inherently guides one to self-correction AS NEEDED: realize this and then see the shame in abandoning ethology.) Human cognitive developmentalists: hope to get your attention! (See Project, link below)

[Please also read the next Project Log entry.]

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

A subject redos what he has learned to do; is there more?

It seems to me that you have shown that when a subject learns to do something, he uses that (which he has learned) again. What more is there to this and can you really demonstrate more?

It seems doubtful you want to claim that category learning fundamentally changes perception. But, if so: there is a weakness in short-term studies using more or less immediate results.

Asked in project:

Category Learning Generates Categorical Perception:...

How confident can one be of a good cognitive-developmental ethological theory?

How confident can one be of a good cognitive-developmental ethological theory of human behavioral development? I cannot help but be very confident. In fact:

I am wondering if I should fully and completely believe my theory* could not NOT be true [and it surely is not a fault if most all the connected premises (and proposed connected phenomenon) are not recognized as such by others and to me it necessitates the exposing of mainly the obvious].

* FOOTNOTE: The theory is especially expressed and detailed in the large papers associated with the "Human Ethology and Development" Project.

It really all hinges on the question: what else could begin a new (progressive) stage** of cognitive development than what I propose (perceptual (perceptual/attentional) "shifts")? ON other essential matters the theory is as it needs to be: I think the proposition that behavior is biological, and that a theory of the basics should reflect this, is indisputable; and, the theory seems to successfully (and truly) use all the terms of classical ethology, a clear, established way to progress scientifically with a biological view.

** FOOTNOTE: "Stages" may be seen as continuous -- so don't "sweat" this. (<-- This is the second-most damned, old, ridiculous, "tired" topic -- right behind the nature/nurture debates.)

The type of perceptual (perceptual/attentional) shifts involved in key cognitive developments (stages) is much like the one basic kind of perception recent scholars describe which only shows an influence "bottom up". That is its very nature in my theory.

The theory also successfully (and similarly) provides a critique of existing theories (which also is basically undeniable in my view). And as indicated, in contrast with them, it uses biology principles and the terms of ethology to describe the alternative account of the development of behavior -- and THAT involves perceptual shifts -- and I could not see how it could be anything else (I see nothing else that could be in that role).

The theory is also consistent with the idea that human cognition is much related to patterns understood in social relations of many primates -- and thus provides a likely evolutionary basis. As an additional benefit: the theory finally provides an integration of learning and the innate, basically by identifying behavior that would in effect be BOTH simultaneously -- something NO other theory does this, though that very thing has been declared likely for over 30 years. For example see Anastasia, A. Heredity, environment, and the question "How?" Psychological Review , 65, 197-208 (circa 1980s).

Am I correct? Let me know.

<https://www.researchgate.net/project/Human-Ethology-and-Development>

This theory's hypotheses have only recently become amenable to research (with the new eye-tracking technology). So, the theory, in effect, is NEW. And, it is all yours; I am retired.

[Please also read the other Project Log entries.]

Dear

[why do so many say "hi, Brad!" as if they knew me -- IF ONLY!!]

Since I have been a human ethologist for over 35 years, I am aware of the classics that you sent me a paper about. (I have known and studied several of the 2nd generation big guys in human ethology: including Eibl-Eibesfeldt, Charlesworth, Blurton-Jones; I have studied with some of them.)

I await for you to read the approx. 300 pages I provide and, once understood, get back to me. I understand you are an "old-timer" like me and I mean you no disrespect, but you may find one gets no instant credit for 'older' either (take it from me).

Let me say:

You might well be happy to find that what I have said IS the case. I have gotten to where I got with my perspective, largely avoiding adherence to psychology's major theories (though, like you, I am a neo-Piagetian

and know Piaget and the newer version theories well; my theory, in a real sense, is an actualization of the second, less known, sort of equilibration, the "balance" between stages -- something Piaget really did not explain, but just cited "maturation"). I have my bachelor's and master's in psychology; yet for all my life -- and I have kept up -- psychology has been horribly bad in overall theories, e.g. of personality (truth is, as far as major overall-explanatory theory is concerned, psychology has not much improved in 40 years). My largest paper shows the kind of clear terrible error each of the "classic" theories* [of personality] have and then offers an improved theory, discounting NONE of the empirical findings.

Hints of the merits of the perspective:

My perspective does not attempt to apply a thought system to psychology (as it is usually done, by features or analogy); rather, it attempts to place psychology in an inductive scientific perspective of understanding -- well-founded and well grounded. Some important aspects: (1) behavior is explicitly seen as biological and biological principles are applied; (2) it is the only theory in existence (I believe) that completely integrates 'the innate' and the learned, showing how they indeed (as claimed for decades) can occur in effect AT THE SAME TIME SIMULTANEOUSLY. (3) The perspective thoroughly uses the terms of classical ethology. (4) The theory is absolutely consistent (expressly) with all the most recent understand of types of memory and perception. AND: It does (2) and (4) without adding anything artificial to the 'system' -- like the "central mechanisms" (aka 'executive processes') the paper you provided speaks of [BUT: replace "central mechanisms" with simply the existing, naturally-applied known aspects of memory (naturally applied by the nature of those capacities, themselves -- of course, along with the perceptual (perceptual/attentional) shifts I describe), and then you would be ok].

Anyhow (1) - (4): have you seen all that before???

* FOOTNOTE: MY second-longest paper takes on a major Information Processing theory (Anderson's ACT) and that critique is still relevant today.

P.S. I have waiting 30+ years to come back, now that the technology to investigate the major hypotheses exists.

Dear

I apologize for using the label 'neo-Piagetian' on you; I am reading your "Developmental stages, Piagetian stages in particular: A critical review" paper and can see how you would not like that. I am happy to see you are a strong stage theorist; that should help you like the perspective in my papers.

About your statement:

"Piaget's concept and psychological process of equilibration is a "balance" between stages, but rather a balance between assimilation and accommodation"

I do not think that is totally true, that is: I do not believe that is "the whole story". Reading Piaget's descriptions of equilibration, you get the definition quoted (above), but you find another usage in Piaget which, as I said is:

" the second, less known, sort of equilibration, the "balance" between stages".

("balance" being the word I choose there)

While I have not finished your "Developmental stages, ..." paper I have read into it about 10 pages and have seen that you seem content with the notion (having much to do with stage shift) that :

"...it abstracts properties ... of the inner coordinations among our actions" (Campbell, 2009, p. 153), and projects, transposes, or transfers them to a higher level."

The problem for me is, unless absolutely no other possibility exists (something that cannot be claimed at this point in time), one should not accept any explanation said to involve "inner" development that does not have a clear corresponding (as understood in context) behavioral/environmental component. That is my position PERIOD.

[I much more like the statement in your paper: "no strong developmental theory can exist without a criterion or, at least, an indicator of developmental change" and I take the "strong view" there.]

I see myself as an empiricist at an extreme. If my view is simplistic, I believe it should just be seen as

incomplete. The assertion that each stage of development (AND stage of conceptualization AND abstraction) involves literally perceiving some kind of concrete [(yet also of a type)] features in the environment, greatly satisfies me; I find that more than a little believable (one just has to have the proper perspective on what the organism can "bring forward" -- a whole bunch of memory "stuff"). If I do not get the specifics correct OR, more likely, cannot imagine all the specifics, that is not a grave weakness in my mind. Simple beings can know the truth, as long as they know they may be simple - and know that to the proper possible extent.

I will continue to read your paper. I am glad to hear you may well read mine.

Dear

Thank you for reading my paper; I am not sure which one you consider the 'position paper', but would guess that it is the shortest of the three (which is kind of an overview, and could be seen as a sort of position paper -- but it lacks crucial details). If you have not yet read the main paper, "A Human Ethogram ...", I recommend you do so -- that would make what I say below clear or clearer.

I will just address your last paragraph. Any more advanced aspects of human cognitive abilities and memory abilities (the things I most address) are not constrained in my system. They are simply, in effect, thought to develop with ontogeny in the same way (innately guided AND with experience and associative learning -- all, in effect, simultaneously) as with other animals -- but the human is not limited to the same content or even to the same qualitative "levels" (two aspects that are no doubt related). (The fundamental mechanisms and capacities as outlined are inherently basically content-free, though I did "plug them in" to a human example for the exposition of that throughout the long paper.) In a way, I don't see myself linking all human developments to aspects of how various animals develop (except for these fundamental types of mechanisms). I rather dislike thinking in any terms of human uniqueness (because anything like that would be seen well only after a lot of knowledge of us and of any given other animal). Still, I would not claim that all of our stages (or, at least, phases or sub-stages) of cognitive development occur with other animals (and certainly not to the same extent) and the content of perception/attention/cognition and of memory as they occur and develop is notably different (and to a large degree divergent, evolutionarily speaking -- something true of comparisons between any species and another).

Thanks again very much for your interest.

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

P.S. to my own remarks above:

Since my philosopher friends (the ones I respect much) have failed to weight in as asked (yet), let me again speak to my own question:

In some sense, there is only one way to be right (correct) with science. What is it in ANY biological field, including behavior? Answer: No presumptions, just basically applying biological principles yielding FULL organismically contextualized associative learning _AND_ doing so with a theory willing to test maximum empiricism. <-- Now we have the biology and the science parts. And, with these, we will find understandings which include the ending of any nature/nurture debates in situ. If the ethogram theory is not correct, you are obliged to have another theory that accomplishes all these aforementioned basics; otherwise, as a scientist of behavior, you should just "pack your bags and go home".

[Because the ethogram theory is appropriately minimalist (for an empiricist starting out again) and relies on perception and very basic changes therein --- more than plausible things that CAN BE "causes" IN CONTEXT (e.g. including the contextualizing with the operative memory capacities) -- and these hypotheses have not been tested *, you will have a very hard time replacing it as a thorough-going empiricist. (It would be very hard to do without presumptions, if not impossible.) But, take your best shot.

[* FOOTNOTE: Now, with the new eye-tracking technologies, the hypotheses are testable.]

Also, the theory really is consistent with Piaget, just filling in what he did not (esp. in particular "maturation" -- though a very big topic); and, it does not unduly disrespect any of the classic overall theories, often called personality theories (no empirical findings will be thrown out).

We should never forget the potential good of a behavior theory enveloping much behavior (as I address in another question-and answer). And though (of course) the theory has left out details, they are only details that can clearly be interjected -- once fully supported with findings -- at appropriate points.]

How is meta-cognition like a view of the 'self' ?

I will give my answer:

Metacognition is like a view of the 'self' in the sense that there is evidence only that you necessarily (absolutely) need it for conventional social interactions (e.g. communication). Otherwise you may well need neither and much or most of the time you likely "have" and use neither .

It is highly likely that if you think there is always a guiding 'self' or guiding "metacognition" or operational 'higher' executive processes, you have a homunculus (artificial, unreal person-within-the-person) on your hands -- at least in some major instances. It is no kind of necessary (required-thought), foundational basis for any decent general theory of cognition. [(And, on a personal note, constantly actively believing or having [either of] these things is not good for you -- it's maladaptive. You may be able to get in such a state, but in some circumstances you will be "messed up" -- it would never (generally) be an improvement.]

If you think like many of my personal-belief-system persuasion then thinking about thinking would be RATHER THAN using all you've got to think about the subject matter and that is OFTEN NOT adaptive (in short, because it is irrelevant and distracting).

If you can't overcome these criticisms you should abandon any central (or required) role for metacognition, executive processes, "mind-reading", "time travel", and the like. And, these criticisms are more-than-plausible.

Discovering the nature of innate guidance mechanisms is much better than positing a homunculus (note the word, 'discovering', early in the sentence, NOT positing). Worry not, cognitive scientists, my Project is here for you: "Human Ethology and Development". If you would like to approach such a problem as I have attributed to the metacognition people from a personal direction/perspective, you could try the "Core Buddhism" Project.

Have you looked at the "Human Ethology and Development" Project?

Re: the Project, "Ethology and behavior systems ":

Have you looked at the "Human Ethology and Development" Project? It seems it may be connected to the types of references you cite and could provide a few more references. (It really is hard to say what the relation between your Project and "Human Ethology and Development" is, because you present no description of your Project and all the papers also are not immediately available, but must be requested -- I have requested 2 of the

papers). See:

<https://www.researchgate.net/project/Human-Ethology-and-Development>

Asked in project:

Ethology and behavior systems

Dear

I will be able to start to understand your perspective as soon as the requested full-texts are sent to me. As yet, I have nothing to read.

My perspective does not attempt to apply a thought system to psychology (as it is usually done, by features or analogy); rather, it attempts to place psychology in an inductive scientific perspective of understanding -- well-founded and well grounded. Some important aspects: (1) behavior is explicitly seen as biological and biological principles are applied; (2) it is the only theory in existence (I believe) that completely integrates 'the innate' and the learned, showing how they indeed (as claimed for decades) can occur in effect AT THE SAME TIME SIMULTANEOUSLY. (3) The perspective thoroughly uses the terms of classical ethology. (4) The theory is absolutely consistent (expressly) with all the most recent understand of types of memory and perception. You got all that?

You've got about 300 page to read. Get back to me.

P.S. I have waiting 30+ years to come back, now that the technology to investigate the major hypotheses exists.

Dear

GOOD WORK!!

Here is the Message I sent to Gordon Burghardt (and it should have been addressed to you, as co-author, as well):

Dear Gordon Burghardt

Not that you might much care, but I found "From instinct to behavior systems: An integrated approach to ethological psychology" a very agreeable set of views. I gave myself a break and started on page 10 (after the historical part), and then read the rest of your paper very closely. Though I am a kind of a person that "looks for trouble", I did not find any.

I am curious how you would process (integrate) my "A Human Ethogram ..." view into systems. First, I would imagine and hope you would see fundamental systems, very amenable to yours, within my paper. My paper simply offers: simplicity (and that is important) and proposes a central focus from which to see development, which allows further relation to biology (right down to the level of basic biological principles, e.g. homeostasis). I believe the central focus is a good point of integration with findings on all the memory capacities and on emotions.

I hope you might agree when (if?) you read my paper ("A Human Ethogram ..."). Relatedly:

I see much of my perspective as just logical and necessary (things need to conform to necessary principles and when they do they will be seen this way) -- thus, in a sense, you might see my view as stating the obvious (but it is NOT obvious to everyone). What MUST-BE also must be recognized (and as such), when it is very well possible it is not (or it is often forgotten).

The other thing I like about my perspective or theory is that everything (including advanced conceptual (abstraction) abilities) can be seen as having some environmental correspondent guiding learning at their inception. In a sense, there is no such thing as "abstract" (and one can see this if one fathoms what memory "brings forward" into a setting). I think one should be thoroughly and completely an empiricist, unless that is just not possible.

I would imagine you might find my perspective quite agreeable (that would be my prediction), given your great thoughtfulness, that yields the very useful, thus very agreeable, perspective your systems provide.

I would be much honored if you would read my main stuff and let me know what you think.

Have you looked at the "Human Ethology and Development" Project?

Is psychology worse than the tower of Babel?

There seem to be so many pieces of research from basically unrelatable models or points of view; at least often, the results are hard to relate with/to other findings; the results certainly often defy integration (even any imaginable integration). And, many pieces of research continue, just like in the old days, to have a certain 'model test' (often an apparently rather simple supposed-'instance' "of a phenomenon") as something that supposedly represents an entire type (or class) of [that] phenomenon, but actually lacking ecological validity and VERY likely lacking the generality the researchers suppose. Plus, many results are mis-labeled and thus quite misleading. There is some research (not infrequently) that is either trivial or facile -- maybe done to work with some professor and satisfy a requirement (yet also, some may not see it as researching a "flighty" phenomenon or phenomenon that are trivial).

Psychology researchers, friends: How can we make sure this is NOT true? Please don't think the philosophers are going to do it for you -- they too address an idiosyncratic chunk of phenomenon and/or provide very vague or skewed or specialized "overall outlooks" on actual phenomenon.

How do we get out of this situation?

Think: well-grounded (well-founded) research program BASED ON AN OVERALL THEORY that can cover as much behavior as possible. It should also be simple, empirical (even nearly wholly concrete), and thus be fully understandable and (of course) all related hypotheses should be researchable. And, at least, it should be such so that all who should be able to understand it (and this certainly should include undergraduate psychology majors) can, with certainty, clearly understand it. A good overall theory would not be disjointed, extremely complex, vague, or obtuse. Good (necessary) theory forces NOTHING of that kind. Just like working memory: somehow things can be made to be as simple as they need to be (and certainly things can and should be that way when starting out).

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

P.S. In many, many ways psychology reminds one of people working in an old out-dated factory, people who want to keep making things the old inefficient ways and even want to keep making things in incorrect ways. Do you wonder why? Perhaps it is the system in higher education where almost all (or all) have to fall in line behind their advising professor to succeed -- a formula for stagnation. -----

Also, theory development , in the sense of thinking about how to develop a new theory, is rarely (if ever) a topic in psychology departments. All just keep working with the at-odds, incomplete, cumbersome, awkward, disjointed existing theories (and sometimes you cannot really even call them that): Some "theories" are just models (and obviously artificial models) -- like info-processing , or [ad hoc] connectionist theories. Some "theories", like "Relational Developmental Systems Theories" are not even decent enough to be seen as theories, but are seen even by several of their major supporters as "just frameworks". And, then there are some "really cool" actually-just-constructs to play with (like attribution 'theory'), that keep people busy for years (and connect a very limited range of things). THROW IT ALL OUT!! START AGAIN!! Sometimes, you know, this is what you have to do (for YOUR mind, or for any good mind, to make progress) -- yet this doesn't have ANYTHING to do with "throwing away" any decent empirical findings (even from attribution 'theory').

Let me quickly add: You still really have to fully understand existing theories to have "something to bounce off of". You need to see what may be right and what is wrong to build something new.

[In the last decade, fools have essentially thrown away the most promising theory to a large degree: many have largely abandoned ethology, sometimes or often ridiculously thinking it does not have enough to do with 'learning' . <- How did anyone come up with thinking like that except by thinking in stereotypes!?!; what nonsense!. A good ethological perspective and theory almost certainly HAS THE MOST LEARNING IN IT, more than any other conceptualization -- a lot more; true, it is guided learning that is at times the most important, but what's the problem?]

I believe I have solved the philosophical realism problem; why start over?

Dear

I believe I have solved the philosophical realism problem at least with regard to ONTOGENY -- which is your concern; why start over?

Really! There is no dualism in my full-blown, already-developed outline for a human ethogram (see especially

"A Human Ethogram ..." in the "Human Ethology and Development" Project). Absolutely no philosophical "realism" problem of the sort you describe there and it is a full scientific outline for studying the human ONTOGENY and finding the ethogram.

Save yourself a lot of work. I've done it.:

<https://www.researchgate.net/project/Human-Ethology-and-Development>

[I find I have to follow your Project to see my Question in the Home list and to see some responses . I do not endorse your Project because I believe it makes "trouble" and complications, where they need not be; I suspect it will only defeat its own purpose. Historically, that is about all that has ever happened with philosophy; philosophy, by its very nature is (at least) almost always dualistic; at times, it is "well-equipped" to cause the very problems it seeks to solve: To wit: I see in your paper you want to focus on "activities" -- and with that you already have lost not being "separate from perception" -- and show a hallmark (you pointed out) of the philosophical realism you wanted to avoid ! Eeek! Here is a tip: YOU, the researcher: DEFINE NOTHING and see things from their inception by being able to note the key perception! My long paper indicates how.]

Asked in project:

Ontology for Behavior Analysis

Would you like to explore a perspective (theory) that is as empirical as possible and yet also possible?

[RE-POSTED: IT DISAPPEARED FROM LIST and problems associating it with a Project]

Would you like to explore a perspective, a theory, that is as empirical as possible and yet also possible? That is what I believe can be found in the main paper, "A Human Ethogram ...", in the "Human Ethology and Development" Project. Thanks to new eye-tracking technology the hypotheses can be investigated (and tested). I believe the perspective, if results come in verifying hypotheses, can be tremendously integrative -- in time incorporating all behavioral phenomenon I can think of. I call this the Ethogram Theory, and it is basically a neo-Piagetian, cognitive-developmental theory [but unlike Piaget's own theory, factors in "maturation" are sought out and are the bases of the unique hypotheses (the only unique hypotheses) of the theory].

And, it is reasonably [perhaps ultimately] simple and not subject to any vagaries or any needless complexities (at all); there are no intuited or external constructs or models (or thinking-by-analogy) involved, no intuited processes, and no confusions. It is well-founded on biology and in the terms of classical ethology (all of them).) It is as close to pure empiricism as possible when looking at the behavior of a biological being with significant cognitive processes (and development); the assumptions are absolutely minimal and all in the service of maximizing empiricism and empiricism in a way which should most definitely be considered, since the only assumptions are very likely true. It is in conformity with (and makes use of) the knowledge of all other basic capacities (in particular, memory processes) which are involved in cognition and conceptualizations (all based on solid established memory research, i.e. what are considered BASIC FACTS). Then there is the well-recognized phenomenon of associative learning. That is really it, except for a recognition that cognition undergoes some qualitative changes (I need not say "stages") during development -- and THAT is made completely explicit in the nature and potential (likely) existence of the hypothesized entities: perceptual (perceptual/attentional) shifts, the very things that are the ONLY basic new hypotheses or aspects of the theory (so they will be or not, as looked for and found or not).

<https://www.researchgate.net/project/Human-Ethology-and-Development> and especially:

[see link to paper attached, below]

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

Easy Answer: Someone is going to do eye-tracking studies to try to verify the hypotheses of the Ethogram Theory. (It will not be me: I am retired and have no equipment or resources of any kind.)

You may or may not recall: I have waited 32 years to come back with this theory, awaiting the possibility of having the technology to test the hypotheses (many might feel lucky that I am not dead). Now the technology exists. Unfortunately, I am too old, etc. to do that. This should be a gift to someone who "believes" or sees as I do.

My question is: WHO WILL DO IT? (Thanks for asking !)

How did we ever view 'abstraction' as a progressive disconnect from the world?

Viewing developing abilities to think in terms of abstract concepts CANNOT empirically or from any reasonable perspective be seen as a progressive disconnect from the world. That is anti-empiricism and extremely unnecessary and in every way not useful; it's damaging and wrong. "A Human Ethogram ..." describes the types

of CONCRETE, real world aspects which accompany each level (stage) of abilities to do "abstract" conceptualization and thinking. If you have not yet, join me and be a thoroughgoing empiricist.

View the entire "Human Ethology and Development" Project for more, including a couple dozen short essays addressing aspects of this problem (see Project Updates, in the Log; see author's Q-and-A's; and see author's Timeline) . Plus at the Project site, there are two other major papers:

<https://www.researchgate.net/project/Human-Ethology-and-Development>

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

Re: Theory (or "models"): Why is there no concern about thinking about "too much"?

When it comes to thinking, the deliberate (clear, conscious) parts of working memory are essentially the same (quantity-wise) as that of short-term memory: 7 + or - 2 "chunks". Now, there are major memory capacities providing a LOT of CONTEXT for working memory -- this gives you a lot of the "environment" you are working in/thinking in, but beyond yielding their "triggering" through selective attention, these contextualizing aspects of our experience are not much under our control -- though they may change, even quite quickly, with processing (but this is basically just selective attention/perception at work again).

Why am I saying all this? Because in developing an explanatory scheme, system, model, or theory, you absolutely have to pick the correct basic "chunks" to begin with or you may well mis-"chunk" because you are pushing working memory beyond its capacity (if for no other reasons). The mis-"chunking" could be over-generalization, over-extension of a concept/concepts, or just plain missing things or not considering things (some simple models basically just do the latter). BUT: What we really want is a theory that can build to incorporate all that is really important (and such would not include the last-mentioned models).

Thus, when you are developing OR learning a theory, you have to pick a perspective which is inclusive enough at first with its view YET NOT be "too much" and there-after, using prescribed ways of monitoring, guides you to continue to be able to progressively (and reliably and validly) re-"chunk".

Well-used-capacity [(of working memory)]: This should be a huge matter of concern when developing a system, a scheme, or a theory. Otherwise your thinking (due to what we basically have to call mis-"chunking") will be inevitably biased or skewed or selective! In short, at best, your theory will work a bit and then "dead end", but it will never allow for continuous progress. ("Dead-end" models or frameworks are also basically impossible to integrate with other ones, or anything else.)

What is the answer? How do we protect ourselves? One: if what you are studying is biological (e.g. behavior), then expressly and always explicitly actually have proximate (real, actual, "there") biological things (like homeostasis) as guiding aspects of the behavior you are seeing, and make sure that all you posit similarly abides by biological principles. A second thing which allows you to protect yourself (and others) is demonstrably, with near 100% accuracy, show that everybody sees everything you see exactly the same way (this is inter-rater reliability, ubiquitous in ethology).

Third, be sure you do not look for too much at once and try to process too much at once OR you will fail. Here is a big hint about how to do this: let the SUBJECT (the organism you are studying guide you): whichever aspect you are studying, study in such a way that you can actually 'see' the next step in what is happening, that is, make sure your conceptualizations are absolutely clearly empirically well-founded AND, if you are wrong, you will be able to see that. I believe there is a way to proceed that will be self-correcting and, if the way you are doing your studies is not, you will be in trouble (see above).

[Now, what looks like the self-serving part:]

An example of the application of all this: when learning, coming to know, and/or developing a theory of ontogeny: have it something essentially in all regards like the Ethogram Theory ** (in the "Human Ethology and Development" Project) -- the neo-Piagetian perspective that looks for clear changes, that can always abide by biological principles, and sees perceptual (perceptual/attentional) shifts as the basis of qualitative changes (some like to call these "stages", but don't if that bothers you -- it may well be possible to see the qualitative changes occurring rather slowly or incrementally, *BUT* things will not and CANNOT (if you resolve nature/nurture problems) remain absolutely continuous).

[(If you do not see that qualitative changes in representation, conceptualization and thinking occur over time with human development (0-18 y.o), then leave the developmental psychology field -- because there is absolutely no doubt you will mis-"chunk" (you are deluded, basically similar to thinking you are superman). Belief in extremely simple continuous, incremental change is NOT A WORKABLE IDEA -- quick evidence for this is that you have absolutely no real idea of HOW innate factors and learning work together (and THAT, if you are "real", is a BIG problem); there are no doubt other sure ways of indicating such a person has clear troubles, that could also be absolutely reliably be shown -- just think 100% reliability and you can think of others.]

For more, check out:

https://www.researchgate.net/post/Do_research_psychologists_and_theorists_have_other_things_to_be_concerned_about

** FOOTNOTE: Other major processes at work, almost always, are: the types of simple associative learning we are all familiar with. (Other content, which could have been another footnote are in the top part of the

"answer" below.) ***

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

*** First, here is basically another FOOTNOTE to the main Question (and answer), above:

In addition to "contextualizing", long-term memory also provides access to well-developed procedural and declarative memory. Also there are some helpful automatic rehearsal "loops". And, "mirror neurons" that facilitate learning sequences. LTM includes episodic memory (including personal memory) and spacial memory. Some kind of sequencing facilitator (which may be considered part of episodic) includes the marking of time and basis of number understanding. There are also very important response inhibition capabilities at work.

The episodic memory is a buffer to what is recalled and activated from long-term memory (i.e. declarative and procedural memory and the other capacities). There is also the first brief aspect of memory, known as "sensory store" (holds a lot but very briefly).

Since in the Ethogram Theory, it is mainly talking about representation, the more passive "contextualizing" aspects of LTM were emphasized in the essay above. These would be related to what we most often see as the most explicitly limiting aspects of working memory (the contents of our present representations).

Now a P.S. (to main Question):

Clearly, the point of the main Question (with answers), above, is basically to express a concern about a lack of concern: In all the "psychologizing" by theoretical/research psychologists, why has there been nearly NO EXPRESS concern about the limits of the "psychologizer"? Isn't this ironic, as they are supposed to be so objective?

Do research psychologists and theorists have other things to be concerned about?

Some concerns were covered with the last question:

https://www.researchgate.net/post/Re_Theory_or_models_Why_is_there_no_concern_about_thinking_about_too_much

(<-- you might well want to see that question, before you read the material directly below, if you haven't yet read it). <-- The last question was really concerned about the limits of researchers and theorists; how is this not an issue? This is something that needs to be explained.

And, not unrelated:

I would add that you could have a huge body of studies showing significant results with VERY LITTLE coming together in any clear, TESTABLE, way. Statistical significance is not that significant (in fact, to an ethologist, having to test to see if your results are "significant" would be a sign of weak or poor results).

Someone should show how $p < .05$ compares to inter-rater reliability of 98%+ ***

There is essentially no salvation for very many or most psychological researchers today, either from the standpoint of reason (based on good or necessary assumptions), OR from the standpoint of strength of results OR relate-ability of findings (and you need ALL three!).

Sometimes (I would guess not infrequently), at best, you get more results that are just worth "imagining or wondering about" : what does this tell you? Not much, not much at all. In fact, in terms of hard science: without strong results and those results showing tested and proven relationships, you have next to nothing.

[Actually, though, I DO propose there is a _way to salvation_ (click on the link at the top of this post to get to the other more basic (and foundational) question-and-answer).]

[*** FOOTNOTE: Here is a professional statistician's opinion, that indicates how low % agreement can be, yet still be acceptable (as related to statistical significance):

"There should be no ratings more than 1 level apart. If there are more than 5-7 rating levels,, an absolute agreement level closer to 75% would be acceptable, but the exact and adjacent agreement should be close to 90%" (I guess one can assume this comparison to statistical significance would be with equal Ns of some number). This provides a qualitative idea. If you properly correlate the ratings (in inter-rater agreement): (quoting)): "The general rule of thumb for percent agreement is presented in Neuendorf: "Coefficients of .90 or greater are nearly always acceptable, .80 or greater is acceptable in most situations, and .70 may be appropriate in some exploratory studies for some indices" (Neuendorf 2002, p. 145)." Again, this gives you a fairly good qualitative idea. The matter turns out to be complex.]

Would the "Human Ethology and Development" Project be of help?

I have a Project on researchgate.net with a theoretical perspective that is consistent with evolution and biology AND is most certainly and thoroughly thinking about theory . It offers thoughtful related strong critiques of all major other overall [("Personality")] theories.

Let me recommend it: It is the "Human Ethology and Development" Project (200 pages in major papers, and another 30 essays relating all of it and relating it to what is done today):

<https://www.researchgate.net/project/Human-Ethology-and-Development>

Asked in project:

Evolutionary psychology: thinking about the theory

Dear

If promoting my work is what helps with your issue, I will promote my work. This should be understandable. Here's the shortest version (and that alone might help):

This short essay might be seen as a brief "position paper":

https://www.researchgate.net/post/Re_In_what_sense_if_any_can_psychology_be_a_science

(There is biology in evolution and there is biology fundamentally in my view, which I call Ethogram Theory. THUS, it helps, because in no theory are biology principles actually really central, as they are here.!) Go ahead now and see if this helps "thinking about theory" and evolutionary psychology.

How do psychologists effectively take into consideration their own limitations as they begin their study of behavior?

What other than "we stand on the shoulders of giants", and we look to find statistical significance, demonstrates actually knowing and taking responsibility for limitations? As you "stand on the shoulders", you must take responsibility for all you understand and use and do -- every bit. You have to find and truly justify all as right OR seek to correct it (engage in true existentialism); then specify and make explicit what the limitations are and how you take them into account. (It would be best if your answer stands congruent with the strongest, relevant, and most basic principles and clearly recognizes the best-established relevant findings in psychology thus far, whether explicitly related to your model or theory or not -- personally putting them into your proper perspective.)

I have provided my answer in

https://www.researchgate.net/post/Re_Theory_or_models_Why_is_there_no_concern_about_thinking_about_too_much

I am looking for OTHER ANSWERS (or do you not consider this important?)

Dear

My point was for those attempting to follow in the path of one of the major existing theories. It was to say that there are still extremely notable problems there, because of how the theories were formulated and those who follow one should come to see the problems and find ways to correct things. That was my point. (My critiques of the major existing theories can be found in "A Human Ethogram ..." in the "Human Ethology and Development" Project -- you can see there of what a grievous nature I see the problems to be. Some of the main problems, interestingly, are all of the same type: using conclusions or pre-conclusions as assumptions --

something I call "pseudo-assumptionism". This is something as wrongful as it sounds, yet in the nature of some core assumptions of the classic, and still existing, major theories. There are other problems like using unrelated models and reasoning by analogy and a short-term observation/study bias.) I should probably just have been more explicit about where I was "coming from" in trying to make the point (and have just said, in addition, what I now said here).)

Your point seems separate (but perhaps related). It is also a very good point but seems to be another major issue.

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Are there serious concerns about Evolutionary psychology?

I have seen a lot of "use" of evolutionary psychology, where the specific origins (forerunners) of the behavior, the processes related to the behavior ("then" and now), and/or the specific effects of the behaviors are NOT made clear -- sometimes not even clear in the speculations on the here-and-now end. (And, this is not to mention the proximate causes/mechanism of the behavior, as it actually occurs/occurred, then and now, OR understanding the ontogeny) Yet this thinking is supposed to be helpful !? I am an ethologist and I am saying this. While this kind of thinking may very much seem to be helpful in understanding behavior today, I find it more than dubious.

A lot of it seems to be conveniently imagined to bolster some view, but insufficiently grounded.

Tinbergen's famous 4 Questions suggests that an "integrative understanding of behaviour must include both a proximate and ultimate (functional) analysis of behaviour, as well as an understanding of both phylogenetic/developmental history and the operation of current mechanisms".(quote from Wikipedia).

How are the incomplete or largely unfounded inferences from evolution found acceptable?

Dear

I read a good part of the Article you referenced. Still, my concern is that until you "connect ALL the dots", that is, until you have all the aspects of what you see as likely connections to forerunner behavioral patterns,

fulfilling all the criteria I outline, in your conceptualization, the claims remain very suspect. I see some evolutionary explanations quite good and thorough and thus believable (and providing some testable hypotheses and thus some possibly useful isolated insights); others seem like mere stories; and most fall in-between. We just need to be clear on how much doubt or skepticism we should have about each evolutionary explanation we see (and have some suspicion of, and perspective on the limited value of, even the best). Again, I tried to outline something close to a full set of criteria that would indicate a good, believable and possible, and somehow partly testable evolutionary explanation. But even if all Tinbergen's 4 Questions (and a couple other things, noted in my Q-and-A concern) would seem to be fulfilled (which has not occurred with primates/humans) this still does not mean the explanation, and associated hypotheses, are very good because there is always some "story telling" component in how the one giving an "explanation" thinks things were in the past in our distant ancestors (and about how the behaviors in question are seen NOW).

Evolutionary explanations seem helpful but their connection to behavior, even with the best "stories" and with some connected research, seem less certain than speculations of the meaning of associations between cognitive events and activity in brain areas -- and the less certainty of evolutionary explanations is hard to improve on (whereas connections of behaviors to brain activity may well become more clear). And, to add to this criticism: findings related to evolutionary ideas about ("conceptualizations of") behaviors and related evolutionary hypotheses which have some support in research, provide little or no insights on how to integrate these outlooks-and-findings with other behavioral phenomenon, even where there basically must BE a relationship! Thus, ALL evolutionary explanations I am aware of have limited value and may end up yielding biases in how we see present human behavior (even with the best evolutionary explanations), and limitations which are hard or impossible to overcome.

In summary, today I see evolutionary "explanations", even at their best, as merely suggestive; while some research seems to bear them out, this is not research with remarkably strong or clear results AND there is that clear deficiency of lack of integrability with other findings and known likely-related behavioral phenomenon.

Still, I believe it is very worthwhile to look for likely and possible relationships between present behavior and the 'behavior patterns' likely shown by related creatures in the past because it provides basic insights into how we are likely like other creatures AND also keeps the issue of finding and seeing the adaptive nature of behaviors at the front of one's mind as a real and important consideration.

Maybe evolutionary hypotheses seem greatly bolstered by comparative psychology findings, and maybe they will be. But, as of yet, it has not been enough to loose the weaknesses of the evolutionary views themselves. Comparative work (comparative psychology) can stand more strongly on research (on actual empirical comparisons) and provides good and progressive understandings. This also yields the possibility of better evolutionary hypotheses, but this up-to-now has provided just a little more merit to related evolutionary hypotheses and to related findings in that field; the weaknesses remain.

Perhaps most importantly, it is a weakness of concern in OTHER perspectives where there is a total lack of any evolutionary connection indicated (or seen). Perhaps this is one of the greatest strengths of evolutionary perspectives today: to guide such views toward correction.

[Note: This view comes from an ethologist, who should like evolutionary views and explanations, and I do when they are put in proper perspective. Ethology strives to rightly see major basic behavior patterns operating according to biological principles and seeks great inter-rater reliability for each increment of progress in its behavioral research. A good ethological perspective seeks to be totally consistent with good comparative psychology results. Ethology sees behavior as contextualized by (and to some good extent, defined by) surrounding, associated behaviors. Good human ethology also stays consistent with all the strong consistent findings in psychology (esp. the strong findings about types and aspects of memory). Weaknesses in today's evolutionary perspectives have very little impact on ethology; we wish for good evolutionary explanations.]

Dear

[The parenthetical phrase "(which has not occurred with primates/humans)" was added at a key place in my answer to Espen A. Sjöberg]

It seems as if you have seen some findings "within the framework of evolutionary psychology" that do not rely for their claims on absolutely thorough evolutionary theory. I fully understand and agree, so have I -- at least several times (in the work of de Waal et al, for example). Of course, findings are findings, and some that are put in the evolutionary framework do not rely on it for some good value in themselves (to say the least). Yet, at times, some related evolutionary hypotheses prove quite fruitful, but this is after-the-facts. Given the high quality nature of some findings in-context they strongly suggest the long-time adaptive nature (and existence across species) of some clear type of behavior; with such phenomenon well-observed and documented in nature, the adaptation value of the behaviors, is rather clear (and sometimes it is rather clear there may be similar likely-related results about behavior in related species -- and there are cases where that has been found). But here (and, I think always), I give more credit for simply acknowledging evolution, when clearly observing behavior well and seeing it well in context, than to any evolutionary theory. To me there are evolutionary hypotheses that likely bear out, rather than ever any good full-fledged evolutionary theory. Unless approaches change radically, I doubt if there is ever any more than isolated, evolutionary hypotheses that bear good "fruit" with respect to primates/humans; anything else which relies on 'the theory' to even see the phenomenon in the evolutionary perspective will be very crude because it cannot live up to the standards a good evolutionary theory would have to have (outlined in my previous posts).

It is those motivated to hunt for new behavior not so-well-documented and observed, by thinking in "terms of evolution" that gets irritating (e.g. like Desmond Morris and several others). For those with good findings, the evolutionary angle simply is just strongly suggested (and seems quite apparent) and is almost like an add-on to the great observations and findings such researchers have made which stand well by themselves. My point: It seems ONLY findings that stand-well by themselves lend themselves to a good evolutionary perspective, where some evolutionary hypotheses may seem likely true AND are useful (associated with other or additional findings). After some good findings, which can be seen evolutionarily, I have also seen where some additional evolutionary hypothesizing generates looking for other results, in other species and/or the same species, and that ends up in similarly good findings. So, evolutionary hypotheses seem quite helpful when associated with good comparative research**. But, what of evolutionary theory itself?: NOT MUCH TO SAY.

[** FOOTNOTE: I do believe I have given a fairer characterization of comparative psychology here and how it does generate good, useful evolutionary hypotheses (and even good evidence for them), than in my last post, where I was so strictly and unreasonably focused on good [overall] evolutionary theory.]

I do think IF you could fully show all the points needed to really well justify an evolutionary theory of behavior it would and could fit well into one paper. I do think that fulfilling all requirements for a thorough outlook for a good evolutionary theory of sets of well-observed and well-documented behaviors, seen as likely long-existent in many species over much time, is likely impossible with respect to humans/primates and I have never seen that, nor do I expect to anytime soon *** (see FOOTNOTE, at bottom). [It is likely I indicated in my last essay, that I had seen more related to some well-developed evolutionary theory, than I have. I don't believe a good full-blown human evolutionary theory is, at present, possible and I have never seen sets of results on primates corresponding to that -- in fact, just interesting added speculations around some sets of likely-true hypotheses. As you indicated with your point (3) (and you are correct): I cannot present any true example in conformance with all the theory criteria -- not in humans (or primates), anyway (not even close), and it is humans/primates towards which my criticisms are skewed. (In contrast, some old-time classical ethology with other animals is quite impressive, even in getting towards a decent evolutionary theory, of at least some behaviors (see Eibl-Eibesfeldt's Ethology, The Biology of Behavior pp.1 - 215, the best of any research, with journal citations found there) -- I do not see so much done so well today, but that is possibly, in part, because I focus on primates; it is the great animal studies I just cited the reference to that give me the idea that good evolutionary theory is sometimes possible and worth talking about, and not just a totally impossible ideal).]

There are other areas of psychology I see as almost as crude as looking to tell a full evolutionary story of behavior: much social psychology seems quite crude almost all the time (maybe all the time). There is inadequate theory for the approaches to understanding for social psychology -- at least all I have seen, and that is a LOT (they made me teach it a couple of times). So, poor theory (or lack of real theory) is not unique to evolution. (Let's see if I can get social psychologists mad at me too now.)

BUT ALSO:

I do not even enjoy much (if any) human ethology nowadays, because there is no good theory. Here, though, it is because they do not abide by good methods like the classical ethologists (they COULD !!); with scrupulous methods and abiding by/with biological principles, there could be good theory: I offer the outline of one which could develop in "A Human Ethogram ..." (a paper associated with the "Human Ethology and Development" Project). Needlessly, nowadays: Too much "ethological" thinking is by-analogy or by inference from crude premises (some is even much like "evolutionary theory" or is that). And, often, views of phenomenon (behavior) are greatly specialized and even idiosyncratic.

[P.S. I have done psychological research. I also taught college psychology for over 10 years, and I think of thoughtful, library-researching teachers as psychologists too (library research is research). I am author of "A Human Ethogram ..." in my "Human Ethology and Development" Project. I do take, as a cautionary note, that I have not, in this thread, hunted down specific examples, like perhaps I should have. Hopefully, though, I have more clearly and properly described and characterized the research in this present post, than in my last.]

*** FOOTNOTE: That is until a good ethological theory like I outline in "A Human Ethogram ..." in the "Human Ethology and Development" Project is flushed out and elaborated. If this happens, human evolutionary theory may progress.

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Would you like to take up the research on a well-founded and well-grounded ethological cognitive-developmental theory (eye-tracking tech. required)?

Would you like to take up the research on a well-founded and well-grounded ethological human cognitive-developmental theory (which I call Ethogram Theory)?

In particular: the work of testing its hypotheses. The hypotheses have only recently become research-able, since they require the new eye-tracking technology. [The author of the theory formulated the theory over

thirty years ago and is now re-presenting it to the science (psychology) community, since it has just now become testable and, hopefully, verifiable.]

The author is now retired and has neither the technology nor any ability to do this research, and thus must find a new main, head (lead) Collaborator (for the "Human Ethology and Development" Project, with which the main theoretical papers are associated) to finish the work, just described above.

As it is said in the latest (03/01/2017) Log entry, under the "Human Ethology and Development" Project: (quoting that, in part, and somewhat paraphrasing):

A hands-on, true Main Collaborator / Eye-Tracking Researcher is needed for THIS Human Ethology and Development Project, to test the hypotheses generated by the "A Human Ethogram ..." paper (and its associated paper, "Information Processing Theory and Perspectives on Development (ethology) ...").

Since this work -- actual research using the new eye-tracking technology -- cannot be done by the author (the initial "Collaborator"), another person is necessary for the Project to proceed, for the Project to bear "fruit".

The knowledge base and theoretical background of the person for this position can be known by reading the major papers of this Project (References) and also finding all the essays the Project author has written here on researchgate.net (get this additional perspective by reading the Log items below (and also go to the 'targets' of the links found therein); and go to the author's Profile, and then to Contributions, to read all the Questions-and-Answers associated with the author, as well).

If good research results are found, the researcher would likely be very well-rewarded.

Thanks for all considerations. (end quote of 03/01/2017 Log item)

<https://www.researchgate.net/project/Human-Ethology-and-Development>

Re: In what sense, if any, can psychology be a science?

You can surely try to do psychology in a completely empirical way, and likely reliably and validly discover the systems -- that is science. To start: Recognize behavior as biological (like the functioning of the lungs, etc.); have a system that expressly has biological assumptions as a foundation. Then, try to see all that might be most relevant to get a valid (real) broad outline of the phenomenon of human behavior (the major "containing behaviors" -- to which other behaviors appear to certainly relate).

I propose here looking for the foundations of qualitative change (cognitive developmental stages) in perceptual (perceptual/attentional) shifts (that is all that is needed as they "come up" in an already adaptive behavioral complex/context). Do this in an absolutely empirical way by looking in eye-tracking data for the real bases of each major qualitatively different sort of categorization/conceptualization that we do; recognize that the ultimate bases of everything that develops, including our most prized abstract conceptual abilities, are very likely and potentially observable, i.e. concrete (in their inception), using the new eye-tracking technology. Maintain the highest inter-rater reliabilities for what you see/find.

Abandon all useless or unsupported dualisms like nature/nurture and stages vs. continuous development: abandon them for looking to see!! Know that it is indeed possible for learning and innate guidance to occur (in effect) simultaneously -- this has been argued for by the best thinkers for 40 years. Recognize that there are qualitative changes (or shifts) and do not get "hung up" on whether they appear rather abruptly (stages) or seem part of some continuous process. [I would like to add: avoid unsupported presumptions. A big example here is the idea that the more "advanced" an organism is, the more learning there is AND the less innate guidance -- the last part of this "belief" has no basis in any good science. There is no such thing as "pure learning", NONE !]

Look, look, look. You have the technology to see and to find patterns (its called "eye-tracking" technology and "computer programs", respectively). If you do not try what I have outlined, then you have NOT tried and may very well never have good science or real science (that could well be your consequence). Are you an empiricist or not?; this will determine if you are a scientist. Try empiricism! I have outlined the WAY for you.: See the

paper,

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses?ev=project, and see the "Human Ethology and Development" Project, <https://www.researchgate.net/project/Human-Ethology-and-Development>

(Reading the essays underneath the "Human Ethology and Development" Project will give you any further needed perspective (e.g. on memory capacities) -- see advice in the latest Log entry of this Project.)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

I must disagree with you when you say "scientific psychology is not an infant discipline". It is no wonder you are "off", you miss the clear specifics of what is wrong: (1) theories of development (and personality) are not expressly of a biological nature, where they show abidance with biological PRINCIPLES -- that is one thing that should be considered STEP ONE to having a decent (or mature) theory of behavior; (2) psychologists continue to falsely dicotomize nature and nurture when the best minds have said this is NOT the way it should be considered (for decades) -- so this is another feature of poor/immature theory (in particular, today's typical psychologists have NO conceptualization of innate factors and learning happening at exactly the same time (SIMULTANEOUSLY), when that may be precisely what's needed -- AND psychology provides no way NOT to rule out this likely truism, though psychology has only the support of philosophy and NOT the support of research for its beliefs); (3) there is still a presumption that all innate factors in behavior are present in infancy (and there is absolutely NO evidence that this is true) -- failing to do any reasonable investigations to prove or disprove this assertion, makes psychology a crude and immature discipline. (4) There is the baseless assertion that the more "advanced" an organism, the LESS innate guidance -- again, there is absolutely no reason to believe this (and until put to the test, and this limits conceptualizations and TESTS of modern "theories").

In short, psychology is a "victim" of presumptions and false assumptions (and actually often accepting CONCLUSIONS as basic assumptions), as fully shown in "A Human Ethogram ...". NO perspective of this nature could be considered other than poor and in an "infant state". Another clue for you: researchers and good theorists do NOT do the defining; the subject matter, well-observed, provides your definitions (just as in other sciences). This should count as MAJOR start-off failure (5)!! Thinking YOU must predetermine so much makes me think : old-time philosopher, NOT A SCIENTIST. (Looks like you want to start up yet another seemingly intuitive hypothetico-deductive system, this time using "intention"/"orientation". Hey, start with some good inductive work and forget about hypothetico-deductive systems UNTIL CLEARLY NEEDED.)

What you cite is pure "party line" B.S. I have, just above, provided the basis for a counter to your claims. My complaints are clear and very specific (as opposed to your characterizations). Alternatively, I might ask: "what have you been smokin'?"; but to be more constructive, I will just note again that your arguments are empty (vacuous) -- which basically say: "Things have been unclear." "Things are hard." (Things are harder to do when totally done wrong!)

In summary, psychology has bi-passed basic tests of its foundational beliefs (I shall not even dignify with calling these assumptions -- because there really has been NO REASONABLE TRY to find and set well-founded assumptions and no tests show that the presumptions adopted are correct (or otherwise); WHERE THE "ASSUMPTIONS" CAME FROM IS WRONG).

My initial Question[-and-Answer] outlines the way of and to good science -- clearly!

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

How about a perspective that does not describe ANY learning process in all-abstract terms, even for the most abstract conceptualizations!? This might be best for a machine. Even abstract conceptualizations are thought to have a concrete basis (based in perceptual (perceptual/attentional) shifts) at their inception according to Ethogram Theory: SEE: _

https://www.researchgate.net/post/Re_In_what_sense_if_any_can_psychology_be_a_science

About science in psychology: I would like to refer you to Brad Jesness' most recent Answer to

" Is it sensible to reward good research by using citation counts as a metric? "

(
https://www.researchgate.net/post/Is_it_sensible_to_reward_good_research_by_using_citation_counts_as_a_metric)

:

https://www.researchgate.net/post/Is_it_sensible_to_reward_good_research_by_using_citation_counts_as_a_metric#view=58c9e3e7dc332dd10c7a4547

Do philosophers sub-serve psychologists and are they dependent on psychologists' views?

It seems often that philosophers are "hemmed in" by the 'parameters' of the views of psychologists OR is it the other way around? (or both)? (likely both). In any case, philosophers seem to only be able to "tweak" the views of psychology, even in the gravest instances of theory failure. Let me refer you to a thread:

https://www.researchgate.net/post/Re_In_what_sense_if_any_can_psychology_be_a_science

(the top 5 posts in this thread -- is this an instance)

Dear

"Spiritual development" (as it is meaningful at all) refers to continuing and continuous personal development (betterment) -- nothing super natural (like extra sensory perception) in this definition. Other definitions are simply unintelligible. In the interest of rationality (and of decency), I can submit that there is a prescribed path for personal 'spiritual' development which is entirely rational, and realistic (based in the actual, real world): it can be argued (and HAS been argued) that this is the real CORE OF BUDDHISM -- the actual interpret-able meaning of ALL the words of the historical Buddha. Having read all of these words (but for the book of special instructions just for monks), I can testify to this and HAVE. See the "Core Buddhism" Project:

<https://www.researchgate.net/project/Core-Buddhism>

[Show me someone who [supposedly considers and] "thinks of everything", and still has something in his/her mind, and I will show you someone who understands nothing. The essence (nature) of anything, at the core, IS the essence (nature) we give it, and that should be empty -- basically, to have/show no bias. The inherent nature of every thing (concrete, or at whatever conceptual level 'IT' is) is emptiness (<-- used as an adjective, i.e. NOT nothing, but more like available potential). For more see: <http://mynichecomp.com/paradox.html>. NOTE: I admit that several of the Buddha's claims about the nature of personal development may seem strange and have not been proven -- but I support only that (of the Buddha) which seems consistent and helpful AND which is potentially testable and supportable.]

Dear

I agree basically agree with a good part of your last sentence : Buddhism rejects dualisms (<-- but note the added plural) and supports atheism.

That's all good.

Because things have gotten off on just one track, I would hope to get back to the perhaps clearer issue AND to the overall issue, so I will repeat the basic question:

Do philosophers sub-serve psychologists and are they dependent on psychologists' views?

[Note: the issue is not about what distinction philosophy and psychology have in their basic definitions, but IN PRACTICE: how much does one depend on (and/or is limited by) the OTHER. Let's try to address this matter (which seems very important to me).]

What I am truly "driving at" is how did we get in the following MESS ? :

https://www.researchgate.net/post/Re_In_what_sense_if_any_can_psychology_be_a_science#view=58bf1513f7b67ed4a21dba92

WHEN, available to us is: the top post of_

https://www.researchgate.net/post/Re_In_what_sense_if_any_can_psychology_be_a_science (a great foundational rationale for human ethology -- and an ethogram)

[Please address responses directly related to the overall question via salutation "Dear Brad Jesness" OR otherwise indicate that your intent is to try to answer the whole question.]

Why do "imaginable-that-it-can-happen because it is imaginable-that-it-could-happen" models seem so popular?

Why do "imaginable-that-it-can-happen because it is imaginable-that-it-could-happen" models seem so popular? My answer: desperation. To wit:

We have more than one "imaginable-that-it-can-happen because it is imaginable-that-it-could-happen" type of model (including some thrown-in-as-needed algorithms -- just a few (so, ok??)). What happened to the environment?; what happened to ecology and ecological validity (not to mention test-ability: hypotheses to be proven or disproven)?? Lordy. Computer simulations will not "do" as proof of a partial and inherently limited set of strange explanations. Examples: _

https://www.researchgate.net/publication/312425067_A_narrative_in_three_acts_Using_combinations_of_image_schemas_to_model_events

(<-- I had to make a request for the full-text of this)

ALSO see: _

https://www.researchgate.net/publication/309333693_Desiderata_for_developmental_cognitive_architectures

(the full-text is already available on this one)

Better to find capacities with always some same nature and INVOLVE the environment. AND: look for likely (hypothesized) processes connecting the organism to the environment which directly enable new learning. _THEN_: ALL these hypotheses are testable* . The new learning is found and associated with such processes OR not. [(And (by the way), regarding the capacities which have constant characteristics, memory capacities in particular: much of the testing has already been done and the findings made!)] Only with this sort of situation and approach can hypotheses really be tested. Plus, improved explanations can be sought when one is not completely correct (and not just sought using imagination, analogies, etc.!). It is central to good theory to always expressly see the operation of biological principles in any systems of behavior hypothesized and in those found.

*FOOTNOTE: See my "A Human Ethogram ..." paper in the "Human Ethology and Development" Project (<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>) -- and see the 30 or so shorter essays connected to it via the Project Log, etc.

P.S. Isn't it strange that "ecological validity" is not even an official Topic yet on researchgate.net???

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Article [Desiderata for developmental cognitive architectures](#)

Article [A narrative in three acts: Using combinations of image schem...](#)

Dear

The desperation I was speaking of is that in the field of psychology. It was "my answer" to why there are so many terrible models ("imaginable-that-it-can-happen because it is imaginable-that-it-could-happen" models).

The real answers lie with basic (necessary !!) assumptions from Biology (for human behavior). Seeing those more and more true, or repeatedly very true, and in actual observations.

With Eye-tracking Technology and Computer-Assisted Data Analysis, couldn't important findings come up incidentally?

For example, with eye-tracking technology and computer-assisted data analysis, looking at numerous, extended sessions of real-time behavior: it is possible that IF THERE WAS A THEORY addressing real-time behavior, someone looking for some data supporting something ELSE could find data supporting that other theory on proximate causes and behavior patterns (e.g. such as addressed by "A Human Ethogram ..." , in the "Human Ethology and Development" Project).

AND, for example: If you couldn't chance testing Ethogram Theory (because of social/political pressures), you could still test it while doing real-time session monitoring to show something else (also using computer-assisted data analysis, of course).

So help out (it can be a secret) -- unless you find something, and then herald-in Ethogram Theory!

ALSO: Perhaps, realizing this potential, people will come up with more theories on proximate causes and real-time behavior patterns -- so this is NOT all about vested interests one person may have!

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

How Advanced does Artificial Intelligence have to be to Understand* the Human?

Perhaps, the answer is "not very"; it may be advanced enough now.

But, one may "lead a horse to water", but still it won't "drink".

If one thinks the science of humans is possible and one develops a science, do you really think "only we" can do it? (You can not believe, which is common, OR you can set yourself up to fail to develop a science, which is common, _OR_ what "we can do", " 'they' can do".)

[You really did/do not think we are that 'smart' did/do you ?? (Don't worry, we're in charge -- for now; on the other hand, "how's this workin' out for us"?)]

****FOOTNOTE** (added 9:45 CST 03-14-2017) in response to a question: You can take my use of "understand" HERE to mean: 'able to replicate'.

[Off-Topic NOTE to reseachgate.net users: I almost always have to come back to a post about a day later to take care of very strange additions and deletions to the Topics a post is placed under -- most assuredly we have one 'bad robot' here. (After redoing the Topics, about a day later -- so they are reasonable -- they then seem to stick.) (I have informed researchgate.net twice over the last several weeks.)]

Dear

You can take my use of "understand" HERE to mean: 'able to replicate'. Thanks for asking. (Having this more clear is important; I added a FOOTNOTE to the original post, providing this definition there as well.)

Dear

While honestly, I too have doubt over a complete simulation of a human, I would simply say (in response to your input) that we have to make the program so it is NOT "fixed". (The need for finding real process is also central in psychology, to develop the quasi-science of 'psychology' into a science, so there is something reasonable to try to replicate. How to find real process, or real patterns for that matter, still seem to be too much of a challenge for today's psychology; if you cannot take care of these problems insomuch as they have to do with your particular study in psychology, then you should STOP and take care of these matters before proceeding *. Think: empiricism; think proximate cause; think nature-AND-nurture. I could "plug" my human Ethogram Theory here again, as a good example -- but people, I think, are tired of my "plugs", no matter how relevant [; just click my name to find it, if interested].)

*Footnote: I actually think this should be a RULE and that psychologists and researchers should show they have done this before doing -- and certainly, before publishing -- their research, (We really should not have to "read between the lines", when psychology writers and researchers leave this implicit or simply assume their view is clear to all or already-agreed-upon. They would be "hanging" their assumptions "out" for all to see with this, but THIS is exactly what we need -- even if over-and-over-and-over ! It might be good if all asked themselves: "How I am like B.F. Skinner in form and outlook?; am I?")

Dear

As you re-iterated your point, I do understand what you mean and see your point. So, at least to some extent I must agree. Yet:

Still, code changes itself (of course, what I mean by this is some code changes other code), and programmers can update and improve this. Plus, can't we make it so the environment, itself, does some of this correcting? (I sure would be happy for a some insight into the answer to this last question.)

[I never was much of a programmer, but I was one so hopefully can have a bit of a realistic perspective. BUT, on the other hand, I have no particular insight (at all) into details on how something like Watson works. I most certainly respect your view and perhaps in no way substantially "disagree". P.S. As usual, I was really "carrying on" (in my response to you) mainly regarding problems with psychologists (I use anything as a pretense for that)

and I was not really disagreeing with you as much as you may have thought.]

Dear

Part of what I tried to say with my last answer is that I do not disagree. (I did go on to make a couple of remarks and ask an additional question I hope someone like you might answer: Can't we make it so the environment, itself, does some of the correcting of computer programming ?)

P.S. Even psychologists and I (me) can't come together. You have nothing to worry about in such a regard!!

Why just sensori-motor? : How about (at times) also memory capacities just working with that which is perceptual (or perceptual/attentional) [PERIOD]?

Why just sensori-motor? : How about at times (esp. later ages) also simply memory capacities working just with that which is perceptual (or perceptual/attentional) ? Forget imagining your own 'schemes'/'schemas'; why not let the SUBJECT define itself [and refrain from needless hypothetico-deductive stuff and from the homunculus (for surely your way will inevitably 'need' "executive processes" or "meta-cognition" or some such -- though it is "allowable" in modern psychology to let vague 'social learning' basically "play" these roles, so you may emphasize that.)]?

Agency tied to sensori-motor? I can only see just simply that making sense (TO YOU) because FOR THIS PRESENT TOPIC, that is all psychology allows!! What?, is this a game? Come on, psychologists: You typically do not limit OTHER phenomenon involving episodic memory and other types of memory to a sensori-motor base. Nor in other contexts you do not limit phenomenological experience to some such thing. Rather it often is something with memory doing the clear contextualizing and nothing directly sensorimotor about it (not in your sense of the term anyway)!! (And, what do you know, your schemes are not needed!)

Broaden out and do what you usually do, in answering "other questions". Do that, and then [also, sensibly] posit some innate guidance involved in new levels of conceptualization** during ontogeny and you will be "with me"-- and with the likely biological realities.

Come on enactive, embodied, embedded people! You now have the eye-tracking tools. Why not use some new sensible imagination about development?

** FOOTNOTE: Where does the abstract thinking come from, in your conceptualization? Is it just conjured up internally in the mind? THERE IS NO NEED FOR THAT! (Read final note below.)

Since you seem to be into Piaget, you know that one type of equilibration referred the balance between assimilation and accommodation; the OTHER type of equilibration Piaget referred to was the balance between staying in the current stage-mode OR advancing to the next stage (he said this "occurred with maturation", but never explained this; I do in the paper referenced below!).

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear Ezequiel Di Paolo

I put my response to your response there too. I hope people can find it.

(It is under your "Sensorimotor Life: An Enactive Proposal" Project, under a LOG item, and then under your reply to my first "reply" there -- specifically, under the "Table of Contents" LOG item. (The link to the Project is at the bottom of the top post of this thread.))

Dear Ezequiel Di Paolo

NOTE: I added to my response (Comment/Reply) (at that special location in the Project Log), about 7 or 8 hours after the first posting THERE -- a review of your (Di Paolo's) 2016 paper (about 4:30 CST US 03/22). (It is under

the listing of the Table of Contents of your forthcoming book, in the Log of the Project, like my first Comment/Reply)

Posting here (or no notice of the addition will show up).

Dear Ezequiel Di Paolo

This morning (03/23): I posted a new (another) Comment/Reply under one of the other Updates in the LOG of your Project (this one, specifically, under the Update showing the book cover) . (The update I refer to is in the log of the Project: <https://www.researchgate.net/project/Sensorimotor-Life-An-Enactive-Proposal>)

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Posting here (or no notice of the addition will show up).

What can "straighten out" the mess that psychology is?

What can "straighten out" the mess that psychology is? I believe it is by coming to realize that SEVERAL basic assumptions (actually, just totally unproven beliefs) are incorrect and the opposites are true.

You will see much/most of the following is the OPPOSITE of what your psychology professors tell you, but it can clearly be argued that all of the following are more in line with biology (organismic, if you like):

- 1) one should develop a theory expressly consistent with biological principles (e.g. homeostasis) -- it should clearly and, in effect, constantly show in the theory;
- 2) The most significant learnings and innate factors occur, in effect, completely simultaneously (and the innate factors at times may well be more important, regardless of the stage of development one is looking at);

- 3) Major innate guidance emerges with each significant qualitative advance in conceptual abilities (last one around adolescence, at the earliest);
- 4) The more "advanced" the organism, the more learning occurs, BUT ALSO the more [significant] innate guidance (factors) are involved;
- 5) Inductive work should be emphasized and hypothetico-deductive systems should be formulated ONLY when you must (and then with no loss or bias of/in observation)
- 6) Everything that develops, including our most prized abstract conceptual abilities, are very likely and potentially observable, concrete (in their inception) -- and likely seen as perceptual (perceptual/attentional) SHIFTS and adaptive biases. (This is the empirical assumption and the way it would happen with the organism adapting in its environment. NO abstract conceptual abilities emerge from just internal processes -- from just "thinking" in the brain/mind.)

None of the above indicates there is less learning (more if anything); but, there is no "pure" learning.

Seeing things this way totally frees one to be a thorough-going empiricist and to DISCOVER answers with key real-time observations of the subject. THIS "straightens out" psychology. The Subject can begin to provide the definitions and the related-definitions; research becomes a MUCH more inductive process.

It is true that some research may involve the new eye-tracking technology and software (but we have that now).

See especially:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

Dear

I don't "consider" anything myself (I do not "consider" in the sense, in YOUR sense, of ADDING-IN anything). Rather, the subject indicates what more is going on at each "turn". Period. But, you should see I am a developmentalist.. Ethogram Theory is inherently developmental: it outlines ontogeny and hypothesizes how to find key aspects -- in particular, the major shifts in perception and attention, and thus immediately then learning, that are the very embodiments of innate guidance during cognitive stage transitions of child development. Congruent with my statement about "adding-in": I do not presume to be able to GUESS at other things (like sociocultural aspects); rather (again) for me, ALL MUST BE DISCOVERED. Induction, NOT a priori ANYTHING: we must shed the inclination for coming up with and applying our own hypothetico-deductive

systems and basically do so only when forced to.

There is no earthly reason for a presumptive nature/nurture debate AND they are ALL presumptive. I am done with anything like that and you should be too. The major innate guidance factors determine the very nature of major learnings and, in effect, learning and these major innate factors (perceptual or perceptual/attentional shifts) literally occur SIMULTANEOUSLY -- as the very stage shifts (which ARE the perceptual or perceptual/attention shifts and the learning that follows on that), which occur with each cognitive stage transition.

You really did not see to 'see' what I was talking about (and perhaps just need to read more of the larger papers in the "Human Ethogram and Development" Project). In your statement your advice seemed to try to enforce much that I see as wrong, and in good part "parroted" the "party line". It obviously will be very hard for some (most?) to "shake off" the extreme presumptions that come with premature and preemptive hypothetico-deductive systems of just OUR OWN creation (created, probably from some basic Western philosophy) and adhered to simply blindly by tradition, AND based ON NO EVIDENCE.

Clearly I do agree with your statement "different subdisciplines [must] come together and devise some form of generalized or unified theory to explain learning and other well-known psychological phenomena". This is precisely what I am trying to present the core for and trying to get researchers to do.

But, obviously, I do see psychology as a mess -- and a needless mess. And, I have a lot of problems with a LOT of what "theorists" are trying to do. If you look at my Comment under a paper called "Desiderata for developmental cognitive architectures" you will find an example of me addressing some particulars of some trends in modern psychology I find destructive:

https://www.researchgate.net/publication/309333693_Desiderata_for_developmental_cognitive_architectures

Article Desiderata for developmental cognitive architectures

Evolution: Likely from least change needed, and easiest had?

[This essay ONLY addresses changes from evolution we can/could still see in behavior and is researchable -- provable or disprovable.]

Isn't it more than likely that evolutionary changes would come from changes in just what would be essentially necessary (that 'needed' to change), and that which is the most susceptible (easiest) to change?

If so, wouldn't it be LIKELY that cognitive developments could (and would) come from simple perceptual (perceptual/attentional) shifts? In an already-adaptive behavioral complex, what more would be needed to

enable representation and cognitive developments?; why (or how for that matter) would there be more that is needed? Thus wouldn't it be likely that that which makes apes (including humans) notably unique is cognitive abilities (essentially representational abilities) largely resulting from just these*?

[[By the way, I believe humans have generalized some of the perceptual shifts, yielding our more general use of conceptual abilities; we may also have a additional partial stage and stage resulting from similar perceptual shifts.]]

* Footnote: Carlos Montemayor (with Harry H. Haladjian) has cogently argued for 2 distinct sorts of perception: while one type show effects both ways (from it and on it); the other sort shows only "bottom up" effects. It is among the latter that the perceptual shifts I hypothesize occurred AND occur. (Don't mix up the two or pretend there is just one 'perception'.) I propose talk of such changes from evolution we can actually see (and still see)!! The rest is mere story-telling.

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Article [Perception and Cognition Are Largely Independent, but Still ...](#)

Are People willing to share where they think things are most-right in General Psychology (developmental or personality theories)?

I am asking because I see at least most of psychology as an embodiment of bad approaches: hinging clearly and mainly on intellectual speculations (heck, it seems as if philosophers do much of the work); formalizations (systems, frameworks, models) done in the abstract without added research and certainly lacking any key (foundational) research (sometimes even intentionally lacking in citing any process(es)); and presumptive/presumptuous positions (e.g. seeming to emphasize a "pure" type of learning and/or presuming all innate stuff is present in infancy). I am open to nominations of approaches clearly NOT in any of those categories (I am looking for maybe a bit better stuff to read). (And, P.S. I am not interested in any comparative or evolutionary 'approaches' that do not cite specific, clear and very-likely behaviors shown by past organisms OR clearly shown in another species AND specifically and presently shown in existing organism(s). And, please, nothing that is not empirically grounded in all key aspects OR potentially so, upon direct investigation(s).)

Let me say some words, not about applied psychology, but about research psychology (this, of course, is related to applied psychology):

I cannot understand why psychology researchers do research on what seem like specific predictions of a theory or model, when the necessary contextual factors (that in large part define any relevant or predicted behaviors) are not understood. This is to say that often a model's or theory's assumptions or general (and necessarily relevant) propositions are not well understood [factually, objectively (proven inter-rater reliability in understandings of definitions), and empirically]; yet researchers go ahead and do research on what they see as specific 'predictions' (often adding their own confounds, through their own skew on definitions, to this already-bad situation).

THEN: One should appreciate that it is NOT hard to show trends at $p < .05$. ** These are very weak results compared to hard sciences; and, even when compared to studies using inter-rater reliabilities, these are weak results (acceptable inter-rater reliabilities, when translated to correlation coefficients with their p-values, are much stronger results); in other words, the results of many (or perhaps most) studies in psychology would be seen to show unacceptably weak results for researchers like ethologists, using inter-rater reliabilities.

Then there is (understandably) a problem of replicability. A study (likely a meta-study) I have seen reported showed that less than half of a big block of psychology's published findings hold up in replication (in studies of the "same thing" as understood by other researchers). (I tried to find the report of this study again, but failed to find it quickly. Sorry. Perhaps someone else could cite it in this thread.) Anyway, many or most psychology studies have not only weak results, but are facile findings (not replicable, as understood).

See: <http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=3681&articleType=ArticleView&articleId=170> (this paper likely cites the study on lack of replicability, I referred to earlier, and provides a link to a nature.com site, where you can read it)

Another article you might look at: <https://psmag.com/where-does-bad-science-come-from-124b8318ecba#.rjgn1d3a>

Most psychology studies would be seen to be of a quality only useful probabilistically, like for insurance or advertising research purposes (and perhaps not even there, though it often is "profit from the margins"). ALL this relates to not establishing the basics -- as described in the first larger paragraph (above). Such a "science" will never clearly or well-integrate or progress.

** FOOTNOTE: AND: As many may know, with large sample sizes (Ns) just about any trend that seems likely will test out with $p < .05$. Here is an interesting quote from MeasuringU, a quantitative research company: "With

large sample sizes, you're virtually certain to see statistically significant results, in such situations it's important to interpret the size of the difference." (Meaningfulness of A SIZE of a difference may be something one could much better assess if the major relevant CONTEXT factors of the behaviors are understood -- no doubt related to making sure the model or theory is factual and understandable. There should be some assurance of ecological validity.)

BUT: Not finding a trend with large samples sizes might be informative. Large sample sizes no doubt help with the representativeness of ones sample to one's population of interest. So, there is some good to them.

How about embodied IN THE ENVIRONMENT, and not just one sphere?

There is a lot of popularity to embedded/embodied/enacted in new theorizing. What seems to be forgotten, in effect, is that it is fundamentally an individual [organism] 'embodied' in the environment, specifically as she/he "finds it" during ontogeny. We should NOT limit this to mainly one sphere of developmental influence in any undo way. Common examples of bad practice are limiting 'learning' to that which is social (or social learning) and/or 'making' language always key to a large part of it (when this is obviously not necessarily the case). Also, perspectives should not be self-limiting by presumptions: one clear example here is, in effect, 'assuming' all key innate features can be seen in infancy (or hypothetically very similarly sensorimotor based, basically: by analogy) -- there is no reason for such presumptions. Then, also, in modern theory, there is formalization of systems without proximate causes (supposed generally useful 'frameworks' adhering to no particular theory -- but, actually, greatly adhering to needless a priori assumptions). [I have addressed particular examples of each of these in some detail in Comment and Replies to particular approaches, here on researchgate.net.] There have also been plenty of information processing theories and some other perspectives basically founded on being like something else i.e. founded on analogy. If there are any other approaches of concern, I would be happy to be reminded of them, or learn about them.

All the above described is no good, because it is presumptuous and, at least to an notable or clear extent, unempirical (and also escaped or detached from the environment and only indirectly connected to the real environment (whatever that is) -- and then, needless to say, in an unclear way). Correspondingly, findings typically show just weak trends, not seen as adequate for any good science (fortunately there are exceptions, such as in some research on memory).

We need to define behavior as it relates to the environment, which we basically discover at the same time we discover behavior. How else could any human (researcher, theorist or not) keep knowledge "straight" and then have truly progressive knowledge, which we can then also keep "straight"? We are subject to the same

principles of learning and memory as other humans -- something that amounts to huge consideration for amassing knowledge or progressively understanding behavior.

One thing that should be considered is that no good science begins with a "closed" hypothetico-deductive way of viewing things (this can be seen as summarizing the vast majority of bad examples, such as above). This is the major sign, in general, of bad theory development. I want to argue we depend on inductive work until forced to take some explicit hypothetico-deductive stance.

Any theory that can be seen as not providing ecological validity should be seen as bad. No connection of biological functioning (e.g. behavior) to basic biological principles is also bad.

Any other nominations for 'bad' perspectives (models, frameworks, hypotheses, theories)? Any nominations for good approaches? How do we have and find the individual organism developing in the environment as a whole, as it really is? (Many know I have my hypotheses here, which are minimal and empirical; the possibly 'minimal needed' also requiring minimal presumptions, only necessary assumptions.) [P.S. Why is Deductive Reasoning an official Topic on researchgate.net , BUT not inductive reasoning? And this is not to mention 'ecological validity' -- still not an official topic on researchgate.net; where did that good topic go, it used to be big?]

[Attached, below, is an answer from ethology:]

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

About perception :

About perception -- we should remember that (as Montemayor et al have well-argued) that there are 2 sorts of perception: one which is influence-able "top down" (and some of which may also affect us "bottom-up") AND the other sort which is "bottom-up" only. Then, about the matter of the unconscious: Just about everything seeming to be in this category seems like it should be considered pre-conscious and could be made conscious under the right circumstance and/or with the right primes or prompts. Also, as such, I do not see why it couldn't affect perception, like about anything which-is-really-there might; but, one has to wonder if it can have an effect if not triggered (as I described above). (And also when it has an effect: how could you tell this from other reasons perceptions might change, for example: due to special context, mental and/or physical?). You can no doubt be conscious of something (as demonstrable by some research) and not notice it: it being basically conscious but only as part of what you have/'see' as context; no doubt one might consider this pre- conscious, because you did not deliberately bringing it to mind and you are not (at least at the start) thinking about it. It seems this could to at least sometimes influence newly perceived 'things' or things newly perceived, "new perceptions". It likely has some effect, or why is it there, but perhaps it is just memory-related.

(When I speculate, I try to cover "all the bases" -- as in a baseball metaphor).

Article: Perception and Cognition Are Largely Independent, but Still Affect Each Other in Systematic Ways:
Arguments from Evolution and the Consciousness-Attention Dissociation

Carlos Montemayor · Harry H. Haladjian

P.S. On the sad, twisted notions of embedded , embodied, and "enacted"

Look for one type of process or analogous processes supposedly involving just one type of mechanism (e.g. basically, oddly modified social learning) to account for all kinds of strange concepts related to "sensorimotor contingencies". Then you can sense the presumption and get clear signs that there is a disconnect from the environment. This garbage is based on unjustified 'assumptions' (actually: presumptions or CONCLUSIONS used as 'assumptions'). At the same time other real possibilities are ruled out by the closed hypothetico-deductive systems they devise. It's more like fairy tales than like science. EXAMPLE:

See my Comments (Replies) under Log items of the following Project, <https://www.researchgate.net/project/Sensorimotor-Life-An-Enactive-Proposal>, to see me take down one particular unempirical and bad theory. Also see my Question under that Project.

The real reasons they are forced to such a bizarre position for explanation is simply that it is NOT ALLOWED that one hypothesize (or even imagine) that there are significant innate behavior-guidance factors that occur during development after infancy, in spite of clear universal qualitative changes in the nature of concepts (in a regular sequence, near particular ages) during child development. How dumb and presumptuous can psychology researchers be?

How about embedded IN THE ENVIRONMENT, and not just one sphere?

There is a lot of popularity to embedded/embodied/enacted in new theorizing. What seems to be forgotten, in effect, is that it is fundamentally an individual [organism] 'embedded' in the environment, specifically as she/he "finds it" during ontogeny. We should NOT limit this to mainly one sphere of developmental influence in any undo way. Common examples of bad practice are limiting 'learning' to that which is social (or social learning) and/or 'making' language always key to a large part of it (when this is obviously not necessarily the case). Also, perspectives should not be self-limiting by presumptions: one clear example here is, in effect, 'assuming' all key innate features can be seen in infancy (or hypothetically very similarly sensorimotor based, basically: by

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Will someone just show me in behavior ONE SMC unambiguously "in action" after infancy?

Outside of infancy, it is at least largely nonsense, generated by stilted unimaginative psychologists with very poor bases and evidence for their theories. It is a fairy tale. Key required pieces of evidence can not be unambiguously shown -- and it is NOT because "behavior is so complex". And, in fact, the cause is very, very simple:

The real reasons such 'theorists' are forced to such bizarre positions for explanation is simply that it is NOT ALLOWED that one hypothesize (or even imagine) that there are significant innate behavior-guidance factors that occur during development after infancy, in spite of clear universal qualitative changes in the nature of concepts (in a regular sequence, near particular ages) during child development -- somehow adults always rise to the challenge of "engineering" these, all across the globe.

PLUS: Such other real possibilities (such as emerging innate-guidance factors) are ruled out by the closed hypothetico-deductive systems. Spare yourself a large waste of time, and see an alternate, more biological (and more biologically likely) account via the "Human Ethology and Development" Project. <-- There is no more evidence against this position than for theirs, basically NONE. BUT, if these ethological hypotheses are proven true by eye-tracking technology (which they could be), then things become more empirical and more clear. AND, yes, you heard correctly: the Ethogram Theory hypotheses are provable or disprovable, because the phenomenon indicated are not hopelessly ambiguous. The embodied, embedded, enacted 'theory' hypotheses ARE NOT PROVABLE OR DISPROVABLE because they ARE hopelessly ambiguous.

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

When we think about levels of human conceptual abilities, shouldn't we think of all apes?

[This post is actually another negative critique of current embodied development 'theories' (also sometimes referred to as 'embedded' or enactive 'theories').]

There are new 'theories' which posit (actually: imagine/presume) the centrality and key role of many rather strange and supposed social learning processes -- to somehow come out of Piaget's Sensorimotor Period (0 - 2 y.o) and keep having "sensorimotor contingencies" (SMC) central and key to our progressive conceptual understandings/abilities. (This is likely a presumption in large part due to refusing to believe that any innate guidance for learning and concept development occur after infancy -- in spite of their being NO evidence against such further emerging innate-guidance factors and that we have seen some such things in ethological studies of other mammals).

One very notable problem with this SMC-type theory (other than failing to have a link with biology and being impossible to prove or disprove) is that it seems to fail to be able to account for several similar conceptual abilities in other apes. For other apes just to understand the social structures of their social life (not to mention, creative forward-looking development of tools) would seem to certainly require SEVERAL of the levels of our developed conceptualization abilities.

THEN, the key question becomes: Do these 'theorists' see the same special key social learnings happening in these other apes? I bet these SMC 'theorists' would not say such occurs. But, if not, these apes get to their levels of conceptualization in some other ways! IF these other apes have their conceptual abilities develop other ways, we still need to know how. And, of course: if 'them', why not US too? (Readers of my "Human Ethology and Development" Project know my answer -- for ALL apes.)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

What are necessary features of good general psychology theory?

I am now going to go "out on a limb" and maximize my chances of looking stupid (if just because of omissions

or editorial errors): (these standards are not meant to be unrealistic):

Overview: If you cannot unambiguously show key, directly observable proximate causes indicating the clear (and, as far as you know certain) relevance of concepts in your theory _AND_ also show the present setting clearly addressed by your theory, _AND_ show the specific results predicted HERE by your theory: then the theory should be abandoned.

To try to be a bit more specific: (also, you will note that different statements below address different portions of ALL that must be present):

In the brief overview summary above, there are issues of proximate [(real, direct, observable)] causes, ALWAYS ONE OF WHICH AT ANY POINT IS REQUIRED: one or more specific (and specified) thing(s) causal of/for another _OR_ mechanisms possible AND seemingly objectively explainable from previous clear* direct observations and/or present observations _*AND*_ (in either case) presently associated with some key 'triggering' observable(s); _OR_, minimally, one or more specific, clear* thing(s) at least invariably associated with another *_AND_* THIS minimum WITH clear empirical (testable) hypotheses for discovering more about ALL of these external and internal factors cited as involved -- with the clear goal of yielding a good theory (as described above and below). (Having predicted effects is addressed in the statements below.)[* FOOTNOTE: 'clear' means proven, as always understood in the same way, as can be shown with excellent inter-rater reliabilities.]

If it is because the theory cannot, in ANY given context where it is necessarily relevant, show the hypothesized specific, directly-observable predictions, then it is wrong (bad theory). And/OR, if clear specific behavior(s) or pattern(s) of directly observable behavior which are necessarily in-line with the conceptualizations of the theory OR if the theory's specified consequences supposed to be present cannot be directly shown, both as when (in the flow of behavior) and as where (given specific, and specified, environmental features) they are supposed to occur, then the theory is wrong. If the actual (demonstrable and observably-proven) processes involved in building-up the conceptualizations in the theory (i.e. the how of the coming-to-be of the theory) cannot be indicated (at least that which is necessary SHOWN during closely related observable development specified) the theory is wrong. If related processes triggering the functioning of the related products of the theory cannot be shown in directly observable behavior (were/when) predicted and having the predicted effects, then the theory is wrong.

ANY ONE of these is/are enough to be fatal flaw(s) of a theory and indicate bad theory.

Obviously, if because of how it is built-up and/or because otherwise there is nothing without ambiguity, it is obviously built up wrong and it is wrong (bad theory). Very bad. (This kind of case is only particularly noted only

because it does not infrequently occur -- it clearly includes more than one of the fatal flaws.)

One of the motivations (and first "hopes") I have had is to be able to locate where everyone is in psychological conceptual space -- I think you'll know what I mean. (We all no doubt work hard and strive to do this on our own.) More clarity, needless to say, would likely be immensely helpful. It would also be nice to be able to gauge how "far along" different theories are, and know exactly what they are about, and judge their quality (and not just be forced to conclude and accept that others simply have untenable positions, though some may). Standards, such as I try to cite, would show if we can "live together" in psychological conceptual space. I think we should be able to (if we "shed" needless assumptions/conclusions and are more explicit about our procedures and assumptions/conclusions and where they "came from", doing so in an unambiguous manner).

I wrote this essay on theory very quickly, perhaps just barely (if) adequately inspired and barely (if) adequately mindful (I can tell you that it doesn't make me happy, but I don't know why). And I did not write it when I was at my best, but (as old as I am) cannot seem to do better today (though with any kind of prodding or inspiration, I may be able to do better -- or we can do better). By all means, if you can do altogether better or if you can offer any improvements, please do so. After all, this is supposed to be a Question. Re-write/add/replace all you don't like; this would not offend me (after all, my copy will still be there). It seems certain that some things still need to be expanded on, I think mainly for clarity and not so much for inclusiveness.

One of the points I was trying to make was that we even have to show the objective observable procedures in the composing of a theory, per se. In General (personality/developmental) Psychology, we are floating in the same "sea" as our subjects and others and all must be able to see where we are; all possible actual information relating to that must be shared; if the best you can do is the crude clearer "statement of assumptions", we'll have to settle for that -- but I, for one, want more.

To me, without strict standards and cautions and clear* and reported observations, we are just in large part playing around with philosophy (much like the many poorer philosophers do). And, though we can be guided by some philosophy, we are supposed to be better than that and clearly offer more, including clear findings that can be built upon. (We have the advantage of actual subjects we work with, that's why -- so no offense to those few philosophers I happen to like.)

How do YOU consider (and potentially come to see) significant innate guidance factors emerging well after infancy, and having their effects?

Dear Peter König

Can the 'action' associated with an instance of sensory processing just be a new aspect of perception (perception/attention) (and nothing else immediately overt)? In such cases, of course, there would be conscious processing/memory processing which is consequential -- and that at least in some way would manifest in OTHER behavior (though perhaps not immediately, but then systematically later). If you do not consider the possibility of an 'action' being just a new aspect of perception (perception/attention), you are failing to consider and look for somethings that could be seen with the new eye-tracking technology and computer-assisted patterns analysis. And, PERCEPTION (perception/attention) alone can very conceivably be the only immediately observable 'action'. You cannot leave this consideration out or you will be just philosophizing, in my view.

And, I would also predict your theory would lack coherence from a gap in its foundation. First off: one thing that would give us a BIG clue about whether you are willing to look for all actions is: do you accept the possibilities of very significant innate guidance factors (guidance to learning) coming into play (and detectable) ONLY well after infancy OR NOT?

Let us know.

You say: "We emphasize that "sensory processing" is about generating adaptive action right from the start." This gives me no comfort, unless you are open to ALL activities (all actions) and all possibilities for consequences (given the existence of our memory capacities and thought abilities). Let us know.

No one, of course, wants to view "sensory processing" in isolation, which makes no sense -- and I wonder how that could even be possible in behavioral science. BUT, you DO have to consider developed capacities and abilities enabling new ways of perceiving/attending (with the help of innate guidance, and which, by the way, need NOT be INHERENTLY SOCIAL in their nature) AND consider the subtle yet significant possible consequences (and then you would not be limited to artificial constructs presumptively modeled by-analogy on developments in the Sensorimotor Period (0-2 y.o)). To give you some needed comfort: I think new perceptual (perceptual/attentional) shifts would appear often (so repeatedly detectable with eye-tracking technology, etc.) AND, again, these would soon show other very overt effects in behavior (but NOT necessarily always immediately).

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Action first and then evaluation?

How is an organism going to well assess an action (or set of actions), specifically a sensorimotor contingency (sense - motor), if the action is just based on past-learned actions and present ("as is") perception? This question seems especially relevant when what is tested out by an individual is aspects of one's NEW incipient, nascent cognitive abilities. How can an organism even have any way to assess a new behavior (and let's not have the specialized tailored-to-fit-a-theory social learning always essential and thrown in -- which could not on this earth reliably occur with any organism anyway)? (Another argument I have made against elaborately tailored social learning explanations is: the other apes obviously do significant conceptualization (to understand social relationships and the hierarchy to mention some applications), yet I doubt anyone is going to attribute the advanced sorts of supposed social learning to them. (And, unlike with humans, conceptualization and thinking is MORE restricted to social things (typically) with them.))

Yet, quoting Konig:

"Additionally, the forward model is essential in error-based learning and mismatch detection - two main components to allow an adaptive behaviour. A mismatch between expected and perceived sensory effects during active manipulation allows to detect externally caused changes and to launch appropriate corrective actions. Self-learning and adaptation in a sensorimotor framework." (end quote)

The individual of your conceptualization must, in effect, IN ADVANCE, know what he is "looking for" as a result of action (or somehow literally "sense" it) **. This is not a problem if it is innately guided perception/attention (which guides learning, as it occurs at key points) and which yields (or at least rather soon yields) better other capabilities, AND here there is little decision or evaluation to make -- perhaps just consistency with existing cognitive abilities and with memory:

He's guided; he does (still using all the "old stuff" that is relevant he has); he "likes"; it works. Doesn't this seem phenomenologically correct? No need for hard-math in the head for everything.

** FOOTNOTE: Otherwise (just regarding this one point), you better take representation (and not just of the subject's actions and sensations) BACK INTO YOUR SYSTEM -- big time, big time.

Also see:

[https://www.researchgate.net/post/How do YOU consider and potentially come to see significant innate guidance factors emerging well after infancy and having their effects](https://www.researchgate.net/post/How_do_YOU_consider_and_potentially_come_to_see_significant_innate_guidance_factors_emerging_well_after_infancy_and_having_their_effects)

A Humann Ethogram: Its Scientific Acceptability and Importance (now NEW, because new technology allows investigation of the hypotheses)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Do you know why Piaget himself would NOT approve of Sensorimotor Contingency Theories?

At least most (if not all) of the Sensorimotor Contingency 'theorists' have as their inspiration and foundation the clear 6 sub-stages of developments that occur during Piaget's Sensori-motor Period [his first of at least 4 Periods (stages) of qualitatively different thinking shown, according to his Child Development theory **]. BUT: Piaget himself would not back any notion of just the extension of the sensorimotor processes and developments of the Sensorimotor Period (nor anything simply based on analogous developments) to account for all of the stages of child development.

THE REASON IS: Piaget thought the stages associated with his Periods of development (the last stage coming around adolescence) were all individually real (and represented real qualitative changes associated with different processes): qualitative differences in the way children thought, due to "maturation". Correspondingly there was a second form of equilibration defined by Piaget, other than the that "balancing" of assimilation and accommodation; this second sort of equilibration was the basically biological "balancing" between continuing with the same major sort of thinking OR progressing to the next stage of thinking. Unfortunately, he did NOT define the causes for these real stage shifts other than to say they came "with maturation" and were qualitatively different -- and they were real, somehow biologically based shifts.

Thus, it is fair to say that because Piaget thought the stages (periods) were real and qualitatively distinct, just citing learning (even the beloved, imaginative sorts of 'social learning') and the processes and mechanisms of his first stage (and somehow expanding on those) would most definitely NOT BE SEEN AS any SUFFICIENT sort of cause(s) to explain all the behavioral develops during ontogeny (child development).

It is important for people to realize this because some (maybe much) of the credibility of SMC theorists and their theories comes from appearing just to "build on" Piaget. They most certainly do not and he would NOT back any of them. See: *Equilibration of Cognitive Structures: The Central Problem of Intellectual Development* by Jean Piaget (1985-05-23)

**** FOOTNOTE:** Many, including neo-Piagetians, see and define 5 stages of cognitive development during childhood.

Ideas on at least some of the fundamental bases for the stages of child development have been put forward (see the publication attached to this essay):

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Can't goal-directed mathematics artificially add patterning and, with those added patterns, make associated 'findings' and premises just SEEM true?

I am no mathematician, with only 2 years of college math. But it seems to me that you can provide the patterns through mathematics that would appear to allow much-less-than-accurate premises, and associated 'facts', and processes to appear to "work". It seems to me one could substantially add as needed to make a lot of things "work" (with/in the math you use). In certain cases much more is surreptitiously added TO other premises, based really on nothing but the added-in patterns in the math itself.

It seems to me therefore that it would always take more than added math, when it is NOT just clearly descriptive math, matching true agreed-upon observable empirical findings. Otherwise you are in a real sense cheating in seeming to make your basic view of processes and events and hypothesized progressive sequences seem to have a real true fit with events, and this would be most certainly and especially be true if your organism (subject) cannot likely or possibly be using and doing such math -- in any way. It would have to be grounded or well-founded in the organism for math to describe and to really be appropriate and truly indicate a set of working mechanisms, actually there.

In short, any math not clearly simply descriptive (of phenomenon otherwise seen) guides and alters processes and cannot be considered anything but a confound, if not justified by aligning with independent observation.

You are, in such bad cases, not describing something with math, but adding patternings that may very well in no sense be there -- it is like an alternate "explanation" of a problem (and there is often more than one way to solve a problem). True, I think eventually such math might not (or would not) completely work to bolster your concepts otherwise, but could seem to work to yield all you are after for a long time and could make you quite "happy" if what you are after is limited -- and not really organismic.

For an example of an apparent bad example see: Self-learning and adaptation in a sensorimotor framework (https://www.researchgate.net/publication/289587870_Self-learning_and_adaptation_in_a_sensorimotor_framework) and associated works like it in the following project: <https://www.researchgate.net/project/Socializing-Sensorimotor-Contingencies-socSMCs>

Article [Self-learning and adaptation in a sensorimotor framework](#)

Is it possible that there is enough new technology that psychology should start over?

I am thinking mainly about eye-tracking technology and computer-assisted (analysis) software. If the real basics or core bases of psychology (or psychology during development) can only NOW possibly be seen (using such technology), shouldn't that warrant at least some seeing what happens if they start over? Likely nothing would be lost (just perhaps reframed).

I would submit that after infancy or early childhood, perceptual/attentional changes may BE, at significant times, the critical ACTION that guides development (with nothing else or nearly nothing else observable). Can anyone really say this could not be the case? This would be the foundation of a truly empirical approach (something, it can be argued, does not presently exist).

It just so happens that a biologically-based and fully biologically consistent theory hypothesizes just that (in some sense it can only speak of the major results of perceptual "shifts" -- simply because they are yet to be seen as they actually are). (This theory also allows connections with present findings and likely future findings in comparative psychology.)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Your view seems high agreeable to and congruent with papers in "Human Ethology and Development"; is this true?

Re: New evidence for perception as a "smart" perceptual mechanism :

You should find much of my writing here on researchgate AND especially the 2 longest papers available via the "Human Ethology and Development" Project AS "music to your ears". Try them all out, just for the sake of completion.

Asked in project:

New evidence for perception as a "smart" perceptual...

Doesn't a true empiricist start with the observable and at all times try to stay with the observable?

Really, when you think of the hard sciences being "empirical", isn't this what seems to be at the core true?: a true empiricist starts with the observable and at all times [in a very real sense] tries to stay with the observable. AND : If you depart from the observable, you must say so AND indicate why and also when and how you plan to return to the observable (over this whole process: in a demonstrable way leaving nothing important out -- and thus _essentially_ leave NONE of the OBSERVABLES out)!

I believe my "Human Ethology and Development" Project and approach is empirical in this way (and I am likely the most empirically-based psychologist you could find). It makes me a bit nervous to put it in this way, but if this is how it truly looks to me I most surely ought to say so.

SEE: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> (the central paper is linked to below).

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

You prove the "observable state" with very high inter-rater reliabilities, so that really takes care of that and is not a problem. In a real way objectivity is just real empirical phenomenon demonstrably seen in the same way, in other words: good communication.

Your theory will also have to have good validity (somehow) as well, to progress; validity involves logical consistency with a well-founded theory (abiding by necessary assumptions, but no needless ones), and not developed prematurely* AND with real representative-ness with the actual behavioral patterns and behavioral systems shown by the organism (again, with good inter-rater agreement show here also).

*FOOTNOTE: I am convinced, especially with behavioral science, much inductive work should be done and hypothetico-deductive theories should be formulated only when absolutely necessary.

Dear

I am happy to exclude paleontology and several other fields of study (including at least most evolutionary psychology) from being considered science. The definition of science cannot be compromised by other fields of study hoping they have so much to offer that they are sciences, when they are not. Just being systematic is not sufficient.

Dear

The vast majority of findings in animal ethology resulted from inductive work. I would challenge you to provide any bases for or evidence of : your idea that "induction... is pretty feeble". I think most philosophers have an "axe to grind" (I can see that bias and it seems ridiculous) and they have little to offer -- why wouldn't this be the case since THEY WORK WITH NOTHING?!

About your outlook, I say: What a horrible Western outlook. What is feeble is premature deductive systems (aka hypothetico-deductive systems). And, this is basically ALL OF PSYCHOLOGY. I have shown IN GREAT DETAIL (and I believe in an incontrovertible way) that all major personality/developmental/general psychology theories are corrupt, with serious unjustified presumptions and USING CONCLUSIONS AS ASSUMPTIONS. Hopelessly

corrupt to the point of being very quickly useless. See: attached paper, where I will convincingly show this pseudo-assumptionism beyond doubt _and_ the horrible consequences (and where I also provide a real science alternative):

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Can the influence of 'cultural factors' be directly studied scientifically?

I very much doubt that the influence of 'cultural factors' can be studied in any direct or scientific way. I doubt one could get any excellent inter-rater reliabilities on 'cultural factors' (definitions) (or their influences).

It seems to me that studying the individual subject will result in finding any real influences of 'cultural factors' . But, otherwise seeing statistics on such factors as meaning anything people can agree upon (and understand the same way) seems very unlikely. At least most theorists who offer explanations from several "levels of analysis" are simply just speculating: it is THEY who are determining/defining how things "come together" (and NOT the organism via clear, hopefully universal, findings <-- which is always when, where, and how findings on systems should be seen as "coming together").

Mis-understanding the nature of 'abstraction' leads psychologists to take 'the lead' (inappropriately) in defining the nature of 'abstract' concepts?

One matter that has NOT been answered (and I couldn't care less about Kant and other philosophers) : Does each major qualitative type of abstract level of concept (hierarchically observable and definable) HAVE an organismic overt behavioral correspondent 'action(s)' key to its development? I say: yes: it is the periodic emergence of perceptual (perceptual/attentional) "shifts" which ARE new overt 'actions' (themselves) influencing new learning (and, with that, a new level of concept development). [I believe these perceptual shifts in later childhood (beginning just past toddler-hood, at the latest, and definitely emerging as late as adolescence) may be the ONLY overt, behavioral aspects -- BUT THIS IS OVERT, THIS IS BEHAVIORAL: we can come to SEE them and understand them. It may well involve the use of new eye-tracking technology and computer-assisted analysis software, but it IS NOW doable. These "perceptual shifts" will have to be understood in the complex of behaviors, especially MEMORY CAPACITIES, we know have already developed (and which, at some time, showed overt counterparts --and that's how we KNOW these).]

I outline the major universal consequences and general nature of the "perceptual shifts" in my "A Human Ethogram ..." paper -- now NEW, because its hypotheses ONLY NOW are researchable and provable/disprovable.

Now back to the question, my thoughts on it: As long as we view abstraction as a result of ONLY internal cogitation of some kind (with the supposed help of hypothetical (but UNprovable) 'social learning' OR not), we will improperly define behaviors that should be defined through observation/study of the organism. THIS has to be resolved by us empiricists and psychologists once and for all.

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Isn't "hodge-podge" 'theory' development just obscuring real basic empirical questions to a hopeless extent?

My answer is "yes". Now I will describe the type of situations we have with these "hodge-podge" theories and it will be clear that questions about any basics have been buried, obscured, or forgotten:

I have noticed a cross-theory trend in new theories, where the 'theorists' gather all the pieces (or possibilities they would consider) for explanation and put them together using supposed good rationality -- actually, using their favorite philosophy and/OR supposed-"common sense" -- to fit everything together, to 'engineer' their overall "design" of explanation. The result of this is always ambiguous and/or confounding to such an extent that the theories are not even understandable and they are often (and sometimes it seems, completely) VERY far from having needed hypotheses that are directly testable -- thus the 'theories' certainly cannot be proven or disproven.

This is true with all the embedded theories (sensorimotor contingencies theories and enactment theory) AND is true with Relational Developmental Systems 'Theories' * (including the 'Bioecological Approach' and sociocultural theory) -- where in spite of the thorough and believable 'stories told' about development and personality, it is the 'researchers'/'theorists' who do ALL THE 'RELATING' , relating all the different supposed 'levels' of factors that affect development and come together to form a mature person. More regarding RDS 'theories': only very, very small pieces could be empirically tested and this has VERY little or no bearing on the whole "story" ("theory"); thus the complex of factors and how they actually come together is UNTESTABLE (there are few if any unique clear, testable hypotheses "in there" somewhere that could be considered noteworthy, and these are disjointed).

It is quite a similar (or maybe worse) case with embedded and SMC theories** where the 'theorists' gather all the pieces (or possibilities they would consider) for explanation and put them together themselves (no need for Subject involvement, though research -- quite a lot of disparate non-theory-related research -- is cited to seem to bolster the case for the "system" of whatever SET OF embodiment people have formed a particular group of collaborators. I have never seen any research findings directly bearing on their propositions -- which vary notably to some extent from group to group, but always, after infancy, involve some magical 'social learning' (<- this is because they, for NO empirical reasons, reject the emergence of any clear and significant innate factors for guiding learning after infancy or toddlerhood -- which is also true of RDS 'theory' adherents). (It would take a monastery to teach the system-of-thought to others, and still no one would be able to reliably apply it and certainly no one could get any direct findings.)

The common thing is that no one could even replicate an oral exposition of the details of these 'theories' and likely be saying or talking about the same thing [because it is really utterly ambiguous or unknown what the 'thing' (whatever real biological system and patterns observable there may be) is OR what even vague only-hopefully-plausible organismic processes are involved AT ALL].

*FOOTNOTE: One good point of "news": I have written to a lot of theorists or researchers using the Relational Developmental Systems 'Theories', and the LARGE MAJORITY of those who responded declared out-right: "RDS 'theory' is not really a theory, but just a framework" -- somewhere between several and many responded exactly this way. Why they still like it when the processes of putting the 'stories' together, where whatever underlying assumptions they are using are completely and absolutely obscured -- and at least mainly unknown to any reader -- is anybody's guess. (For a good example of such bad examples, you can see: a book, *Developmental Science -- An Advanced Textbook* (supposedly 7th edition -- but it seems 'uniquely' unique), Bornstein and Lamb, editors (Psychology Press, 2015). It contains a lot of essays, by a lot of RDS 'theorists', seeming somehow similar and perhaps giving some vague impression of congruence -- but nothing real. I read a few hundred pages of this, until I went insane.)

** FOOTNOTE: For examples of embedded-type, SMC and "enactment" theories, simply see such Projects I have asked Questions under or where I have made Comments (Replies) under the Project LOG items; for one particular example: see: <https://www.researchgate.net/project/Socializing-Sensorimotor-Contingencies-socSMCs> (and look for my Questions under that Project and my Comments (aka Replies) under the LOG items (esp. the top one)).

Can we ever just 'look' without "looking for something", <-- that is: which we will understand right away (questions about eye-tracking research)?

It seems impossible to allow anything but what we already know guide us (at times, ACTUALLY ALWAYS, in Western society). Is this necessary? NO, if we simply know the empirical boundaries (just adequately, that is: specifiably) of what we are looking at. This question becomes even greater when we can use completely objective computer-assisted analysis software to see any and all patterning in what we are 'looking at'. Now, consider these questions and this perspective with respect to eye-tracking technology:

Why not pick a clear natural-type setting (I.E.: reproducible) and an age of subjects (and perhaps, gender) and just see what complex of eye-tracking behaviors there are and patterning which occurs therein. What if it is a lot of activity?; what if there is a LOT of patterning ('seen' thanks to computer-assisted analysis)? Let's say the answers come back: 'yes' and 'yes'. NOW, what if we looked at Subjects in a different age group, in the same reproducible setting?; what if the patterns were dramatically, yet seemingly systematically, different ('systematically' IS definable, of course)? NICE! (Nice enough???)

AGAIN, THE KEY QUESTION IS: If we do not know the answers to these questions, why don't we simply "take a look"? Need a reason?; at least some hypotheses??? OKAY, here you go: see attached Publication (general hypotheses, therein) (also, see the Project, "Human Ethology and Development" (<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>)) :

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

[Also note: see caveats in my added paragraphs, below.]

In response to my own question, I feel the need to add: If you lack certain hypotheses or fail to apply certain (even necessary) principles, you may MISS "LARGER" patterns that would otherwise be seen (PART, though not all, of this may be a matter of time-scope). And, nothing is built into software to make up for such oversights -- UNLESS these very type of particular things, just mentioned ARE expressly built into the software, plus some other things outlined below. Thus, obviously, software is not an inherent every-pattern seer, even as it sees all in a setting and time-frame and finds all patterns simply therein -- it can be grossly lacking even with respect to what is really occurring in the time segment monitored. The situation, just roughly described, makes sense:

The software does not have the knowledge of what WERE previous patterns and of previous developments and sequences of events, actions, and development that occurred earlier in ontogeny. Relatedly, much of what the memory capacities bring forward are unknown to the software, though THEY THEMSELVES are most certainly part of real patterns. Seemingly isolated, but important, things related to those or other past behavior changes may be barely if at all be detected by the software or, as as they are 'seen' by the software, may not stand out

or may not show what seems like a noteworthy pattern (and may fail to detect a pattern at all) -- at least in the scope of the behavior segment that has just been observed, but possibly even 'missed' in long sessions monitored. It is possible even one key behavior (just a single one detected, and noted by a human) in a time segment may be what is important.

None of this argues against the possible utility of even rather "blindly" looking for patterns (using eye-tracking and computer-assistance via software), but argues for ALSO building good (usable) representations of previous knowledge gained and of perspectives and abilities (and capacities that come to bear) into the software. That may eventually result in much better software and allow us to see and find all we want to have seen and found. I do believe that this sort of use of computers is much, much better than getting computers to simulate our models, and thus, supposedly, behavior itself -- which seems to be the present concentration.

[I will not re-attach **my publication**, since it is attached above. IT DOES contain many necessary assumptions and does indicate the nature of special hypotheses for things to be observed.]

What should be the aim of the young researchers? Should be focused on a specific area of interest or work on diverse fields that are interconnected?

Dear

I like your question. I will address the question from the perspective of thinking in psychology and psychology research.

I worry we already have plenty of people looking at rather diverse fields and trying to integrate or relate the findings (and somehow, likely because of lack of training, they often do so in a notably poor manner). If anything, in behavioral science, they often do so (in a sense) too much, blurring real lines or skewing the picture-as-a-whole (for the diverse field they want to relate their psychology to, especially -- seeing great, clear correspondences, where the findings do not support such conclusions). A common type of example here is relating behaviors to brain activity (neuroscience). [At the same time, though, I believe neuroscience can provide very helpful hints at times (perhaps ruling out some types of interpretation, which should be ruled OUT). Part of the reason there is so much emphasis or reliance on neuroscience is because psychologists have not come up with a good way of having a working and progressive theory of behavior PER SE -- so much so, I have doubts that many psychologists even think this is possible (and thus they have hopes for nothing but continued further help from neurosciences).]

Another type of case of "too much" relating/integration happens when psychologists try to relate and/or integrate sub-fields of study in psychology -- and do so, in actuality, too much on their own intuition, believing the effort (any way) yields a better perspective for science (an example here is the thinking of Bronfenbrenner and those who have followed in his thinking -- I have disliked Bronfenbrenner for DECADES). I wish I could say something positive here, but in decades it has always seemed in every way a vice rather than any true, lasting-good, help (except perhaps for some applied psychology, like clinical psychology).

I believe to well cover "a specific area of interest " requires a broad-minded outlook: in particular, people need to have a full appreciation of the nature of theories and be able to evaluate them critically; they must essentially come to make some theory truly their own (it may be an existing theory or not -- BUT MUST, of course, involve coming to a complete understanding and appreciation of existing theories as part of "their process").

I believe the coverage of how theories are actually formulated, and how they should be formulated, and how they can be critiqued (in colleges and graduate schools) is miserably lacking. (How about, for example: evaluating the proposition that behavior is clearly biological, abiding by the same principles (in some ways) as the functioning of other organs, AND psychologists should be able to point to how this shows itself in the behaviors they study.)

All this (outlined above) makes doing what I think all psychology thinkers and researchers really very much need to do (AND MUST DO) still nowadays something they have to do very largely on their own. Much more involvement and OPEN guidance from college and university staff (i.e. their teachers) should occur.

Still, yet, if there are real connections between sub-areas or between other fields and behavioral science to be found, it could be good for certain purposes to find them.

What do we need to know (or specify) to look for behavior patterns?

I have decided to repeat the question (which appeared UNassociated with the project in the general list of "free" questions) HERE, so it is convenient and ASSOCIATED with the "Human Ethology and Development" Project.

Can we ever just 'look' without "looking for something", <-- that is: which we will understand right away (questions about eye-tracking research)?

It seems impossible to allow anything but what we already know guide us (at times, ACTUALLY ALWAYS, in Western society). Is this necessary? NO, if we simply know the empirical boundaries (just adequately, that is:

specifiably) of what we are looking at. This question becomes even greater when we can use completely objective computer-assisted analysis software to see any and all patterning in what we are 'looking at'. Now, consider these questions and this perspective with respect to eye-tracking technology:

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[Also note: see caveats in my added paragraphs, below.]

In response to my own question, I feel the need to add: If you lack certain hypotheses or fail to apply certain (even necessary) principles, you may MISS "LARGER" patterns that would otherwise be seen (PART, though not all, of this may be a matter of time-scope). And, nothing is built into software to make up for such oversights -- UNLESS these very type of particular things, just mentioned ARE expressly built into the software, plus some other things outlined below. Thus, obviously, software is not an inherent every-pattern seer, even as it sees all in a setting and time-frame and finds all patterns simply therein -- it can be grossly lacking even with respect to what is really occurring in the time segment monitored. The situation, just roughly described, makes sense:

The software does not have the knowledge of what WERE previous patterns and of previous developments and sequences of events, actions, and development that occurred earlier in ontogeny. Relatedly, much of what the memory capacities bring forward are unknown to the software, though THEY THEMSELVES are most certainly part of real patterns. Seemingly isolated, but important, things related to those or other past behavior changes may be barely if at all be detected by the software or, as as they are 'seen' by the software, may not stand out or may not show what seems like a noteworthy pattern (and may fail to detect a pattern at all) -- at least in the scope of the behavior segment that has just been observed, but possibly even 'missed' in long sessions monitored. It is possible even one key behavior (just a single one detected, and noted by a human) in a time segment may be what is important.

None of this argues against the possible utility of even rather "blindly" looking for patterns (using eye-tracking and computer-assistance via software), but argues for ALSO building good (usable) representations of previous knowledge gained and of perspectives and abilities (and capacities that come to bear) into the software. That may eventually result in much better software and allow us to see and find all we want to have seen and found. I do believe that this sort of use of computers is much, much better than getting computers to simulate our models, and thus, supposedly, behavior itself -- which seems to be the present concentration.

[Attached Publication DOES contain many necessary assumptions and does indicate the nature of special hypotheses for things to be observed.]

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Is Ethogram Theory like the Embodied Theories (SMC, enactive), but allowing for More Possibilities and Empirically "Bottom Up" -- AS IT SHOULD BE?

Isn't Ethogram Theory like the Embodied Theories (SMC*, enactive), but just allowing for More Possibilities and Empirically "bottom up" -- as it should be?

* Sensorimotor Contingency Theories -- very speculative, and thus a very top-down type theory and Enactive Theories are similar, THUS both are in contrast with the empirical approach of Ethogram Theory (and if the special hypotheses of Ethogram Theory are not proven or disproven, we may very well WORK UP to something like SMC theories, so fear not SMC people). SMC have nothing to lose and have only empirical grounding to gain to adopt the Ethogram Theory approach. These SMC , etc. theories are just self-limiting anyway because of presumptions and "top-down" for THEORY is not good.

In addition to the attached Publication, for more see: _

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Forget Simulating a Human based on theory, isn't it better to have software see patterns by direct

observation, needed principled hypotheses added IN?

I am of the opinion that simulating human behavior to match what is predicted by a theory is nearly meaningless (where you describe a pattern, 'dynamics', and causes and match PRODUCED behavioral results -- a set of results that you say "is it". Doing this is very much just matching supposed reality with programming, where the problem here is that this is just matching supposedly what is important (start to finish) and which, in reality, could be superficial and/or temporary phenomenon or even FALSE (very much at best part of the "story", or appearances made, but done wrong) .

I do think we should use computers, but Isn't it better to have software see patterns ALL by direct observation (e.g. eye-tracking), needed principled hypotheses added IN AS NEEDED? (I do not want to over-emphasize adding in even principled hypotheses, if some broader actual set of observations does not give a good indication supporting these and supporting the "how" of these. On the other hand, biological principles for biological functioning is important.)

The Ethogram Theory provides a perspective to build "bottom up" from direct observation, and that could be used by software to do thorough and well-justified systematic observation (this is at least outlined in a general way (crudely, if you like) in the attached Publication). I have also spoken about this 'see' vs model issue (and IN CONTRAST TO Sensorimotor Contingencies theories) in some posts, including:
https://www.researchgate.net/post/Is_Ethogram_Theory_like_the_Embodied_Theories_SMC_enactive_but_all_owing_for_More_Possibilities_and_Empirically_Bottom_Up--AS_IT_SHOULD_BE2

Also see:

https://www.researchgate.net/post/What_do_we_need_to_know_or_specify_to_look_for_behavior_patterns

You may also like to read more writing associated with the attached paper at:

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

Some people study phenomenon at such a high level of abstraction (high-level in the hierarchy of concepts), I find it hard to believe they can be studied at all. Yet, most of these areas occasionally seem to indicate something and putting one's mind "in that direction" could well be useful -- especially if there is otherwise some tendency to just guess at the answers to such issues on one's own.

I did appreciate your inputs.

Shouldn't any Developmental Psychology Theory offer clear Empiricism (and how to maintain that) AND outline a clear Epistemology?

Shouldn't any Developmental Psychology Theory offer clear empiricism (and how to maintain that) AND outline a clear epistemology? Both (1) AND (2) are necessary:

- 1) There are human factors (for example: a sort of quantitative -- but not necessarily qualitative -- constant or near-constant "chunks"-limit to working memory -- FOR ONE) that make it clear that it is essential, especially in a field like psychology (where there is internal representation), to start correctly (empirically, with direct observation) and have a credible approach to stay correct empirically (defining the only ways that observations may relate to clear, established "internal processes" and to clearly defined and established abilities and capacities). This, itself, is an argument that is impossible to over-come (or ignore): if a theory does not explicitly or clearly consider these human factors OR does not expressly define a way to overcome empirical challenges, at start-points or which always occur at points as research progresses, GIVEN already existing solid findings and the theory's necessary assumptions and any new solid findings, this is a theory that should be considered "DOA" ("dead on arrival"). (Regarding this final sentence, and anything related to any process that was addressed, see (2), below.)
- 2) [I have already covered some of this point, so some of this may, in effect, be repetition, but somethings are added -- and the rest is needed for context.]

A theory must have an acceptable (considered, and more than reasonable: proven, demonstrated, agreed upon) position on how coming to know and understand will occur with your Subject (the allowable and possible nature of learning at all times, even if that changes in ways) and must take a stand on how your view of the behavior of the Subject is going to, AT ALL TIMES, have a clear relationship to empirical facts -- what you can observe now _and_ (because it's necessary) what you have previously directly observed AND the nature of the necessary relationships with other empirically or as-near-as-possible-empirically established (and agreed upon) "internal" factors, _AND_ with the necessary assumptions. The theory's position must be clear; it need not be totally correct, because we hopefully will be on solid ground to make needed changes (all would understand

"what is wrong" in the same way). Related to this: Good empirical starting points must be indicated and relate to the necessary assumptions and to the empirical-strict-guidance spelled out by the theory (i.e. relations to past direct observations and established abilities and related capacities). RESULT: There may well be problems, but everyone should understand sufficiently what and where the problems are in the problem-space. ANY THEORY THAT DOES NOT DO THIS SHOULD BE "DOA".

Any theory that does not accomplish either of these 2 things is almost just a myth or just a story and not a theory: it is soon becomes useless or close to useless from a science perspective, or at least that is my view. Also: GOOD THEORY IS POSSIBLE. AND: Even basically a theory just of behavior and only behavior -- understanding there is an organism of a certain, though systematically changing, nature (behaviorally related) -- is possible (i.e. a theory basically of behavior per se -- and I believe this sort of theory is not only possible, but is NECESSARY or science is lost).

Try the attached:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

P.S. You should apply all the above standards to any theory you read and to any you have not closely evaluated yet -- even failures are informative (very). The perspective provides a foundation for comparisons: You should also use the above standards when comparing theories.

(You get used to doing all this, so it is near-automatic after a while).

The Question (with Answer) starting this thread is an attempt at a somewhat better essay on theory (than the one written two weeks ago). I am more confident that it covers major points.

Really great theory, but aren't you uncomfortable having cognizance beginning any significant developmental process?

I am uncomfortable with having "cognizance" begin any significant developmental process -- I believe we are more "embedded" in the environment than that. Though you go well beyond Piaget and provide a great theory, it still seems you are similar in your exposition to how Piaget used the word "maturation" -- it still seems major things (supposedly) are just done ("naturally") "in the mind" or "by the mind". Not necessary: go one more abstraction and incorporate the outlook of "A Human Ethogram ...". True, my theory is only in rough,

simple outline form, but you can fix that. Let's look for all the empiricism possible. You can read some of my shorter essays (about 60 of them) here on researchgate.net to know my view better. Here is one that shows my very strict empirical stance:

[https://www.researchgate.net/post/Shouldnt any Developmental Psychology Theory offer clear Empiricism and how to maintain that AND outline a clear Epistemology](https://www.researchgate.net/post/Shouldnt_any_Developmental_Psychology_Theory_offer_clear_Empiricism_and_how_to_maintain_that_AND_outline_a_clear_Epistemology)

You may also like to view my Project: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

I must, up front now, be more explicit and make a confession (which may be apparent to some): I do not have enough knowledge or insight or creativity from adequate experience to know (or even to have any reasonable further guess at) better answers for the key qualitative environmental 'placeholders' in my own theory (aka the "perceptual (perceptual/attentional) shifts"). I have only done a bit of research, 32 years ago; otherwise I was mainly a college/community college psychology instructor (for 12 years, non-research positions) and otherwise "things" that are not as relevant (though you might see my science background as relevant) -- see my Profile info. Even assuming I have the needed intelligence, I have not been immersed in research, theory and the related analysis and paper-writing to have the insight and creativity needed; now I am retired and not in any sort of "right place", so there is no hope I can rectify this. I believe in something better to occupy the placeholders; I "believe in" the placeholders because they are there to fill a clear logical gap (the real phenomenon most likely are of the qualitative nature I describe) AND because I seek try for more empiricism -- enough for a much more "full" empirical foundation for a developmental psychology. BUT presently all you will find is the vague 'placeholders'. And, this is all I have to offer.

Again, I have no ability to shed further light on this central and most important matter. The fact that I cannot clearly see the actual empirical foundations I theorize does most certainly not mean that someone, properly immersed and fully thinking in theory, could not do it. I MOST CERTAINLY BELIEVE THEY COULD! But, most unfortunately, I can be of no further help in providing any insight or helping any explorations or discovery, leading to refinement.

THUS: I am trying to give the "Human Ethology and Development" Project away to someone who is capable and in the position to answer the needed questions. Andreas Demetriou, is one such person and I would offer my appeal to him and to any others who have a comparable distinguished research/theory background (which may be few).

P.S. The MUCH NEEDED insightful, creative psychology researcher (one immersed in research, theory and the related analysis and paper-writing) would likely have to work with someone very good with eye-tracking technology and computer-assisted analysis software; and, a programmer -- because the software may very well need to be changed (updated) to look for certain special objects of focus or attention (based on observations of other-age subjects or in different time segments), or aspects of the set of eye movements seemingly associated

with broader patterns (fully seen as potentially significant only across time segments), or those objects of focus or attention associated with subtle special patterns, the special meaning of which seems clear in relation to other behaviors in the same or other settings/circumstances. All these "coming down to" being eye movements in a given setting, associated with potentially important visual perception. (Although I tried, these possibilities, just noted, may not be a full set of types of behaviors and/or patterns in eye-focus or attention which could potentially be of significance for development -- or perhaps I got lucky and they are.) (Obviously: Possible significant perception of interest is not that which has always routinely followed sensations.) [Such a project would have the possibility of getting multiple sources of funding, not only that for developmental psychology (and education), but also funding sources seeking to help establish better (and perhaps easier) foundations for artificial intelligence.]

Here is the Project which I now seek to give away, to someone who sees its potential and has the needed capabilities: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

(see the LOG -- presently the top Log item (Update))

P.P.S. Those who feel my limitations are a disappointing weakness: you should know that I don't. My view indicates types of ways to look and possible types of challenges when looking for perceptual (perceptual/attentional) shifts. But, the fact that I cannot be more specific in my predictions about these "shifts", not JUST indicates limited research (observation) experience (not to mention: limited equipment), but also indicates that I am appropriately open to a vista of possibilities, ANY of which may come to be hinted at and then seen in eye-tracking data (given/with the other capacities involved, I have outlined elsewhere, and given the types of challenges you are aware of).

While saying more would be a guess for me, it will soon not be much of a guess for you, because you will have the data, the computer-assisted analysis, and have the learning background to see at least hints. The hints may come quickly (or maybe not). (I would not be surprised if the hints did come quickly, simply because no one has even tried yet (so this IS a possibility).) Once you have the hints (and if you are correct), the specific hypotheses about the "perceptual shifts" will be formulated to be tested rather quickly, I believe. There is much reason for hope.

In a real sense, I myself, simply never really started. I know that and you should know and appreciate that.

Can we remember just one thing about evolution?

Can we all just remember that evolution affects EXPRESSION (behavior), and thus the organism changes (it is "more fit"). How can evolution directly affect the brain as the beginning cause (by itself) of any significant new behavior???? <-- THAT DOES NOT HAPPEN (think about what a ridiculous, inefficient and preposterous 'method' that would be, anyway, really: think it out: let's wire-in one method of 'abstraction'; WHOOPS! ; let's try another ...)!

That view (on significant behavior change: it starts with changing behavior) goes for everything, at least for THIS empiricist, until proven different ! Plus, I outline the empirical explanation for the inception of ALL significant cognitive development* in some behavior, be it only a "perceptual bias(es)" for later developments. Though "A Human Ethogram ..." provides just a rough, crude, simple outline, you can fix that ! (I had to "take out the 'trash'" or "drain the swamp" first, so don't blame me -- if you look, you'll see.) Why don't we empiricists go with my empirically amenable view?

*FOOTNOTE: Abstraction, at any level, begins in the environment with some concrete stimuli involved; poor Western man has to learn that the abstract is not really completely abstract in its development (it's not THEIR 'abstract'). Dominion be damned.

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

It's not all you; I am not such a great writer and worse than terse at times.

The key line, now with some added words, says (and was meant to say):

How can evolution directly affect the brain (its structures/functioning) AND THAT DIFFERENCE IN THE BRAIN ACTIVITY ACT as the beginning cause * (by itself **) of any significant new behavior???? <-- THAT DOES NOT HAPPEN ...

... I outline the empirical explanation for the inception of ALL significant cognitive development in some behavior, be it only a "perceptual bias(es)" for later developments [(<-- that is, in the later stages of child development)].

(<-- end quote or paraphrase of main parts of my short essay)

New footnotes for this present note:

* FOOTNOTE: "beginning cause" refers to proximate cause (key cause at the inception of another phenomenon).

** FOOTNOTE: "by itself" means with no concrete referent (i.e. concrete thing referred to) in the overt behavior shown by the organism, specified by the theorist. [(It is hard to believe that this is what theorists do. AND they also have other major INDIRECT changes in abilities/behavior as a result of further activity of the brain, just in the brain ("by itself"). Again, the overt behavior does not come WITH difference in brain activity (as a co-proximate cause), but only AFTER brain activities (the myth of all that, described in their explanations of their systems -- and of behavior) . This is patently un-empirical, as well as VERY unlikely.)]

What is one additional reason one can have confidence in a Project?

One thing that ALSO raises my interest and confidence in the "Human Ethology and Development" Project is that all sorts of phenomenon as described in the theories of TODAY (i.e. constructs), are not directly empirically based or clearly related to an empirical basis and yet they are not just supposedly existing but also important (but THAT is doubtful, and certainly doubtful in the universality given them and the role given them), _AND_ these loaded, unclear CONSTRUCTS can be explained away and the key phenomenon (of behavior change -- THAT which is to be explained) is explained in another way -- and a way that is more empirical (in every sense) (and rather easily). The more-than-debatable constructs include:

mind-reading

future seeing

time travel

executive processes -- as always and necessary for development

strange "forward thinking"

all the meta's (metacognition and the rest)

inner processes working on the mind, just with the mind

BASIC core "embeddedness" connected (often in implausible and elaborate ways) to SOMETHING not clearly involving the environment

Strange self-supporting (theory supporting) sorts of 'social learning' (of a highly doubtful, or at least of an unreliable nature)

Major developmental shifts essentially occurring without the environment

(and these are just things that came to mind with just a minute's thought.)

I need to "believe in" or posit NONE of these things, with NOTHING LOST, taking the perspective of "A Human Ethogram ... " (major paper in the fore-mentioned Project). If you can explain things equally well and more empirically (not to mention ecologically) THEN faith in one's alternative theory gets very strong. And, this is all in spite of admitted SERIOUS (and unsatisfactory) vaguenesses in the theory; the vaguenesses get rather excused, if even the vague forms (of types of phenomenon posited) provide an adequate outlook and still give one a clear idea of a better explanation.* (The theory has serious vaguenesses because the hypotheses need refinement and to be tested; unfortunately, I am not the person for any of that -- see the latest Project LOG entry, for more explanation of this.) [It may be helpful, for part of the thinking I use for the perspective (to posit overt behavioral alternative explanations), to view the thought expressed in the following post I made: https://www.researchgate.net/post/Can_we_remember_just_one_thing_about_evolution <-- Perhaps now one can see how just vague definitions of "perceptual biases" or "shifts" can be seen not only to suffice to show the nature of a better answer, but also to maintain empiricism. Then, you can stop having any worries from the footnote, below.]

[* FOOTNOTE: (Or, maybe you might think it is the Eastern, naturalist Buddhist outlook helping out . The Ethogram Theory developmental theory was developed at the same time a purely rational, realistic (real-world) CORE of Buddhism was realized 'ON THE SIDE'; BUT this, and nothing else either, had any negative effect on logic, possible pertinent facts, or empiricism -- and certainly provided no "hocus-pocus" of any kind.)]

Also see: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

I like:

"The weakness of the scientific position is not that the empirical facts are devoid of interest or utility, but that these facts are thought of as a refutation of the intellectual doctrine."

But I DISLIKE:

"The problem of "truth to nature" in our sense arises only when a confusion is introduced by an intrusion of the scientific, empirical, and rational point of view."

And, I DISLIKE:

"The peasant may be unconscious and unaware, but that of which he is unconscious and unaware is in itself far superior to the empirical science and realistic art of the 'educated' man."

My "like of" and "dislikes of" the other statements are about half and half. (And some (a couple) that may have some truth, would only be so of/for those who have had major realization in an area, and the meaning of those quotes otherwise (for others) is more than greatly subject to a bad perspective.)

Dear

I most certainly disagree STRONGLY with you when you say: "The realization of the absolute Truth does not involve any thinking whatsoever." It takes a vast and unimaginable amount of thinking (and doing), even a very vast amount of thinking, etc. to have a temporary and partial realization of "the way things are" IN JUST ONE AREA. Things are not ultimately knowable, but even MUCH MORE SO FOR THOSE WHO DO NOT THINK !! (You should not be PUSHING for the general BELIEF of something that someone (hypothetically) will realize just FOR THEMSELVES ONLY at some advanced point -- after a LOT of thinking, ETC.).

For more: See the comprehensive summary of ALL the rational and realistic (real-world) words of the historical Buddha at <https://mynichecomp.com> (Subject II) -- I have read all the words and THERE they are summarized, pointing up and valuing only all that do or could [(empirically)] make sense .

While the absolute truth (or any of them) are not fully knowable: It is ONLY through our concepts and communication that we can move toward knowing any. "Beyond concepts" is for when (hypothetically) you have done your best through conventional communication facilities and in your life, and through ardent striving to "see things as they are", _AND_ you have attained a major realization (at a point and only for a time) OR enlightenment (and NO ONE has gotten to that point -- of realizing all Truths). So, you are badly mistaken in making such a statement as you did -- you have a wrong view. Such a view is quite generally not useful and is a BELIEF, a wrong view rather than something good. (In a real sense you, and others, should BELIEVE NOTHING.) I have heard others say the same thing you have said and IT IS THE OPPOSITE OF HELPFUL (it is unwholesome). It is like some other concepts (like 'emptiness' -- see P.S., below) that you only see with some full realization or enlightenment.

To say it another way: You cannot PUSH the idea of "beyond concepts" OR THAT MOST CERTAINLY ISN'T so and you are simply pushing a BELIEF -- and have nothing there to be proud of; who could even imagine what that could mean to another person?

Nagarjuna, was the greatest thinker in Buddhism after the Buddha; he just pointed out things that are in the Buddha's words, but are rather hard to see. He "employs the doctrine of the two truths, paramartha satya ("ultimate truth") and samvriti satya ("conventional truth"), explaining that everything that exists is ultimately empty of any intrinsic nature [(because YOU are involved, is why)] but does exist conventionally. AND:

-> The conventional is the necessary means for understanding the ultimate <-, and it is the ultimate that makes the conventional possible." (end of quote from Britannica, paraphrasing Nagarjuna)]

You are basically anti-science and that is the opposite of what this thread (Question, etc.) is about. This is NOT a religions thread, so just stop.

P.S. Similarly: You should NOT say to others, as a general point for all: that "things are empty" (i.e. that THEY should see them as empty, and essentially thus BELIEVE) (that is another BELIEF pushed) -- this is similarly not beneficial and is wrong view, in effect, always (and at the proper point you still would not say it for others to BELIEVE). You simply, AND others simply, should BELIEVE NOTHING -- this is why we have and test hypotheses (people communicating and sharing). Rather than the wrong view, know what you know and know what you don't know (and ardently strive to more know "things as they really are", which will involve much thinking, etc.).

Emptiness is used as an adjective, and not a noun UNTIL FINAL REALIZATION. In other words, "emptiness" is a qualification that SOMETHING/experience-object has become "empty" OF some of what it seemed to have (or of some of what it did have) for YOU (in a important sense, its past nature is gone).

And, thus, emptiness is an awareness of what has been transcended at each point of realization _YET_ you are required (at the same time) to have a clear awareness of what is still present.

AND: "... even the peak of emptiness, the realization of full awakening and unsurpassable mental freedom, is "empty of." Empty of what? Empty of lust, anger, and delusion (MN I 298)." (as cited by Analayo)

FOR science don't we have to hang to the utter essentials "by our fingernails"?

In any area of behavioral study (with their object of study): Imagine a system of practical, usable, utilitarian scientific thought -- a thorough, full set of propositions seen to be as well-defined-as-possible, objective (agreed upon) as possible, and these being a set of only clearly-related, necessary propositions, and related to useful, realistic (in-the-world) clearly-corresponding (beyond logically consistent) conceptualizations AND TO necessarily associated empirical events. Now, see it progress, with findings. (And, do all this without having or enforcing presuppositions.)

Now: Has anyone seen an example of any such system (today considered valid) AND with the actualized thought system, etc. NOT BECOMING more unlike what it was in its clear intentions (and in its propositions), in time; or, to put it another way: has anyone seen such a system remaining of the intended and expressed nature of the original thought system as time and 'work' progressed?

I believe: NO. And, all these "changes" (in the supposed initially-thorough underlying system), occurring with great differences between people (groups of researchers) too -- in the many extreme divergences. (All to such extents that the 'final' systems are failing to meet the most lenient standard of rational, logical consistency with the beginning system, and diverging in many ways, not clearly related, nor one clearly better than another.)

Hypothetically (likely not practical or ethical, considered as something-unto-itself): A study (even an experiment) could be done on this and show whether a system with only a few or rather few, extremely-well-grounded (empirical), applied propositions can remain this system of thought with its propositions actually-used in explicitly related understandings in-the-world by any group of people and keep conclusions EVEN consistent with that thought system OR WITH EACH OTHER as time goes on.

You could vary the number and nature of such propositions, and see, with time, how consistent subjects' outlooks remain, even simply logically consistent with it (and alike between persons). (In follow-up studies, you could see what helps and maintains a system.)

I think the experienced and wise can imagine.

The upshot (or "main hypothesis" to "show", for success): I believe we need some very few utterly well-defined (fully agreed-upon and grounded (i.e. empirical)) PROPOSITIONS (including, prominently, what are known as, and are, true assumptions AND some central explicitly agreed-upon established findings) AND, as these propositions are applied: always checking back with the relevant environment-aspects and subject-aspects (citing and publicly declaring every simple, single use of the system and being very explicit about it -- and also such reporting at each and every "turn") -- TO EVEN HAVE A CHANCE AT RATIONALITY (that is, even bare logical consistency) and to have a hope of relatable findings. (From these requirements, there are implications for the nature of the actual empirical units of study, i.e. finding a way of 'dividing things up' right -- and we DO, I believe, have some choice in that matter.) I believe if we are ever going to see anything that can be considered a "true science of behavior", this is the kind of care we will have to see.

Therefore, I argue: for science we have to hang to the utter essentials "by our fingernails". And, you?

What is it about the magic "silver bullet" of 'system'-explanations in psychology?

What is it about the magic "silver bullet" of 'system'-explanations in psychology?

I would say: nothing good: a product of desperation.

Without good, constant real: ecology, observation, AND biological grounding, and involving some explicit, always expressly agreed-upon, established findings -- BUT still NEVER accepted IN USE (used) without seeing evidence of those very 'established facts' in all pertinent overt behavior, as it is said to be -- It is just a wrong view.

Psychology is still about as "off this mark" as ever and we have a prevalent (and prevailing) wrong view now. It is a new wrong view (to be described soon) which, I submit, is replacing simple theoretical presumptions, where these theorists were using a same/similar type conclusions, AS supposed assumptions of where and how behavior we already have "at-hand" 'came to be' and as the main thing behind explanations (and simply testing if such things "still 'explain'" the "learning" in their experiments and other studies). // Apparently, psychology got tired of this 'classic' wrong view and way to proceed and now has another one, another wrong view and wrong way to proceed (only the new one is a bit more involved and clever and obscuring, but, as before, this new type-of-explanation can be, for adherents, most exciting "magic"). Now (again) we have some similar type of conclusions 'explaining' behavior and process: again, like with the 'old' systems (theories): it's not necessary and well-established assumptions directing observations and leading to findings BUT (again) conclusions used AS directly applied 'assumptions' (again, actually presumptions) OF the nature of behaviors themselves. Unlike the older systems, they differ in being "forward looking", constantly providing the organization of what we see "as major aspects of behavior" as it supposedly progresses, BUT throwing in, as necessary, "believable", related processes -- the key and important products of which are actually conceived of simply by analogy, unfounded analogy (to some overt behaviors once seen), and typically involving strange learning on a strange basis, that subserve the analogy and the core 'system' -- making all as consistent, and as "apparent" and "believable" explanations within the 'system'. Almost all key behaviors are not directly empirically shown (and never were), but only indirectly indicated; similarly, but worse, for inferred covert processes -- not clearly indicated in behavior, at the time it occurs at all. (In short, a science of behavior that is for philosophers -- and so many of them are involved nowadays, in it is not uncommon to find departments having both philosophy and psychology in their names!) Here is my attitude, specifically naming the types of these new 'systems':

I don't care if the system is dynamic; I don't care if the system posits the embodied, the embedded, or the enacted (they are always limiting because of presumptions, and never ever fully having behavior embedded in the environment). I don't care if such a 'system' (another sort): "considers all levels" of influence on behavior (using great intuition, with all 'known findings' and 'considerations'). I don't even care if any (or all) of these

'systems' look to brain science findings ** to apparently -- partially or metaphorically -- bolster themselves . In all these cases, it is clear that they have LOST THE ENVIRONMENT, and a good part of the actual behavior of the subject. ALL JUNK. Starts as junk, develops and describes some and somewhat for a time, and seemingly to an extent ties things together and "explains" -- all to ultimately end in stagnation, hopefully, seen as junk.

IT ALL IS NOT SCIENCE. An approach is not science UNLESS it has real ecological, biological grounding: that is good biological assumptions (constantly abided by), and an ultimate foundation of every concept in direct observation(s) (though well-known established capacities can also be clearly involved (demonstrable, by clear inference) AS PART of the behavior IN EVERY pertinent observation instance, as expressly predicted). // What if to get to a situation "in your head", so you CAN DO THIS, it basically only involves being open to (and looking for) OVERT innate guidance factors in/of behavior and in learning (maybe just perceptual shifts, as the type of behavior at the inception of each such set of developments), emerging at points throughout ontogeny (and as MAIN factors of this nature, after toddlerhood and through adolescence)? These are distinctly provable/disprovable HYPOTHESES (at least now with modern technology). And, with these observations of such behavior (if found), you can do things correctly (as just described) and then consistently simply discover patterns, mechanisms, and real biological systems (which amount to that which is most important), isn't that worth it? You would be never losing track of the environment or of the most-pertinent overt behaviors (and adding nothing through any kind of strange inference). AND: Progressing to understanding more and new behaviors, as they are biologically, from this foundation.

** FOOTNOTE: I look forward to the day when one branch of psychology looks to another, because that other is well-grounded and yielding many understandings (and, of course, is related). It is not necessarily the case that neurophysiology is inherently 'more scientific' than an area of behavioral study could be -- in fact, I would challenge anyone to try to put forward an argument like that, asserting that something not directly reflecting behavior (neuroscience) can be expected to out-perform some future well-grounded area of psychology, operating with excellent, consistent, necessary assumptions (esp. biological), and relying on ONLY on well-established, direct empirical behavior findings (old and new) -- and where even covert behaviors are directly and strongly indicated (as predicted) in the present behavior (plus, no doubt, have some clear relationship with past overt behaviors).

If you do not seek to see/find PATTERNS in behavioral science research, why bother?

Patterns (behavioral patterns) are an organismic thing. They are there and they are important: they contain all

else that is important -- as they would in a biological organism (in ANY of its functioning). Seeing things correctly involves seeing the patterns. What is the use of research that is so scant (in what it looks at and for) that you do not see or find these clear empirical organismic patterns (invariant in their key aspects or nature and which, again, must exist in any important functioning of a biological organism -- this is the kind of patterns I am talking about here)? ALL such have at least convincing indirect empirical relations to what is presently directly observable and some direct relation; anything important and of your interest would involve such patterns; how else could they (your behaviors of interest) BE PRESENT for the organism? And, you do believe in the environment, don't you? : key environmental aspects will be very much involved here, with the patternings -- perhaps much more so with the patterns than your particular behavior(s) of "interest". (AND, about these patterns: I mean actually see and record them in research plus understand parts that may be covert. BUT, included in what you see should be the present proximate cause -- so there is always some convincing proximate cause overtly PRESENT -- because that is the way it IS, if you are an empiricist; AND the patterns will help you find these.)

You really don't think that piece-meal research on 'particular behaviors' in different 'circumstances' will come together basically by themselves (though you seem to have such a hope for whatever behaviors and neuroscience -- that's more "bunk", when considered on the larger scale) *OR* do you think that you are "such a good theorist" (omnipotent) that you can put it all together by presumption theory or spontaneous insight? To me, that is not only unlikely, but nonsense -- just look at psychology's history. The diverse theories we have now are not a help nor seen as such except by those who want meta-theories, bringing theories together -- and this ends up intuitive and diverse as well (I see it as trash on top of trash). Prove me wrong and we shall be transcending reality together (but actually only in arrogance and delusion).

Is there really any hope for general (developmental/personality) psychology?

If the "journals" and other pressures keep producing nothing but psychologists doing junk, what hope is there? Most of the $p < .05$ studies are proven junk -- 2/3rd do not hold up, and end up unreplicable; much of the rest is close to meaningless (at least for many -- and that should not be so), but for those omnipotent with magical intuitions, their sliver of 'reality' is just fine and they "see" ways to apply their findings. Some new big theories in psychology often rely on baseless, unproven and unprovable assumptions AND on unprovable concepts AND unprovable systems of concepts, and unprovable conclusions. YET with some such 'clever' "systems" some of their authors even say "any can use the theory" (its structure and the relationship between 'pieces'), because it is "open to however one might see the 'system' "work". Does this sound correct to anyone?? (This hardly makes it surprising how ignorant psychologists' understandings of behavioral "dynamics" are. Psychologists also never learned enough about ethology to learn good ways for definitions -- both of "the environment" and of "behaviors". PITIFUL.)

Plus, psychology can be shown to have several presumptions which are used as assumptions (often it can be show that it is conclusions used as assumptions). It is self-limiting, and it can be argued that this is more wrongful than that, for that reason and because the assumptions are more likely (or just as likely) FALSE.

Well, other fields may have plenty of sufficient reasons to do good psychology studies because it is much related to their own goals; here, I am thinking of artificial intelligence. There may be some meaningful investment here. Some initial explorations, may lead to a lot of investment (including \$\$) in behavioral science (and without the sick sorts of pressures found in psychology) -- especially after some first big discoveries.

Gee, then psychology (as crudely with "information processing theory") will have something better to "copy" -- and perhaps not only by-analogy. Glad to end on a positive note. Who knows, if others do the work, psychology may eventually stop sucking about definitions, dynamics, and theories and assumptions

Dear

Good psychology is ethology -- and that is as rare as ever and perhaps more rare, since true classical ethology seems to have been abandoned by all. By the way, I never think of those with psychological disorders; my topic is the human IN GENERAL and what is essentially always true of ALL -- NOT any special-type case topic. (The "more 'stuff' the merrier" does not work for science when it is in un-integratable states -- that pretty much speaks for itself, because intuition about such diverse things is never the answer.) That which is essentially always true of ALL is General Psychology (developmental/personality). You have to be on my topic to sensibly address that; "things" (or combinations of "things") other than this is off-topic.

About psychology being better than 20 years ago: I don't see it. The best "stuff" today is no better than John Anderson's ACT* or Fischer and Pipp's neo-Piagetian "Skill Theory" -- both those from the mid-80s, looking at the better stuff. Yet, those had FATAL flaws. I have suggested the way out for these theories -- just read all my "stuff" in the "Human Ethology and Development (Ethogram Theory)" Project (assuming you may be interested in the defined topic).

To judge the prognosis, I judge only the science and not only is it not better, but in several prominent instances it is less empirical AND yet less open to understanding, so they provide very poor direction -- they are loosing in both of the 2 major ways. This is including modern systems with components with NO empirical (direct observation) REFERENCES (no specifiable relationship to ANYTHING directly observable -- i.e. proximate causes).

These "theories" are sometimes known to be NOT theory, even by their proponents, but rather: "frameworks" . Read my essays here in researchgate.net for about all I have on that (about 60 essays, 120+ pages; to do so: see my Profile, and then Contributions, then read my Questions and Answers -- no need to detail and repeat here).

Dear

Re: Your statement: "thanks to ethology we know a lot about non-human animals' behavior. But who is the arbiter who can judge if your claim is really a true claim? " My claim, Professor Lourenco is talking about is: "Good psychology is ethology."

Answer: The judgement of my claim is the establishment and maintenance of empirical connections. If it does that best (as true classical ethology could with any organism), then it rightly "wins". I do consider myself a formal thinker on this matter: see the consistency of my thinking, the justified assumptions, and the rules I prescribe for going about study (assuredly maintaining connections to present empirical referents (proximate causes)) -- that is my evidence for that part of the point. I am willing to take responsibility here.

Re: 2/3rd of $p < .05$ studies do not hold up, and end up unreplicable:

I have cited the study in my past posts (as have others). [I will try to re-find the study and place a citation/reference to it in place of this very bracketed statement. Here is one citation that may help until I find the particular study I am thinking of:]

https://www.researchgate.net/publication/316139894_The_earth_is_flat_p005_Significance_thresholds_and_the_crisis_of_unreplicable_research

I think at least one of the studies backing my point is cited there, in fact.]

I would agree that general psychology (as I rightly define its subject) is better than 100 years ago. But it is not better than 30 (or 20) years ago.

My irritating question (beginning this thread) does not even come close to the irritation I have of the subject area, particularly the irrational and unempirical ways it is dealt with in "models", "frameworks", and "theory" today -- which I have described and provided critiques of in detail in my other posts. One of my 2 greatest irritations is that they have 6 core major assumptions about human behavior that are not only unfounded BUT I CAN ARGUE ARE THE OPPOSITE OF THE TRUTH. (The other irritation is the failure at empiricism, I note at the bottom, below.) Rather than citing the incorrect assumptions, let me state the more arguable truths (to replace

them):

It can clearly be argued that all of the following are more in line with biology (organismic, if you like). (Note how they are opposites of prevalent assumptions -- which because they are baseless are really merely unfounded presumptions.) NOW, Here is more likely reality:

- 1) one should develop a theory expressly consistent with biological principles (e.g. homeostasis) -- it should clearly and, in effect, constantly show in the theory;
- 2) The most significant learnings and innate factors occur, in effect, completely simultaneously (and the innate factors at times may well be more important, regardless of the stage of development one is looking at);
- 3) Major innate guidance emerges with each significant qualitative advance in conceptual abilities (last one around adolescence, at the earliest);
- 4) The more "advanced" the organism, the more learning occurs, BUT ALSO the more [significant] innate guidance (factors) are involved;
- 5) Inductive work should be emphasized and hypothetico-deductive systems should be formulated ONLY when you must (and then with no loss or bias of/in observation)
- 6) Everything that develops, including our most prized abstract conceptual abilities, are very likely and potentially observable (at least, for a time, in their inception, and I would imagine at times otherwise).

AND: Presumptions of modern theories of behavior not only take a totally different view, BUT THEY ALSO disallow even looking for _OR_ finding the truths of these likely realities.

A second major "irritant":

I have also argued the non-existence of proximate cause for things that are supposedly going on in phenomenology according to modern theories and this is the very definition of failure to have an empirical foundation.

ALL THIS IS PLENTY TO COMPLAIN ABOUT and I am as happy as sorry if the best it can do for you is cause "irritation".

What I have outlined is best because it IS best by any major criterion of science. Again, the main things are:

consistency of my thinking, the assumptions, and the rules I prescribe for going about study (assured maintaining connections to present empirical referents (proximate causes). When you are ORGANISMIC _AND_ better follow the way of science, then your approach is the best. Yes, this is my claim for mine. I take responsibility (see first attached publication, below).

P.S. : What is it you mean by "overuse of tabular asterisks at the cost of theoretical risks"? That sounds important and may indicate you have some agreement with me.

BY THE WAY, I think the "journals" more than strongly discourage good studies with good thinking; they basically prevent them (they have the OPPOSITE role science journals should have -- this could count as my third major "irritation"). THE SYSTEM IS RIGGED. It is certainly true that knowing what I know now about psychology, I probably could not endure the studies of a psychology major -- thus, yes, most of the field is (as they say) "a crock." Fortunately, I loved psychology long enough (for about 25 years) to "distill" and compare theories, down to the ultimate details, and infer the problems AND provide a true empirical alternative: classical ethology (which is NOT my invention; see Eibl-Eibesfeldt, 1975 -- for a summary of the best research; SEE:

https://www.researchgate.net/publication/232453867_Ethology_The_Biology_of_Behavior?focusedCommentId=59011c2582999cef165be1ad). It is, as major alternatives are, a completely new start (a first good use, with humans, is what I am referring to); but of course all good findings will have a place, so nothing will be thrown away. A nice thing about a new start: it is clear and understandable and is, in its basics, relatively simple -- one should realize that this is the way it HAS to BE.

P.P.S. Between my 150 pages of new essays on researchgate.net, my 160-page "A Human Ethogram ..." and my 45-page "Information-processing Theories and Perspectives on Development...", you should be able to see I HAVE WRITTEN MY BOOK.

Article [Ethology: The Biology of Behavior](#)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Article [The earth is flat \(p>0.05\): Significance thresholds and the ...](#)

Dear

I was talking about A.I. doing the work OF psychology -- for its own advancement, but then psychology could

use the findings as well. Psychology otherwise would no doubt continue to do its standard studies (and "theorization").

Dear

I believe psychology should stand on its own and that it should be a science. These two aspects are related.

Very typically**, cross-discipline "findings" are very unfounded in their supposed links; they are not really integratable, and those who put those various aspects of the "findings" together are just operating on intuition (there may well be a place for intuition, a natural necessary place, BUT that is never in such a very "top-down" role). The way "levels" or "areas" are put together, they are not integrated and that is not science, nor will that ever progress to science. It is part of the mess that has made psychology what it is today.

[** FOOTNOTE: There may be some non-typical exceptions, but that is where there are some clear explicit foundations for the linkages.]

Do you see "forces at work" wanting to continue to have certain questions, at the expensive of having A WAY to get answers?

If there are "forces at work" wanting to continue to have certain questions, at the expensive of having a way to get important answers (related to these very questions), then this would be very likely related to a field such as psychology. Some questions of "folks" (which may at times include MANY/most or almost everyone) may be actively and regularly destroying any progress of psychological science (not just impeding it). These "same forces" are at work placing presumptions on our studies at their beginning -- though noteworthy among such presumptions are ones with no evidence or foundation, several of which I have pointed out in other recent essays; AND there are very possibly better-justified alternatives (assumptions). It may be kind of an enjoyable, fun activity, perhaps a bit like chess when there are historical or traditional "rules"; but it may also, even when seeming to be like THAT, be just mental self-satisfaction (I had another word in mind, but used my better judgement). Maybe a better question is: how can this be stopped? MY guess is only good science and good findings, but will we ever be able to do it? (You do see a need(s) to curtail some of these preemptive positions, don't you? I usually call these positions I am talking about "Western thought".)

[NOTE: "Embedded Development" is included in the Topics list (below) only because this is a counter to it. Readers of my essays and papers will see I most certainly and to a maximum extent look at behavior embedded in the environment (but this is NOT at all typically what modern psychological theorists mean by "embedded").]

Dear

I am impressed by your thoughtful answer. It has components I can 'see' and agree with and others I cannot. (There also seems to be one way you contradict yourself.)

FIRST:

I do see "Western thought" as having something wrong with it. Outside of specifics, there is a huge tendency to leap to OR, most often start with, a hypothetico-deductive system (it is part of what one might refer to as an overall "dominion" assumptive/PERSUMPTIVE perspective). I could deal with details, but that would be almost endless, plus good philosophers would be better at that than me. I can offer a few resultant presumptions (which are viewed as legitimate assumptions -- even though they are baseless):

1. The more "advanced" the organism, the less innate influences (this is due to an artificial dichotomy of "learning" vs "innate" which is not only unfounded, but unlikely). Western psychologists literally seem incapable of imagining BOTH innate guidance and learning in effect OCCURRING SIMULTANEOUSLY -- though some major thinkers have said this is the perspective we need and they have said so for decades (Anastasi, for one). [NOTE: The idea of more innate guidance in more "advanced" organisms DOES NOT MEAN less learning (in fact, I argue that it provides a perspective whereby you can locate and 'see' more learning).]

2. There is the presumption that all that reflects innate guidance is present at birth -- another unfounded and arguable unlikely presumption, which poses as an assumption. This (like 1.) seems clearly related to Western thought. In contrast, I see innate guidance emerging with each major qualitative change (stage) in the development of conceptual abilities (abstraction abilities) -- the last being during adolescence (this fills in an explanatory gap in all neo-Piagetian theories). (Also, see 4., below for particulars.)

3. While we are biological and all our functioning should obey BIOLOGICAL ASSUMPTIONS (necessarily true, justified assumptions, like homeostasis) and this should constantly be seen as a factor, it is NOT in psychological theories

4. In our 'civilization' there are firmly (and always) things that are thought to be beyond having any specifiable empirical connection. A BIG example here is: abstract thought ("higher" conceptualization): NEVER here has there even been shown a willingness to posit a completely directly observable and concrete manifestation of this, most importantly (and the real problem): not even at its inception. Combine this with the at-birth bias, and you cannot allow the idea of concrete aspects of behavior emerging with development (innately guided) which are the most basic proximate causes of the inception of each new level of cognitive conceptualization (abstraction). This, again, is just baseless presumption -- and has a serious UN-empirical outlook firmly associated with this. (This point clearly shows the total limiting

of perspectives that may destroy empirical science in psychology.)

5. There is a serious hypothetico-deductive bias (versus inductive learning) that also expressly contributes to the various nonsense psychological "theories". We seem to love to think "in advance" as much as possible, when, quite likely, the opposite should be true -- as long as there are observations "to be had".

You say: "Subjective truth does not deal with events, objects, space, or time. It deals only with that by which we know events". The problem here is that this sticks "events we know" (or "by which we know") as kind of a constant, which it most certainly need not be. You yourself say: "sciences eliminate the false and increase their true content over time". (Thus here I have pointed out the contradiction.)

You say: "Solving a problem always requires a leap of insight which transcends the problem itself." Yes, yes, yes. The question is HOW and I say the answer is a process of our own learning and development, where better conceptualizations transcend the old -- it is still "all on" the subject of study. But, if this is not what you mean, then I disagree with you here too.

While I disagree with your statement that "Awareness is more intimate than sensory perceptions" , I do agree with all the following: "... It is more intimate than ego ... Yet not once during our schooling have we been asked, "are you aware?" or had any guidance".

Thanks for your input. I have tried to provide my response in a useful and cogent manner. (I have been saying things like 1. - 5. for months, here on RG, and have yet to be countered: I take this as another sign that I very well might be correct and right.)

Psychology: How does perception show as species-typical behaviors (patterns) with/during development?

Perception is behavior; there are different kinds. Perception is not just sensation and even the sort that is

typically unchangeable is not necessarily all static. I wish everyone in developmental psychology to make their positions explicit on perception and to take responsibility on what I see as an important matter. To me, some likely regular (species-typical) changes in perception ("perceptual shifts" or "perceptual/attentional shifts") are likely central in development, providing an empirical foundation for qualitative advances in conceptual and conceptualization (abstraction) abilities. For me this provides more empiricism: a way to find something(s) subtle, but still directly observable which is key to the inception ** of each new level abstract conceptual ability (this may best be the best chance to catch things directly observable associated with our most advanced abilities).

This makes it so NOTHING is not subject to some true empirical grounding _AND_ it also answers questions of what fills-in "maturation" gaps in all Piagetian and neo-Piagetian theories OR provides an environmental component to things in theories (e.g. "cognizance") which now lack a sort of ENVIRONMENTAL embedding.

So many developmental theorists like the "embedding" idea -- why is there no theory where ENVIRONMENTAL embedding is what is central?

** FOOTNOTE: In my view, these perceptual shifts and inception phenomenon are likely occurring several times with the emergence of a new level of thinking AND MAY, at times, also have occasional directly observable correspondents/referents (again, subtle, perceptual/attentional) even after a new level of thinking has developed and is established.

By the way, if it is so, evidence for all this simply awaits some eye-tracking data and analysis, preceded no doubt by some insight guiding the "looking" and involved in programming the analysis software (enough educated intuition to satisfy the human tendency to want to, or need to, partially understand the phenomenon they are investigating in advance -- I recognize there may be a NEED for insight and not just a "want").

Evidence is only up-to-now non-existent because the investigation requires the new eye-tracking technology and analyses software -- which is NEW.

Why aren't you also looking for more "embedded-ness" in/with the environment?

Really. Why? You can't just say "well, it does happen". HOW IS IT that real, concrete aspects of the environment are INTEGRAL AT THE INCEPTION OF EACH AND EVERY SIGNIFICANT NEW BEHAVIOR?? How do you expressly find these environmental aspects?? -- to an empiricist these will not be just qualitative "types of"

things (or "extrapolations" of known phenomenon or by-analogy) _OR_ anything assumed, but actually really identified, in the physical environment.

[This is simply basic empiricism, or an attempt at it (and not breaking with it or accepting a break with it).]

Asked in project:

The grounding of abstract concepts in the sensory and ...

Dear

Since the "embodied ['in' the organism]" is so very hypothetical, far from directly relevant empirical data (and any truly relevant observations) (and these 'theorists' really not indicating how these internal phenomenon really can/do exist, in any satisfactory manner),: it seems to me it would be wise to find and direct us to the "embedded [in the environment]" aspects FIRST! That would provide at least some grounding for the otherwise seemingly much more preposterous "embedded" phenomenon 'hypothesized' nowadays.

Thus, if there is both embodied and embedded, please direct us to the embedded first.

Dear

YOU SAY, BUT IT SIMPLY AND DEMONSTRABLY IS NOT SO (from your viewpoint or at least from the viewpoint of some of the 'theorists' you defend) ! Even your "flexible and situated" displays the bias that the embodied behaviors are there first !

Similarly for your "further basis" statement. It is amazing how people can display unfounded and unscientific PRESUMPTIONS, with no evidence. (Thus your "therefore ... " does not follow !!)

While the embodied and embedded should be 2 "sides of the same coin", citing actual proximate environmental aspects (right-NOW for each major behavior pattern), CORRESPONDING to an "embedded" behavior/representation (possibly with no-representation, or with representation down-played) is rather rare for some theorists. These same theorists also seem guilty of relying on types of supposed coordination of behaviors between adults and children and supposed social learning that also is never convincingly demonstrated. In short, we have both unproven (and to me, unlikely) mechanisms which have very limited and only indirect empirical referents and no proximate causes cited. (To me both these aspects of the "evidence" they accept is unacceptable, if only because other possible and equally likely (or more likely) outlooks are

rejected automatically -- and THESE do happen to indicate the likelihood of more direct empirical evidence AND some proximate causes.)

I am familiar with only some of these theorists, but could cite Peter König et al as an example (at times he even seems to have difficulty distinguishing perception from sensation).

Perhaps more central is many theorists have assumptions that completely bias their outlook (AND their possible outlooks) AGAINST perceptual/attentional shifts being part of significant behavior patterns that may occur at the inception of new qualitative ways of thinking (in children, during ontogeny). The unfounded assumptions which prohibit even the consideration of such absolutely (otherwise) possible elements of development include:

- 1) the old unfounded: all that is innate is at-birth (or MAJOR bias this way)
- 2) the unfounded and likely false pseudo-assumption: the more learning an organism displays, the LESS innate guidance mechanisms involved
- 3) the contrasting of what is innate to what is learning -- IN ANY FORM AT ALL: THIS IS A WRONG DICHOTOMY AND DUALISM.
(There is evidence that it is only reasonable to view the "2 kinds" of factors occurring in effect at the SAME TIME (simultaneously, blended).)
- 4) The failure to get away from some idea that some significant behavior patterns (e.g. some abstract thought) can occur completely internally.

[(We are simply not that smart (even with our awesome memory

abilities): new levels of thought will involve some new or newly emphasized environmental aspects -- ONE PROXIMATE CAUSE)]

5) The abject inability to construe behavior patterns expressly AS BIOLOGICAL FUNCTIONING.

[I probably should have also listed the profound bias against inductive work and (rather) pushing AND supporting coming up quickly with entire hypothetico-deductive systems (which, from a science standpoint, are grossly premature).]

Until all 5 failures or profound biases are recognized we "will have" weird, unlikely "social learning" hypothetically aiding major behavior changes in ways they likely cannot and without direct empirical evidence and without proximate causes. <-- That is NOT science, people: we are either not doing science with this type of theory OR a good science of behavior is not possible for such persons (OR LISTEN TO MY REASON !)

Until the opposite views to the 5 wrong views cited (in (1) - (5)), are allowed AND investigated, psychology will never be a science. You may begin the science by fully appreciating the outlook in the attached paper (it is a proposed fully-corrected, thorough-going-fully-empirical perspective):

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

Basically, the problems I have ARE WITH the made-up-in-people's-minds ideas about how "action and cognition is based on representations of [supposed] PREVIOUS actions and perceptions": In particular (in the views of prevalent 'theorists' now in this area), the hypothetical [PREVIOUS] "actions" and "perceptions" 'hypothesized' [(I usually use the word "supposed", since the 'evidence' is so very scant and indirect)] are on a poor theoretical foundation (assumptions/presumptions), with unlikely mechanisms 'hypothesized' for development. The supposed mechanisms of the development of "sensori-motor contingencies" (SMC's) beyond infancy and toddlerhood and thereby the development of further sensori-motor-based representations is a needlessly speculative view, founded simply on supposed (and unproven and likely unprovable) and very unlikely 'social learning'/coordinated adult-child action mechanisms (true, at least the few theorists I am familiar with, especially, for example, Peter Konig et al). AND, it is needlessly un-empirical compared to more likely mechanisms of development such as those I put forth, involving innate guidance and stages, the kind of stages

and "maturation" Piaget indicated -- ironically, on whose work the elaboration of sensori-motor actions leading to (in effect) representation is based. Piaget, this theorist SMC people are 'elaborating' * on, would much more likely support my view than such as that of Peter Konig et al. (how much YOU exactly follow this group's line of thinking I do not know, but I am supposing it is something similar to his, as is true of the other 2 research groups I am familiar with).

Those SMC-type groups I am familiar with really have a poor basis for any embeddedness (or situatedness) because of the lack of empiricism (direct evidence) behind their other concepts -- supposed KEY developmental concepts. Lip service to embeddedness (or situatedness) does not equal a TRUE OR GOOD CONNECTNESS in theory, OR in your indirect evidence, OR in the evidence-sought TO aspects of the environment. NO proximate causes are (EVER) cited. I have NOT seen even a decent attempt to relate embodiment TO any realistic (or maybe even real) embeddedness (or situatedness) -- see my characterization of the "social learning", above. THUS you (or those I am associating you with) certainly do really not address how "both [(embodiment and embeddness)] are heavily interlinked". You now can try to show me wrong:

I would love to hear a brief but notable elaboration of how "both [(embodiment and embeddness)] are heavily interlinked". Make it clear by clear description how this is so. (This would allow me to see how you may be somehow different than the prevalent SMC-type research groups I am familiar with.)

You say: "I do not think that embodiment is more important than embeddedness (or situatedness)". Well, I can help you there: situatedness (embeddness) IS MORE IMPORTANT -- TO AN EMPIRICIST AND as indicated in well-founded theory with biologically likely assumptions. What behavior PATTERNS are a response TO, is most basic, to an empiricist or anyone who might be interested in the science of psychology. By reading my previous essays in Questions and Answers, under Contributions in my Profile (just see my last post, above, for one), you can learn about likely false BELIEFS you may have that you are using as guiding assumptions and theoretical assumptions, and learn about more likely alternatives (see: _

[https://www.researchgate.net/post/What can straighten out the mess that psychology is](https://www.researchgate.net/post/What_can_straighten_out_the_mess_that_psychology_is)).

*FOOTNOTE: I see SMC people as basically elaborating-BY-ANALOGY on Piaget's description of actual sensor-motor development in infancy. (BY ANALOGY is not how you get to things and which they THEN 'explain' with unlikely hypothetical mechanisms.) They do this because they are boxed-in by likely false, AND unproven, assumptions about human behavior and thus (literally) cannot think of anything else, such as: innate factors emerging well after infancy (up through adolescence), defining STAGES of development (like Piaget), and those factors (likely perceptual/attentional shifts) changing behavior and starting key human behaviors toward that which allows developing new cognitive abilities, at each stage. (ALL very believable with a set of more reasonable, more biologically likely set of assumptions; SEE: _

[https://www.researchgate.net/post/What can straighten out the mess that psychology is](https://www.researchgate.net/post/What_can_straighten_out_the_mess_that_psychology_is)) AND

See attached publication:

Why Researchers' community is not collaborative as much as developers' community?

Dear

I mainly agree with what you say. But when you say "sometimes researchers' questions are more open-ended and abstract" [and] "may tend to include more 'unstructured' knowledge", this should NOT excuse not being able to find some common ground in addressing the particular questions. There is no good excuse for lack of common ground. The reason lack of common ground exists is: lack of direct empiricism (incl. observations and inter-rater reliabilities AND a clear history of such informing our understanding of the nature of internal representation via the various memory capacities). One major type of thinking antithetical to good, empirical science is the notion of embedded/embodied/enacted WITHOUT also significant "embedding" IN THE ENVIRONMENT (present) in EACH significant instance of learning (including that which occurs for major qualitative developments AND ALL SIGNIFICANT DEVELOPMENTS).

It is beyond belief to me that a trend to theorize regarding embedded/embodied etc. is not accompanied by always MORE and MORE clear "embedding" with and in the environment -- this is simply a presumptuous break with empiricism (AND it's due to faulty, untested pseudo-assumptions) and is not in any way justified. Until and unless the "embedded" theorists (researchers?) always show some corresponding increase in the embedded-ness of significant behaviors within the environment, all we have is a grand fiction of some important behavioral developments occurring ONLY IN/ JUST WITH the mind itself, i.e. ONLY internal processes involved. This is related to the preposterous belief (and pseudo-assumption) that higher levels of conceptualization (aka abstraction) have no external proximate causes (referents) in the environment essential for their inception. This preposterous, unempirical, and unjustified stance certainly has a long history in Western thought and mental philosophical cogitations, but should be seen by any empiricists as very likely a fiction; our outlook on the organism and its environment should SHOW our stance against such unjustified and empirically preposterous positions. Until this is true, common ground, any real common ground for discussions will be lacking (it will be like the debate of those of 2 religious denominations !!)

If Western scientists continue to want to hold to certain basic assumptions (actually, basic beliefs, and not true assumptions), then they should at least have to PROVE THEM! Without that the foundations of the fields of psychology are NOT even established; in a real sense, nothing good has yet even begun.

Let me remind you of ALTERNATIVE views and assumptions (contrary to those positions held today, but biologically and organismically more likely) -- and this is in addition to finding empirical referents for all significant behavior change AND HAVING A HISTORY OF TRACKING THOSE over ontogeny (a pattern of conceptualization supported by the ethological approach in "A Human Ethogram ...", using only, but all, the terms of classical ethology):

It can clearly be argued that all of the following are more in line with biology (organismic, if you like):

- 1) one should develop a theory expressly consistent with biological principles (e.g. homeostasis) -- it should clearly and, in effect, constantly show in the theory;
- 2) The most significant learnings and innate factors occur, in effect, completely simultaneously (and the innate factors at times may well be more important, regardless of the stage of development one is looking at);
- 3) Major innate guidance emerges with each significant qualitative advance in conceptual abilities (last one around adolescence, at the earliest);
- 4) The more "advanced" the organism, the more learning occurs, BUT ALSO the more [significant] innate guidance (factors) are involved;
- 5) Inductive work should be emphasized and hypothetico-deductive systems should be formulated ONLY when you must (and then with no loss or bias of/in observation)
- 6) Everything that develops, including our most prized abstract conceptual abilities, are very likely and potentially observable, concrete (in their inception) -- though these may often be seen "just as" perceptual (perceptual/attentional) SHIFTS and adaptive biases. (This is an instance of the CORE empirical assumption and the way learnings/developments would happen with the organism adapting in its environment in any and every noteworthy way. NO abstract conceptual abilities emerge from just internal processes -- from just "thinking" in the brain/mind.) Never accept social-learning fictions as any plausible substitutes for individual advances -- especially when these really have just the same status as stories or myths

By the way: None of the above indicates there is less learning (more if anything -- if one can really use their imagination here); but, also see: there is no "pure" learning.

Establish these OR establish your "contraries", but DO ESTABLISH a foundation for the field. If you lack the ability to establish your core beliefs and views (and "assumptions"), abandon them for views and assumptions that are quite possible (if not more likely) and which can be empirically shown -- or at least give it a try..

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

Isn't the only way to well understand resultant behaviors to "get ahead" of them?

AND, wouldn't this necessarily have to do with better understanding PERCEPTION _AND_ THAT including any innately guided aspects of this type of thing emerging during ontogeny (e.g. with qualitative changes in thinking, occurring periodically and up through adolescence)?? The obvious answer (to me) is 'yes'. How else will we "get ahead of ourselves", literally and REALLY?

IN ANY CASE: If you have no better answer, and cannot disprove my answer, then you HAVE my answer (and what else?) [Forget your a priori and pat hypothetico-deductive systems, as the static things they are. They 'wither' when considered in the light of "trying to get ahead of things", though good theory will incorporate all good findings and useful perspectives.]

Dear

Your point #1 is well-taken. I see your point and can acknowledge those possibilities. I agree that a way to study possible mediating processes may well involve appreciating the full BEHAVIOR PATTERN of perception and action.

Also point #2 seems to have some good merit. We perhaps will not know all that is being perceived (or at least how all of it is being 'put together' into one overall perception) until we let the organism better direct us to what are the stimuli (again, true behavior patterns point the way). All will be well as long as WE, the researchers, do not feel omnipotent and like WE, ourselves, better-see and can define stimuli (or define behaviors, for that matter) -- the subject, as in other sciences, defines all for us (which translates into behaviors define each other as seen in true patterns: behaviors define behaviors).

I can imagine subtle orienting responses (which are subtle overt behaviors) preceding important perception (or at least the perception which is most pertinent).

Binary choice?: inherently (innately) guided to perceive and experience in-advance VS. knowing (having 'learned') in-advance (nature/nurture AGAIN)?

Cognitive behaviors [(I'd like to say "behavior patterns", but will largely 'stick with' "behaviors")] oftentimes seem to (AND may) lack ANY explicit (demonstrable) external reward(s). Yet, we empiricists assume, in reality, _for the organism_ (phenomenologically, in real-time and in the real-world), this has NOT been the case for all the instances of the key definable and defined behaviors (allowing for just the believable/likely/demonstrated trial-and-error (variability) aspects of the behaviors). This explicit aspect (finding express 'rewards' in the

environment at hand) would be especially likely true in the earlier instances of any behavior patterns with their results (and be necessarily true in the first instances).

If problem-solving behaviors seem new, one must be able to validly posit that the key behaviors-and-their-results were (OR are): (1) able to be "seen (perceived and experienced) correctly (in this type of case I mean: behaviors to a most-notable degree being inherently driven AND the adaptive result inherently satisfying) and/OR (2) the organism must "know how" to evaluate (AND to experience positively or negatively) the product of their thought IN-ADVANCE by some other mechanisms (no doubt, in modern theories, often "thanks to" big-time hypothetical "meta-'s"). And, this latter (#2) is the type of case where the behaviors may lack ANY explicit (demonstrable) external rewards but still satisfy, "thanks" in good part to memory (internal capacities). We all (as empiricists) should allow for BOTH types of instances/cases being most prominent. We all understand this latter case (#2) similarly though we most certainly do NOT agree on the supposedly active internal mechanisms (a big example: some see NO NEED for "meta-'s" in the way they view behavior as having developed and being).

BUT (and this is the POINT OF THE POST): No one should say it would most likely always (or always, in significant cases) be one or the other, yet many modern theories ONLY ALLOW the latter-type case (i.e. #2) IN MAJOR INSTANCES. The way this "works" for them (these psychologists/thinkers) is that, not infrequently, thought is thought to involve [somehow, supposed] incremental bolstering and/or more-holistic 'guidance' via very special "social learning", doing things in tandem with a wise other (adult) -- plus this helps yield the "meta-'s". I say: Why exclude or greatly limit the possibilities for the other sort of case/instance (i.e. #1), at the same time strongly "typing" the accepted mechanisms involved in behavioral development generally, based all on [as-yet, and perhaps destined to be always] mere hypotheticals? [(And doesn't it seem, when put abstractly (as described above), #1 is more often likely a major part of the development of any major cognitive behaviors?)]

What clear, fully empirically-based behavior PATTERNS can be DISCOVERED AND how does one behavioral element in a pattern(s) DEFINE others (& v.v.)?

What clear (seen-the-same, agreed upon), fully empirically-based behavior PATTERNS can be DISCOVERED AND how does one behavioral element in a pattern(s) DEFINE others (and vice versa)?

["Clear" also means excellent inter-rater reliabilities.]

BOTH aspects of that question, always. Nothing less than this standard, or we are doing things wrong. Should all stop and revise what they are doing until this standard is met? If not, why not? And, also, if not : why is this not both possible and more than desirable?: How is it not necessary?

It seems to me that from one good thorough-going perspective, this should be the constant question in all psychology and an answer should always be able to be framed in this way (with no essential elements OR relationships left out). Psychologists should always have an answer to this no matter what, for all behaviors "under" their study. What keeps us from rising to this challenge? [(Obviously, environmental triggers/effects, would always be implicated and apparent through this sort of discussion -- so that really would not be a worry.)]

This is a perspective that makes behavior so central that the researcher is actually very much "left out of it", as it should be. The SUBJECT would always be determining the subject matter AND the next steps -- again, not the researcher. The "nature of reality" itself would be being determined by the SUBJECT, again with the researcher "left out". Isn't ALL of this just like other sciences with their subjects of study, and just the way we would want things to be seen? Do you believe THIS NOT POSSIBLE? Why does it seem to be done so rarely? I CAN TELL YOU IT IS POSSIBLE, when it is ubiquitous in classical ethology studies (such as those described in Ethology, The Biology of Behavior, Eibl-Eibesfeldt, 2nd ed. in English, 1975 pp. 1- 215) -- if you've never seen this, go to that text and see.

I believe it would be better to "fake it" (in a sense) to move towards this standard (i.e. aspects you simply hypothesize ("make up") OR create 'place-holders' for would be seen as such), while still always clearly be trying, rather than give up this standard.

Seems to me that anything else is destined to be disjointed (and the field fragmented). Perhaps if you can't see such patterns you are doing the wrong "chunking" for good definitions and categorization or you are not able to think in terms of real process.

[Feel free to judge the compliance and potentials of my perspective: the major paper is attached. ([https://www.researchgate.net/publication/286920820 A Human Ethogram Its Scientific Acceptability and Importance now NEW because new technology allows investigation of the hypotheses](https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses))]

[General FOOTNOTE: In a way, this is like understanding things so well you can imagine them accurately both forward and backward -- similar to the abilities required during development to be capable of major understandings, according to Piaget.]

ALSO SEE:

https://www.researchgate.net/publication/316473057_What_we_talk_about_when_we_talk_about_biology

AND

https://www.researchgate.net/publication/232453867_Ethology_The_Biology_of_Behavior

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Chapter [What we talk about when we talk about biology](#)

Article [Ethology: The Biology of Behavior](#)

We ONLY know what the proper "restraints"* [on our thinking] are by better knowing the subject of study: the human, a biological organism, showing behaviors that are an aspect of biological functioning. THERE IS NO SCIENCE TO BE HAD, OTHERWISE (PERIOD). I.E. There is no other way (other than this) to argue for a psychology as a coherent, yet ever-growing, area of study (and a with an associated body of true knowledge). TRY as you might to deal with this, or if you are deluded, argue against this.

In science, it must be absolutely clear that the subject determines all (as described in the main post, above).

(*Rather than the word, "restraints", I should have used the word, "boundaries" and indicated that these boundaries can be radically shifting.)

Isn't it true "embodied" 'theorists' and "META-cognition", etc. people just do not put 'enough stock' into the various memory capacities?

Isn't it true "embodied" 'theorists' and "META-cognition", etc. people just do not put 'enough stock' into the various memory capacities? AND THUS, they loose "track of" types of possible aspects of the environment that the human may respond to and the major changes (in 'learning' and development) that may well be triggered thereby. (AND they feed a homunculus.)

How is it even possible to talk so much about what's "embodied" and somehow not SHOW (at least at some point) the CORRESPONDING embedded-ness within the environment? It is simply a flagrant lack of empiricism (in outlook, at the outset).

Plus with a full empirical-looking perspective the "meta'a" are not NECESSARY (though they may occur at times, like in social interaction); rather, at least most can basically be accounted for by cognitive processes and the various memory capabilities ALONE. PERIOD.

I submit both these two areas of 'theory' in psychology have, at major points, abandoned possible, likely, and/or necessary contacts with aspects of the environment and are inherently UNempirical, if just because they didn't try (which is not "ok") -- they could not 'bother themselves' to conceive of possibilities associated with our memories (as THOSE develop).

The way I try for a valid perspective, I cannot violate empiricism in those ways, as my large paper shows (and as my many Questions and Answers, under Contributions, in my Profile SHOW). Psychology is "tired" of the old theories of personality and development, but cannot come up with anything that can be viewed as clearly science/more science/something better. I, for one, am sick of this; just new games, with rules, and lackies "playing along". (Many of the new 'theories' are not even seen by adherents as theories, but rather as "frameworks." PEOPLE, WE NEED THEORIES !!! I offer a start, a new start (nothing wrong with a new start): Ethogram Theory.)

GENERAL FOOTNOTE: There is no reason that a new rather general (and in ways more inclusive) theory needs to be very complex. Few things would be more complex than the contorted thinking (and imagined things) in coming up with some of the "embodied" 'theories' .

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

To get an idea of the tremendous memories of even animals we see as quite lowly, psychologists should read about this.. Then ask, if they have such abilities based on types of memory, what might our various memories be providing for us (re: view of the environment) and ability to see more/new things (aspects) in the environment (or to see things differently) (AND we must not forget the types of memory that enable temporal/spacial thought/conceptualization and (some of) which may perhaps lead to (or follow) some new perception(s) or some change in salience(s)).

NOW, ABOUT RESEARCH. We absolutely have to stop trying to put "an elephant in a thimble".

Now, let me describe what 'much better' research (which we can do NOW and as good theory, with its BASIC research goes on, separately). Here RIGHT NOW is what better research would very likely look like (especially, since we are apes too):

Good experiments (and studies more generally) in ape research involve as much a naturalistic setting FOR the behavior to still likely be performed and still be as meaningful as possible AND allows us to see what actually occurs -- which, even if not expected, is often not uninterpretable, and is interesting TOO! The "openness" of such a study (which MAY be an experiment) is clearly an asset. Maybe this feature, just described, is a description of a good study set-up: whatever you get in a close-to-as-possible naturalistic setting, though now some factors controlled or set-up (perhaps, as they may be in reality too), the results will very likely be meaningful or interpretable (OR, if not trivial, at least stimulate the formulation of other new good hypotheses) -- the unexpected is ok and YET you may still get a LOT of the expected responses, too (perhaps WAY exceeding $p < .05$ if its an experiment). ** NOTE ** :

Ecological validity is seen not as a nicety in ape behavioral research, but as a requirement! (MUCH other research with apes has come to be seen as nonsense.)

Wouldn't it be nice to stop being misguided or being simple followers, and have some serious fun (actually freeing up and using a lot of our good imagination)? FOR CLUES ON HOW AND WHY WE NEED TO GET "MORE REAL". SEE the ATTACHED PUBLICATIONS (my perspective in "A Human Ethogram ..." and the views expressed above are in line with all these good perspectives, and with all their proscriptions):

Article [The metaphysical basis of a process psychology](#)

Article [Behaviour versus performance: The veiled commitment of exper...](#)

Chapter [What we talk about when we talk about biology](#)

Is "social learning" often a major false "crutch" for NOT seeing the individual organism & aspects of its environment (& for missing actual ontogeny)?

Another, longer version of the question:

Is hypothetical "social learning" (with no direct evidence) a major false "crutch" for NOT seeing the individual

organism and major ways it encounters (_and_ points out *) aspects of its environment (_AND_ supporting a number of false dualisms and for 'abstract-intellectual' mentalism)?

YES. [* FOOTNOTE: A biological organism, in progressive developmental relations with its environment, will define for us (at least at key points) the important aspects of the environment; if we could only see behavior as biological functioning, with true important assumptions associated with having behavior seen that way -- something that becomes much more possible as we abandon false presumptions (wrong and wrong-wrought 'assumptions').]

Several present predominant perspectives are not environmentally-based (empirically based) enough to see real aspects of the environment and the organism as they together result in the beginnings of developments, and beginnings of new types of learning/thinking -- and for properly conceptualizing the results. It is still the researcher deciding what's what: the 'ghost of the presumptuous Skinner' "lives", "in bed" with 'models' and wrongly conjured hypothetico-deductive systems.

And, it all is related to unsubstantiated presumptions or falsely 'generalized' conclusions (seen as "assumptions" of a 'theory') with no evidence or real foundation for these BELIEFS; AND: excluding even imagining about or considering more environmentally-based and empirical conceptualizations (and thus excluding the possibility of the discovery of such).

[In several of my previous Questions and Answers: I have outlined the unfounded presumptions/'assumptions' (beliefs) and provided an exposition of the 5 or 6 alternative beliefs (which could well be shown true) and which could be appropriately part of an empirical system of thought with good well-founded assumptions. SEE: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> and https://www.researchgate.net/post/What_can_straighten_out_the_mess_that_psychology_is]

All the bad ways could end with a new perspective, and especially one that can make use of new eye-tracking and computer-assisted behavior analysis software, to locate some of the important evidence.

Dear

I will not presently provide a thorough critique of your entire stated position. But I will say it is highly suspect, just because it never refers to concrete empirical behavior PATTERNS shown in the environment(s) by the organism. This is what frequently happens when a 'theorist' decides too much on what is what and on what occurs - - before proper non-presumptive, empirical, direct observation. This is corrupt.

You should be "operationalizing" almost nothing -- NOTHING BUT WHAT YOU OBSERVE (and if you cannot discover behavior patterns, your requisite observation is "in its infancy" OR done wrong). If concepts are based on extensive good observations, proper operationalization could then take place (though another term may be used for it).

Your system of thinking is self limiting, because it for the most part (its terms) come from your head (and likely those who preceded you). Learning is limited by the way you see things in the first place. Social, social, social ... provides stories to replace actual development of the organism involving its own most-adaptive mechanisms. It is seemingly a part explanation, BUT often without any notable direct evidence and no proximate causes. VERY POOR. Cite some of these good things in a further response and we can judge to see if it is "of the organism".

Good clear empirical observations still cannot be found (because you are not omniscient, if for no other reason, with your big hypothetico-deductive system). It is just something you (and perhaps some before you) think can be used; but I would cite lack of DIRECT observation FOR defining CONCEPTS (the good thorough kind of observation, associated with the discovery of necessary species-typical patterns) .

In other posts I have outlined associated major likely-false assumptions associated with those who use quick hypothetico-deductive systems. I have argued that having those assumptions make it impossible for you to think correctly (and thus 'theories' are wrongly skewed, hopelessly); observation is always inadequate (even unsystematic). I also describe how 5 major assumptions used by modern psychological 'researchers' and 'theorists' HAVE NO FOUNDATION (are unproven pseudo-assumptions or presumptions OR conclusion USED AS 'assumptions'). Other opposite assumptions are just as or MORE well-founded and more biologically likely : see: [https://www.researchgate.net/post/What can straighten out the mess that psychology is](https://www.researchgate.net/post/What_can_straighten_out_the_mess_that_psychology_is) AND see: [https://www.researchgate.net/post/Why arent you also looking for more embeddedness in with the environment](https://www.researchgate.net/post/Why_arent_you_also_looking_for_more_embeddedness_in_with_the_environment) (see ALL my responses ("Answers") in that thread)

Dear

I have specified appropriate assumptions AND an appropriately most-minimal hypothetico-deductive system -- I know you cannot use none. BUT, with good assumptions and using ONLY the best-known AND well-established psychological findings on phenomenon (SOME basic patterning if the nature of basic associative learning _and_ several findings on memory), you can have a h-d system that WILL be correct, because it will likely show no presumptions and will fully rely on observations of the organism (and biological principles):. With those things being the case, the system will be SELF-CORRECTING. See <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> and especially the attached paper.

How much do we really learn from neuroscience correlates?

It has been quite a while since I have read such research, and more recently I have read only summaries: But, it seems to me, that results showing neuroscience correlates with some behaviors or responses provides simply "some support" for psychological interpretations -- and, while this support is very welcome, it is really impossible to gauge how important the findings are AND (relatedly) what they really mean.

I know many psychologists are looking to neuroscience to [perhaps, "sufficiently"] bolster their views and positions, but we will never get away from the fact that we must know a lot more about behavior to know what the neuroscience means. I think neuroscience will have more to gain from good detailed observational psychology (if this ever happens) than what psychology gains from findings of neuroscience correlates.

Behaviors relate to behavior patterns (and these to other behavior patterns) potentially more clearly than behavior relates to internal neuroscience correlates. That is part of my view.

Asked in project:

The grounding of abstract concepts in the sensory and ...

Dear

I do NOT think neuroscience methods "provide insights in fine-grained mechanisms". IN FACT, I think they are INCAPABLE of doing this without a greater understanding of overt BEHAVIOR PATTERNS (<-- something modern theorists and researchers seem incapable of FINDING, talking about, OR CARING ABOUT, but are MORE THAN likely there and real and important -- and in overt behavior itself).

You say: "Behavioral psychology is important to relate internal cognitive processes to external behavior. I think that both neuroscientific and behavioral data is necessary ..." (end quote). In the first sentence of the quote, you seem to indicate that SOMEHOW "internal cognitive processes" will be found before "external behavior". That's unreal and unempirical: ponder: "internal" and "external". You don't really think you will find the meaningful patterns in brain activity first and then relate them to behaviors, do you?

If generally the field of psychology is a fragmented mess, shouldn't our 'prime directive' be to solve that?

I'd say yes, unless you clearly have something "better" to do. (I am trying very hard to do the best I can on this problem.)

[For additional contributions I have not generally shared (publicly), contact me -- these are views and positions and facts I have corresponded about with AI people. If psychology will not respond to the identified problems appropriately, I will do my best to make sure AI people create a working human simulation, before the irrationally and unscientifically stuck-in-the-mud psychologists will EVER EQUAL SUCH. It may be I will not continue to have to suffer the abuse of your ignore-ance.]

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

LET ME ADD MY OWN STANDARD yet possibly sufficient-for-a-start position (in case there is a chance you have not yet seen/heard it):

I continue to be filled with wonder at all the attempts to reduce things to "embodiment" with never ever a decent strong continuous general outlook on EMBEDDED-NESS with the environment. I see that this ridiculousness is intimately related to the assumptions problems, ACTUALLY PRESUMPTIONS limiting considerations of connections with the environment. The still fully active (and abided-by, with consistency), yet not in any way confirmed, "assumptions" continue to be: One: all innate is present at birth: and thus failing to look for innate guided perception AND BEHAVIOR in later childhood and adolescence, after infancy or toddlerhood, ALL BECAUSE OF baseless PRESUMPTION; Notion 2 (with nothing but evidence against it, in this case): that the innate and the learned can be partialled out (and they are never seen as nearly always admixed from the beginning -- which has been SHOWN LIKELY); in addition, there is the unfounded presumption (belief, "conclusion", pseudo-assumption) that the more learning an organism show, the less innate guidance there is; plus, there is a continued rush-to-hypotetico-deductive-systems, not seeing the importance and value in inductive work (thus in "systems" we very rarely hear of real validated lawful (or species-typical) BEHAVIOR PATTERNS, when this should be about all we hear about).

THIS IS COMPLETE TOTAL INSANITY (nothing short of this). I have repeatedly shown the false assumptions that are the CAUSE, in every theory context and from every conceivable angle, yet, with psychology fragmented, there is no reasonable response. You can verify the assumptions are unproven and unfounded !!!! PLUS, I have at length described the beginning of a new way, WITHOUT ALL of the presumptions (but, rather: consistent with basic BIOLOGICAL ASSUMPTIONS -- imagine that). See my: "A Human Ethogram ... (Ethogram Theory)"

Dear

To the extent needed, I believe I can provide a fix of psychology for AI -- so you and others in AI need not be directly concerned with it. Between what you have developed and what I propose you add (communicated recently), it seems close to a complete system that could be operational. Correctly or not, I have gotten "a feel" for it. I do not think there will be so much problems with things being wrong; more likely incompleteness will be the problems. But, in any case, we will fix them.

MISC. (Question vanished)

Dear I most certainly have mixed feelings on philosophy. If it helps you FIND your subject and provides the principles for minimal assumptions at the start (aka presumptions), then I think it can be very good. It can also be good to provide outlines of the nature of continuous personal development (aka "spirituality") in certain cases. Without justification of your view of your subject matter and basic ways it must be and basic ways knowledge must develop, you are in great trouble as a theorist/researcher [you are lacking in personal responsibility -- which you actually have for everything (no one should be able to tell you anything, which you do not thoroughly investigate and 'see' for yourself)]. On the other hand, much philosophy is very presumptuous and encourages hypothetico-deductive systems before they are necessary. Some philosophy is very limiting of personal growth with their "definitions". Unfortunately, I believe, the bad philosophy is more prevalent than the good. (I try to stick with personal responsibility, ontology, and epistemology -- and otherwise largely couldn't care less about what philosophers have said.) I have tried to set some good examples: <https://www.researchgate.net/project/Core-Buddhism>, <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>, AND (esp. for behavioral science), see attached: Related P.S. : Nowadays (because of unproven and unjustified assumptions, several most likely opposite of the truth), behavioral scientists in REAL effect do MUCH to avoid thinking in direct terms of aspects of the environment (which is most ironic since this is the ONLY REAL basis of empiricism for behavioral science). Actually, if you correctly consider ethology, you consider not only more, but consider (and discover) ACTUALLY MORE learning (falsifying ONE of the several unfounded assumptions of the mainstream (aka "presumptions")). <-- If you cannot get to where you 'see' this now, keep working and try again. (Consider the following relevant analogy here: If you leave some place(s) and go somewhere else, does the place(s) you have been disappear?)

Will AI people successfully simulate a continuously-learning/developing human before psychologists?

I am presently doing my best to make SURE OF IT. For decades psychologists have shown themselves impervious to rationality and reasoning (and cannot even conceive of behavior in a truly biological manner -- so far are they from a decent start!) They basically do not see behavior as an aspect of biological functioning -- perhaps making the old-time philosophers happy, but not many others.

See, for example: <https://www.researchgate.net/project/Operational-System-of-Artificial-Intelligence> and https://www.researchgate.net/publication/317380937_Sergii_Kornieiev_Artificial_Intelligence_Operating_System_basic_definitions

Article Sergii Kornieiev "Artificial Intelligence Operating System: ...

Dear

"Formal" need not be set, so it need not be formal. I certainly believe it is possible to mimic the human development of knowledge so it can be continuous ("limitless learning") but within parameters -- SHIFTING parameters (and thus truly unlimited)

Dear

Re: Alternative to Neuroscience and Computational Theory of Mind Report

I have provided the information for a thorough model based on all well-founded and/or necessary characteristics of BEHAVIOR (no need at all to resort to the uncertain (in meaning) brain science). Just see all my responses to all the posts of Sergey Korneev INCLUDING EVERYTHING (i.e. including Replies to Comments -- where actual one major part of the information "resides").

It may be helpful for people in AI to see:

<https://mynichecomp.com/Almemory.txt>

and <https://mynichecomp.com/onmemory.txt>

Are there good reasons psychologists should not be considered scientists?

Of course, I say (and have said): "Yes". Some of the major reasons are:

- 1) They cannot doubt major [pseudo-]'assumptions' that are very doubtful.
- 2) Related to (1), they cannot consider major possibilities that may well be true.
- 3) They don't operate "in-line" with some of the strongest findings in the field
(e.g. major reliable, long-standing results on memory ... [enough said]).

I have addressed ALL of this in my Questions and in Answers on researchgate; seek and ye shall find.

[P.S. (4) They constantly make things ("theories") up, based on analogies OR 'extrapolating' or "generalizing" from major UNPROVEN ASSUMPTIONS (aka: beliefs, conclusions, presumptions). They also commonly like to develop systems in the abstract or hodge-podge "theories", assembled largely by intuition. [A few more items, and this pretty much (or well enough) "covers it" ('it' being general psychological theory).]

- 5) They never stick with inductive work long enough to DISCOVER anything, before developing their hypothetico-deductive systems.
- 6) They cannot conceive of innate factors and learning operating phenomenologically at the same time (in effect, simultaneously) -- though both data and arguments, decades old, argue for this.
- 7) They not only cannot get past invalid nature/nurture issues, but they already somehow think they are ready to say (actually: presume) whether development is continuous or in stages (and debate that).

All sensible people (as well as ALL other scientists) can see that these problems are absolutely FATAL and there is no possibility of good, real science. Those who know nothing about it, can well imagine, just from the little summarized HERE. Many psychologists ("theorists"/"researchers") may CLAIM to do several of the good things I've listed above, but their behavior proves, beyond doubt, that these are lies -- though they MAY be deluded enough to 'lie' to themselves. Pathetic, beyond simply mistaken, beyond undesirable. "Learning", itself, remains a myth.]

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

How would an AI robot, with all useful human abilities and human capacities, differ from a real human (and how need it not differ)?

My partial answer:

It would differ, because we would not want it to make needless or destructive errors, as it is refined. (This is my view, anyway; feel free to present other views.)

Is building such an AI robot possible? If so, couldn't we learn tremendously from building such? [(If you cannot imagine such an AI robot, what is the problem, what is limiting you?) In my view: "One is inherently limited" is not an acceptable answer here or an acceptable empirical answer.]

[(I have made some effort to provide a rich empirically-grounded, developmental and practical outline of the bases of human abilities and of human capacities for AI: For capacities, see: <https://mynichecomp.com/Almemory.txt> and <https://mynichecomp.com/onmemory.txt> . There is more you must see to come to know what is necessary: There is the large challenge of coming to know some basic things we do not know (but potentially could well come to know -- with new eye-tracking technology and computer assisted analysis software): see: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> -- a theory congruent with a different view of human development and learning, a different set of more-likely-true and biologically congruent assumptions; IT IS DIFFERENT, though seems a lot less foolish than current ridiculous "embodiment" theories, which have a very poor empirical foundation. Ethogram Theory is an absolutely and ultimate empirical view.)]

<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence>

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

I would say that humans are AIDED by emotions, not typically guided (in a strong sense). I would say that major human learnings and major cognitive developments are GUIDED BY (strong sense) innate action patterns (the sort of perceptual/attentional shifts I indicate in "A Human Ethogram ... " (AND now researchable)). <-- This is

a better justified view than contrary prevalent assumptions. The ethogram view and assumptions are more biologically congruent and supported by cross-species findings -- psychologists are impervious to both this evidence and to reason because of unfounded assumptions or presumptions (pseudo-assumptions) they mindlessly accept (even in the face of ridiculous ramifications in their "theories" -- and the corresponding very weak "evidence"); AND, they are never held by their "peers" to account for this. (Today's psychology is more like a standard religion than a science: they do not even have decent definitions for learnings -- that is how the long-recognized senseless nature/nurture debate and some other absurd debates continue to survive. Psychologists must learn how to become something other than irresponsible cowards -- likely something each must do on his/her own; begin by recognizing the possibilities of being more empirical, by investigating alternative hypotheses, testable with DIRECT data which may literally be right before your eyes.)

I agree that humans can do wrong. So could A.I. robots, but one would refine them so they did not -- AND THIS IS WHAT WOULD BE VERY CONSTRUCTIVE FOR ALL OF US to learn from. (And, AI may well be able to get the funding for projects that include some of the indicated psychological research because of the promise of a useful application -- they would then be doing the "work of psychologists" once again.)

P.S. Categorical declarations are not a good idea in the absence of full, good evidence and are contrary to empiricism. It is best to avoid such.

Dear

I am willing to take responsibility for the difficult and cloudy question. What you really need is a credible "fully containing" empirical (fully testable) system, which is correctable. I am big on DIRECT empirical evidence or a direct empirical basis for each and everything -- if it's possible and credible, try that, do that. That is what I have tried to provide.

The important thing is to start correctly; one cannot expect to well-cover everything or cover the things expressly covered, totally correctly from the beginning. I "believe in" and advocate self-correcting systems: the SUBJECT (the human) always fully informs AND corrects -- that is what I mean, and that is what must be the case with the system. See if my system can be seen like this or make one (a proposal) yourself. THE MAIN THING IS DOING IT AND 'SEEING' EMPIRICALLY ALL YOU NEED TO 'SEE' AT A GIVEN POINT (kind of like a language which is "mathematical" in its abidances, though clearly NOT a mathematical system in a big or true sense (at least one I can see)).

P.S. Dear

Suppose for the sake of non-argument we observe instead of argue.

I am a good, thorough-going empiricist and would [irrationally] posit nothing outside the empirical.

Dear

What we need to establish OR clearly be "enroute" to establish is the list you provide. The basic necessary definition of some of these things is not hard -- do not be fooled by any "reputations" of topics and subject-areas provided by philosophers .

Dear

We must refrain from making judgements or conclusions clearly "in-advance". I do not find statement like "beyond the domain of AI engineering" either proven or constructive.

Philosophers do not necessarily make bad scientists, and scientists do not necessarily make bad philosophers -- that is my view. (There have been many non-helpful, thus hurtful, philosophers who were clearly not scientists. Plus, there are MANY, MANY psychologists who have personally NOT thought their systems out.)

P.S. Dear

I do not have a soul, nor do others, in my view (<https://mynichecomp.com>) . So, I do not worry about that.

THE THING FOR ALL TO CONSIDER IS: CAN I SAY SOMETHING VERY DIFFERENT FROM WHAT YOU SAY, YET NOT BE PROVEN WRONG (and have a useful potential to be proven correct)?

Dear

I have NOT made judgements in-advance of a LOT of relevant observation and thinking -- and, by that, I mean the kind of empirical considerations and clear thinking possible.

"Soul" is a hindrance according to the Buddha and the clear observations of many.

Here is a summary of how and why: <https://mynichecomp.com> (there is absolutely NO religion there, in any conventional sense : it is a testable or eventually testable view -- empirical, rational and realistic Buddhism).

Dear

It is now thought everything clearly influencing cognitive behaviors with overt behaviors accompanying them or following them are either conscious or pre-conscious (capable of being made conscious, with the correct context and cues). In fact, some question whether anything cognitively significant is totally unconscious. Thus, our mistakes are not unpreventable. Thus: the AI robot need-make no mistakes, especially with development and refinement (also: more than 1 person is always involved: everything must be shown replicable).

Dear

Your statement seems to be based on what exists. We most certainly are not done with AI; in fact, many in the field seem to believe they have barely started. [P.S.Activity in brain regions rarely has any 1-to-1 correspondence with behavior AND, secondly, the MEANING OF THE BRAIN ACTIVITY is based on the scant behavioral evidence -- that is its empirical foundation; to me brain activity always provides only clues and it is impossible to see how it could be otherwise, since it is behavior we are (here) trying to explain -- it provides welcome clues, but only clues. Perhaps most of the need for such clues is better explained by the bad behavioral science, rather than the potential of well-seeing brain activity corresponding to behavior.]

Dear

I do not think that "God" could be clearly and meaningfully operationalized (i.e. ever given useful and system-consistent operational definition(s)). I, myself, am an atheist (as are true Buddhists who take a wholly,

completely and exclusively rational, realistic Buddhist perspective -- something I believe is the CORE of Buddhism) and I am fully confident that this position is the useful one -- even for the highest ideals.

If there must be something to be seen as God-like: Only if an IT person believed that the "God-like" was the clear causality (in sequences) of phenomenon ITSELF and nothing else would he/she have a position that would not hurt his/her own work. This would basically simply be beholding real and now-better-known phenomena, which he has come to know, with awe-struck appreciation, and perhaps wonder (his mind now better integrated and consolidated, providing him then with the "mind-space" needed for this appreciation/perspective *). A atheist can essentially have this same view (and also be appropriately optimistic), I believe. [If you must have something awesome and God-like, the first part of this paragraph is all I can provide. I have no basis to provide anything else.]

* FOOTNOTE: This is basically the perspective that allows more yet to be taken into working memory (and to keep doing that correctly as one seeks progress **) I.E. The rightfully ("correctfully") obtained "mind-space" is what allows for clear, valid and understandable [communicable, replicable] progress. (Enough of this and you may have a glimpse of nibbana (aka nirvana); if put in real terms, this could also make you a 'stream-enterer' -- a stage of personal development more clear, correct, and more ethical, and it being a stage allowing for further correct development.) This is how it is possible not to throw out at least some conception of "spirituality" (continuous PERSONAL growth) something -- in the sense just described -- we would not want to do.

**FOOTNOTE: Too little appreciation is given the the limitations and the nature of the correct use of working memory (and using it so as to stay correct -- and communicable, verifiable, replicable -- progressively). Working memory (with a limited 'span', a bit like STM) is something most psychologists do not always take into consideration (to say the least), with their "progress" -- they do not operate in-line with one of the best established findings OF PSYCHOLOGY (and then arguably their "theories" are wrong).

[I think I should point out that there is no reason (I can think of) that an AI robot could not do all of the knowledge-building and development described above. He too, in this sense, could sense the "god-like" (i.e. awesome, and perhaps wonderful, new perspectives)!]

Expect some edits to be made to the new material ON FAITH, below:

ABOUT FAITH:

Within an empirically defined (often subject-defined) area of interest for investigation: if one has some rational, realistic reasonable hypotheses (which at least at some point could be testable) AND has some clues (indicators) that what one suspects/expects might be so, this fits with an understanding of what may be the beginnings of useful faith (at least that which could be the possible beginnings of faith for an empiricist). BUT in such a given circumstance, in addition, one should be able to state and show the clarity and appropriateness of your entities and their dynamics (memory capacities involved, guidances and associative learnings) as such, BY doing so in a way related to necessary and well-established, applicable assumptions AND as 'things' which must be related to other findings (as the relationships involved have been "spelled out"): This then moreso allows you to believe something is like you think it is before the final actual direct or full discovery is made (i.e. before all the direct evidence is found) -- and, this very well and fully fits a definition of "Faith" (appropriately thinking ahead/imagining about what is possible in a case, about some important matter). Such an appropriate faith is a good thing, a needed motivator, providing the needed direction and necessary to be open to find all the clear important relationships (and yet it allows your view to be correctable).

Dear

There is no need to believe the Buddha's cosmology (i.e. believe in any after-life, happenings after death, _or_ reincarnation, and/or in gods and such) to fully obtain all the benefits of behaving and thinking as otherwise prescribed by the Buddha. I believe in nothing at all which is super-natural; I have outlined essentially the entire thinking and the terms of the Buddha, by looking just at the rational, realistic (possible to test, real-world) statements you can find in his teachings and I found it still a coherent thought system for continuous personal development (aka "spirituality"): <https://mynichecomp.com>.

Perhaps it is up to you to indicate HOW (in real empirical terms) certain things MUST "go beyond" the full model I have prescribed (I can't in advance argue against everything I don't believe -- or at least that seems not-so-useful and not fun).

Dear

There are NO major developments or significant major learnings that are well-described OR defined by modern psychology (none); all their views on such are simply greatly misleading. Part of this is because they keep separating nature and nurture, when the two must literally not only both operate, but OPERATE (at least in any real effect) AT THE VERY SAME TIME (this is something their assumptions and constructs do not allow for). In a very real way, there is no definition of learning, beyond perhaps that which is most trivial and incidental, which is satisfactory. THUS, when you talk about an AI robot failing after "learning" (about it misbehaving), this means

nothing because much of learning is not understood at all by psychologists (and several of its possible bases are entirely neglected, while their views are based on the ridiculous and unproven, and not well-based in any clear, acceptable way).

Plus, there is no open definition of "stages" of development because unfounded, unproven presumptions, used as assumptions, rule out any actual big innate guidance FOR STAGES. Find my other writings on how six or seven fundamental "assumptions" of modern psychology are not only unproven and unfounded, but also more likely untrue (this is all here under my Profile, under Contributions and then under my Questions (asked) and Answers (given) -- 300+ pages of explication in addition to my 2 linked-to major papers, containing important and now testable hypotheses). One thing I offer is the better alternative assumptions (more likely real, if only because of some clear relationship to biology -- AND BEHAVIOR IS BIOLOGICAL FUNCTIONING).

The innate problem occurs even in your own statement. Also, tell us the various important ways "stage" shifts can occur, in your view and see how that goes ...

IF YOU COULD CONCEPTUALIZE "THE INNATE" IN ACTUAL SPECIFIC BEHAVIORAL DEVELOPMENTS (and learnings) OF THE AI ROBOT (something, then, we could also program), then you could well be modeling (at the same time) some more-true conceptualization of learning and development which occurs with humans. It, in short, is really time for psychology and psychologists to get real ! Think direct, proximate causes for everything and become more empirical -- a real empiricist. No vague, imagined-for-summary write-up suffices (such modern psychological summaries often are based so poorly, with very little or no incremental or actual concrete evidence, that they are delusional (see the "ham-stringed" and strange "embodied" theories of human development, for example, with their made-up-as-needed constructs of just supposed (and unlikely) behaviors and developmental learnings *)).

*FOOTNOTE: The crudeness of psychology's major understandings can be illustrated or "hinted at" by the ubiquitous and undifferentiated OR vague use of the word, "learning". By now, if progress was good, there should be many systematic, agreed upon (scientifically reliable and validated), and ecologically valid differentiations (types of learning) here.

[You have to think "outside the box" itself, because you are in the wrong "box". You are fighting, often mainly, to defend and seemingly support this "BOX", but now must examine and question "the box" FOR THE SAKE OF EMPIRICISM.]

Dear

You quote: (Pickering 1993, 126): "Old AI crucially depended on the functionalist assumption that intelligent systems, brains or computers, carry out some symbol processing, and that the symbols processed are a representation of the field of action of that system." That sounds most excellent to me. AND you go on to quote: "The ecological approach of the New AI has its greatest impact by showing how it is possible "to learn to recognize objects and events without having any formal representation of them stored within the system."" The "without any formal representation of them stored within the system" sounds terrible. Apparently, in some ways, I agree quite a lot with Pickering 1993.

Then, in you next paragraph, you mention AI people coming up on their own, with their own architectures. < -- That (as you indicated too) sounds like a terrible idea. And, as you indicate, it seems like it could be dangerous, though how successful it could be in the first place (for true AI) is highly questionable.

There are historically some good behavioral science models that are biologically compatible (some good, old ethology) and some (i.e. 1 or more) that are that way now -- for more on that, see my last 'answer' to the following question:

[https://www.researchgate.net/post/Since I have had to add a lot of behavioral specifications I am compelled to ask How bad is true full artificial intelligence today how is it bad](https://www.researchgate.net/post/Since_I_have_had_to_add_a_lot_of_behavioral_specifications_I_am_compelled_to_ask_How_bad_is_true_full_artificial_intelligence_today_how_is_it_bad)

Think of an INTIMATELY GUIDED (but developing gradually) totally empirical approach, and where all issues may not need to be answered all-at-once to show demos of good "proofs-of-concepts" . This basically solves the problem of " "Empiricism" can only add to an Existential Fatigue", you cite. For "proofs-of-concepts" described: See a couple of the other 'Answers' under:

[https://www.researchgate.net/post/Since I have had to add a lot of behavioral specifications I am compelled to ask How bad is true full artificial intelligence today how is it bad](https://www.researchgate.net/post/Since_I_have_had_to_add_a_lot_of_behavioral_specifications_I_am_compelled_to_ask_How_bad_is_true_full_artificial_intelligence_today_how_is_it_bad)

Dear Meenakshie Verma, Thank you for your thoughtful response, addressing some significant issues. I am relieved that you seem to forgive me for my rather harsh, and somewhat presumptuous earlier response to you.

P.S. In any case, if one is realistic about human information processing (working memory), learning, innate guidance and memory, one would not even consider working out a whole system "in their mind" -- we simply

do not "have what it takes" to do that. The mind (our minds) must be guided bit-by-bit [[ironically?]], with minimal errors (and with self-correcting SAFEGUARDS) at each step in the development of a system we come to know and which we (at the same time) come to formulate.

P.S. If one had an idea about how good empirical psychology could be done and THUS then be translated into mechanisms of an AI robot, then we could better contemplate how that robot could/would differ from a human (or not): So let's examine:

How can good true empirical psychology, alone, make it more than plausible (and very likely) that FULL, true artificial intelligence is possible?

[https://www.researchgate.net/post/How can good true empirical psychology alone make it more than plausible and very likely that FULL true artificial intelligence is possible](https://www.researchgate.net/post/How_can_good_true_empirical_psychology_alone_make_it_more_than_plausible_and_very_likely_that_FULL_true_artificial_intelligence_is_possible)

Dear

You can build emotions into AI. They are relatively simple (though some emerge only with development, for example: shame and guilt -- you also have to build the progressive hierarchical types of learning into AI too and these developments yield such "secondary emotions", along with new ways of thinking); emotions are also rather highly patterned; they are variable in people (somewhat in nature and in amount). BUT: they do have a typical TYPE of adaptive function, aiding in proper response (e.g. surprise, joy, anger, fear, even guilt) so they should be there in the AI robot, and I do not see why they couldn't be.

Conscience and repentance involve reflectivity (thinking about your thinking or thinking about what you have done) ; an AI robot would have to have reflectivity to properly learn and develop. Conscience and repentance also typically involve emotion, again no big deal.

See: <http://atlasofemotions.org/#states:anger> ETC.

Dear

If you are asking what is the difference between a human and a AI robot with all human capacities and capabilities: this is something I do not know and cannot fully imagine. BUT the AI robot would be programmed not to BE exactly like a human (with errors, mistakes, and irrationality) but to HAVE all the capacities and abilities OF a human; it should be quite instructive for us to see and learn from that.

Dear

It is so. But, the topic here (the one I want to discuss here) is FULL artificial intelligence, so not limited to menial things

Here is an answer I put in another thread, which has basically the same topic/Question: STILL, for more, also see:

[https://www.researchgate.net/post/What are or going to be the main differences between AI and Human Intelligence](https://www.researchgate.net/post/What_are_or_going_to_be_the_main_differences_between_AI_and_Human_Intelligence)

I have more Answers there.

Human and AI robot. If the following is how it IS (with the human), then this would give some clear idea of what a true AI robot would be like AND BE WORKABLE for engineers and programmers (though quite a lot of psychology research might be necessary). It is fully workable BECAUSE THIS IS a 100% empirically-based development (developmental) system, based on behavior patterns (and developing behavior patterns) "interacting" with specific environmental aspects, and those things being the proximate causes of behavioral change. (The ONLY other things always used and always taken into consideration in this system are the empirically well-established and well-defined natures of the memory capacities -- which most certainly seemed necessary; these are "open" CAPACITIES that provide only limits and perhaps, then, some influence on structure BUT are not ever of themselves sources of content.)

Here is likely the briefest outline of the system (pure behavioral psychology) :_

[https://www.researchgate.net/post/Could some behavior change have overt aspects so subtle as change in time environmental aspects are gazed at or significant decreases in gaze time](https://www.researchgate.net/post/Could_some_behavior_change_have_overt_aspects_so_subtle_as_change_in_time_environmental_aspects_are_gazed_at_or_significant_decreases_in_gaze_time)

This (above) is the "containing system"; there is no problem adding in the more non-universal (in behavior) stereotyped, specific-function-type behavior patterns: here I am thinking of the emotions. (NOTE, though: Some secondary emotions, like shame and guilt, rely on first having cognitive developments, such as covered in the outline of the "containing" system (see "A Human Ethogram ... " to learn about some more specific (more specified) particular cognitive developments associated with some emotions). "Interest" is NOT an emotion -- I don't care if it seems like it (it does NOT have enough stereotyped patterning.)

(This "containing" system is a cognitive-developmental system and works autonomously and develops with the proper things (objects and/or happenings) perceived and attended to, and given the memory capacities: working memory (as it "goes") and the other memories also being active.)

Dear

Let me address your statement, " Paul's [(a human)] choice of dinner is his de facto choice and responsibility, the robot is dependent on a set of pre programmed responses. The argument can be made that AI can be programmed to self-learn and to become independent, but even in this case we would still assume that the responsibility over the choices and actions of such an AI are of the programmer "

And, thus, even in the latter case: (repeating the last part of your Answer, above):

"we would still assume that the responsibility over the choices and actions of such an AI are of the programmer" BUT, NOTE the: "we would still ASSUME part", especially.

I DO certainly see the point. YET, while it may not be easy (in the sense of getting findings and having the KNOWLEDGE OF THE HUMAN NEEDED), I think it also is not impossible. IF EVERYTHING THE HUMAN IS, at least if each and every major set of behavioral responses, IN ITS INCEPTION has: some clear, directly-observable, proximate-cause relationship to "taxi behavior" (overt behavioral response patterns shown in a circumstance automatically AT THE APPROPRIATE POINT IN ONTOGENY (development)) _AND_ to corresponding clear environmental aspects at THAT TIME _AND_ if the nature of internal manipulations (thought) can be well understood IN TERMS OF _PREVIOUS_ such direct, clear responses and environmental aspects -- and reasonably "tracked" more indirectly and inferred (_AS IT IS NECESSARY_) and "seen" as some major behavioral influence (esp. on what the organism attends to), PLUS "seen" integrated at times (during later developments, as hierarchical behavioral/thought patterns develop) [(i.e. at some key times some are "seen" in some understandable way as INTEGRAL with OTHER (new) reliable behavioral patterns IN these LATER developments)] -- _THEN_ the human could be simulated, with choices and actions NOT determined by the programmer BUT RATHER by human-type processing of experiences over a course of behavioral development (ontogeny) (<-- emulating development being something else AI people may most likely have to do) .

In a way, this is simply a full appreciation of and application of strict empiricism.

And, this is not "too many IFs" IFF one proceeds in a disciplined orderly manner. ALSO, by the way, all else necessary to understand THESE other-behavior-"containing" cognitive behavior patterns and developments is: associative/dissociative learning AND the MEMORIES -- capacities with clear limits and types of content ("chunks"), though the "chunks" changing along with other developments -- still, not outrageously difficult to infer. [(I know that emotions were not addressed and will have to be important add-ons, but this TOO is no big deal (my perspective, like Piaget's, is that cognition and cognitive development much determine emotional development and language usage (also) (and NEITHER, operate as significantly, vice versa); THUS cognition and cognitive development are the true basic "containing" system; there is a LOT of empirical support for this position: emotions are adjuncts -- helpful ancillaries -- AND so is language, despite its immense human-adaptational importance, e.g. via specialization and division-of-labor).)]

Now, while all this is hard, at least in the sense of requiring much exploration and much discovery, it is otherwise no harder than the impressive things AI people already do, as far as working it into the hardware and software.

I will also argue that having an overall, over-arching perspective, such as I present, IS NECESSARY in human Behavioral Science to avoid CHAOS -- the very chaos that exists and has existed in psychology for 100 years. The CORE of my view (the concrete specifics, or at least what sorts of behavior patterns are needed for cognitive development with/for qualitatively different "stages" (or levels)) CAN BE FOUND BY READING MY long PAPER, "A Human Ethogram ..." , see:

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

) . In a way it is surprisingly simple (CLUE: the new eye-tracking technology ... will be needed for the research);

but, you will also realize that much research will be needed. For further explication of my view, see the many, many Questions I have posed and Answers I have given here on researchgate. To learn more about the types of memory and how they "come into the mix" in an integral way (in the "big" over-arching cognitive system), see: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

Final P.S. One no doubt realizes that IF THE DISCIPLINED OBSERVATIONAL Systematic-longitudinal RESEARCH is not done, the true AI robot will not be made. If it will be impossible to get behavioral scientists (with reasonable outlooks) to actually do the needed research, then the TRUE AI ROBOT WILL ALSO BE IMPOSSIBLE. Is this "impossible enough" for those who want true AI to be impossible? (Heck, I might present the best empirical argument for the impossibility of true AI: so if you are an empiricist AND you want a way to argue for the impossibility of true AI, then I have provided that for you.)

Since I have had to add a lot of behavioral specifications, I am compelled to ask: How bad is true/full artificial intelligence today & how is it bad?

Since I have had to add a lot of behavioral specifications, I am compelled to ask: How bad are attempts at implementation of true/full artificial intelligence today and how are they bad? AI people: Please try to be very descriptive and specific.

[One AI person I trust seemed to say it has been bad and bad in the same way for decades; I assume the power shown then is cleverly obtained mainly from BIG DATA and simply providing the needed focus, for the good functioning. This is one major thing which is conceivable. Is this some of what you see, or not? What else? (Please especially describe what works and how it works.)]

Dear

Thanks for your interesting and cogent response. You certainly seem very familiar with AI.

Very partly realizing some of the challenges you cite, I always try to think in terms of offering an outline of all human cognitive behaviors which, while sketchy, could function in all the multi-dimensional aspects in any defined and very limited setting; basically, it seems to me that such a demonstration of proof-of-concept could be quite impressive at least for those who know what they are seeing demonstrated (even while the actual behavior range is outrageously limited).

The outline of human behavior (which I have already tried to provide) is totally empirical (each aspect) and everything (each and all capacities and capabilities) are empirically related. Thus it is fit for computer coding and programming. [(I have left the full sorting out of all the aspects of the human I have described to the engineers themselves -- since the sorting out needed should be clear to one who is capable and they need to process it for themselves anyway. It may well be best that I am not involved in the details -- though I stand by the system as an integrated wholly empirical system. * I also did not even bother to describe the roles of the simpler systems at work (e.g. emotions) BECAUSE good information on their roles and nature of their aspects is already "out there".)]

In short, I believe I have done what I can and I hope it is all the basic input from psychology needed for one (an AI engineer) to make a proof-of-concept demonstration.

I believe most of the problems that seem hopelessly challenging basically only seem that way because people want to do everything at once -- when one "bits off more than they can chew", things tend to be confused and confusing. . For a very meaningful proof-of-concept, you need to do much less and just close enough to "right" that it is fixable -- just get everything (using everything in the model) working well in the right direction, in as limited a setting as necessary so a demonstration of the workings of everything can be seen.

[To refer you to references to my system, see the posts under the Question:

https://www.researchgate.net/post/How_would_an_AI_robot_with_all_useful_human_abilities_and_human_capabilities_differ_from_a_real_human_and_how_need_it_not_differ? Concepts you do not find in the description of my basic system OR at least mentioned (e.g. emotions) are either secondary (e.g. motivation) OR not needed (or false or wrong) **.]

*FOOTNOTE: To get to my empirical system (with all major elements central to all cognitive developments and learnings), I did have to challenge 6-7 basic "assumptions" (actually presumptions, because they are unfounded and unproven) of mainstream psychology; these presumptions are/were destructive of real and true and likely possibilities (plus the key hypotheses involved in my system are TESTABLE (verifiable, replicable)); these presumptions, beyond being limiting, are/were MISLEADING and destructive to having as much of an empirical foundation and embedded relationship with the environment which is otherwise, and LIKELY AND INDEED

possible (EXAMPLE of that which is misleading in modern, mainstream psychology: having developments of "abstract abilities" occurring entirely in the mind -- with no clear environmental referents). The alternative assumptions I use are more likely and more biologically related than the "assumptions" they replace. [My system needs no "meta-" capabilities or special separate "executive functions ...". THUS, my system solves the hopeless man-within-the-man problem (i.e. the homunculus) (which could never be resolved); the capacities and capabilities/abilities properly (mutually) balance themselves within a good system -- the concept of homeostasis in some way comes in here and there (something not found in any real way yet in modern mainstream psychology). I could mention other advantages of my system (solving age-old debates) which are relevant to psychology, but I am sick of addressing those stubborn ideologues, and totally unresponsive "boneheads" -- and you need not hear of all that HERE. Psychology cannot argue for itself, as is; and, psychology cannot argue against my position -- they have done nothing even close in almost a year.]

**** FOOTNOTE:** My perspective on human development is the only system offering BOTH a top-down view of behavioral development and a bottom-up view. The mainstream views are basically irrationally bottom-up, i.e. JUST "learning"; I cover both learnings AND realistically also cover maturation due to innate guidance factors involved at key points WITH learning (something the mainstream really doesn't cover at all in express terms of real distinct behavior change). BOTH a view of learning AND of maturation factors (involved intimately with learnings) are necessary for reasonable distinctions being made between TYPES of learnings (otherwise: learning maintains just a mythical as well as a very vague and unrealistically, unlikely ubiquitous status as a sole mechanism).

Dear

I do question whether AI machines could be better overall than a human; but they could be better in a lot of ways, while self-learning/developing; they would be different, yet the using the same systems -- but this need not imply that anything would/could get "out of control" (nor do I think this is likely -- as we learn more about the human, we will have a good sympathetic/empathetic response, I believe).

AI engineers (or perhaps I should say: computer scientists) could AGAIN (as in the '80s) provide a model for psychology; the psychology field itself is worse than stagnant, worse than "in a rut"; it is irrationally bounded by unproven assumptions, this yielding truly ridiculous "theories" (for example: see the "embeddedness" 'theories', which can/could only provide weak and extremely indirect 'evidence' -- so much so it indicates not that the 'theory' is correct, but that it is wrong!).

Dear All

AI needs my perspective and the elements and relationships I outline (my theory). Let me indicate how and why this is so.

[I put the most of the following in a FOOTNOTE just added to another post, but believe it deserves to be seen, so I make the statements HERE as well, with some additions, so all this will be seen.]

My perspective on human development is the only system offering BOTH a likely and realistic top-down view of behavioral development and a bottom-up view. The mainstream views are basically irrationally bottom-up, i.e. JUST "learning"; I cover both learnings AND realistically also cover maturation as it (in my clear hypotheses) affects learning (in real time) due to innate guidance factors, INNATE ACTION PATTERNS, operating WITH key learning -- of course, all in response to specifics in the environment (perceived and attended to). Maturation is something the mainstream psychology really doesn't cover at all in express terms of real distinct direct behavior change -- I DO. BOTH a view of learnings AND of maturation (at key times operating essentially a part of the important learnings) are necessary for reasonable distinctions being made between TYPES of learnings (otherwise: "learning" maintains just a mythical status, as well as a very vague status and is seen unrealistically as a sole mechanism and having a ubiquitous status). IN SHORT, only my system provides a reasonable "containing" theory of behavioral development (and learnings) AND ONLY MY SYSTEM has TESTABLE hypotheses of maturational development and learnings happening at important times (stage shifts), in real effect LITERALLY OCCURRING TOGETHER. Only my view is biologically grounded as well. This is why it is a [(THE)] complete and coherent (integrated) outline of learning and development which will serve AI well: it is internally consistent, has very well definable system of [all]-BEHAVIORALLY-definable elements, AND indicates how the various behavioral elements relate.

Mainstream psychology obviously cannot successful serve AI, OR ITS OWN STUDENTS, for that matter, well.

Can someone explain to me how "embodied" 'theory' explanations of the thinking of older children is not ridiculous?

Can someone explain to me how "embodied" 'theory' explanations of the thinking of older children is not ridiculous?

It seems needlessly constrained by analogies and strange things being posited ("forced" on the 'theorists' by likely-false, unfounded, unproven "assumptions" -- actually presumptions); it is not credible empirically; the

evidence is so indirect and/or weak it more disproves the theories rather than supports them.

Also, corresponding to the lack of direct empirical referents (proximate causes), there ends up being little apparent connection to, or embedness WITH, THE ENVIRONMENT. This supposed "other side of the coin" is barely discussed or well-referenced (in reality) at all.

It is obviously irrationally (by analogy) just taking Piaget's well-documented and excellent sensori-motor findings and 'generalizing' that (really just by analogy) unto cognitive activities supposedly engaged in by older children (the supposed and very unlikely "co-actions" with the mother for social learnings are some good examples of truly unlikely occurrences 'hypothesized' for 'learning') .

It seems to me that the main reasons for these 'theories' are irrationally self-limited people, who cannot think of anything else. The impressively elaborate (though contorted) thought of Peter Konig, while perhaps making an impressive thought structure, gains nothing in credibility by that complexity. In fact, to me, if a simple conveyance of something is not even possible, then it indicates a serious lack of validity.

I HAVE proposed alternatives (which may seem "strange", but not for long -- because they are empirically reasonable (and biologically likely), with testable hypotheses, given new modern eye-tracking and computer analysis software; yet you still no doubt have to have a good solid background to know how/where/when to look.

[If you know a lot of my postings, you know I am at "war" with psychology over fundamental assumptions and the ramifications of those. I cite 6 or 7 likely false "assumptions" (presumptions) of psychology and describe more-likely, more credible, alternatives. Psychologists have neither successfully attacked my positions (very arguably more likely and more biologically-congruent) NOR have they in any credible ways defended their own positions -- in almost a year now.]

If few people even read this, the most likely explanation is fear of the professors, powers that be "in the system" -- what else is new?? Here is the way you can tell if the status quo forces control you: do you read only what professors have you read or what they recommend? SIMPLE.

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

You say "Embodiment" has come to represent the many ways in which the body influences the functioning of ... According to their theory, humans perceive in order to act and they act in [(I got it)] "

But "to act" does not mean sensori-motor type internal actions FOR CHILDREN BEYOND INFANCY OR TODDLERHOOD. It is my position that their by-analogy "beliefs" become the only answer they can conceive of because THEY HAVE BASELESS UNPROVEN ASSUMPTIONS THAT gravely limit them (and COMPLETELY RESTRICT THEM TO A TINY SUBSET OF THINKING); they include:

- 1) "the more learning an organism shows, the less innate guidance mechanisms". The latter part does NOT FOLLOW and is an unproven, unfounded presumption, LESS biologically likely that the opposite assumption.
- 2) All innate processes and innate mechanisms related to cognition are more or less present at birth; this is another (related) unfounded and unproven PRESUMPTION. It is more biologically likely that the OPPOSITE IS TRUE and that all major cognitive developments are guided (in effect simultaneous with the individual organism learning) by innate action patterns occurring IN tandem with (and in response to) special particular aspects of THE ENVIRONMENT perceived and attended to -- THUS EMBEDDED AND NOT EMBODIED.
- 3) In important instances, nature factors and environmental factors appear in real effect SIMULTANEOUSLY in behavior -- something else they literally find absolutely impossible to conceive of, so such thoughts are also (as the 2 above) rejected right away ("out of hand") -- BUT FOR NO GOOD REASON.

There are 3-4 other unfounded, unproven assumptions THEY (and other psychologists) LIKELY BELIEVE which, along with these (above), BLIND modern psychologists to ALL BUT such "embodiment" presumptions and crazy ideas which could have ONLY THE MOST INDIRECT EVIDENCE. My perspective is more biologically likely, and IF THE TESTABLE HYPOTHESES (now possible to research AND TEST, with new eye-tracking technology, etc) ARE SHOWN TRUE, IT WILL BE WITH DIRECT OBSERVABLE EMPIRICAL EVIDENCE -- proximate causes.

In my more well-founded view: Modern psychology CANNOT "think outside the BOX" ** AND **, in fact (to continue the analogy): THEY ARE IN THE WRONG BOX. My views cannot be countered at the present time; "embodiment" can be countered based on lack of relation to the environment and to biology AND because of the extremely weak, indirect "evidence" which arguably does more to disprove the theory than prove it -- not to mention the "assumptions" they have on NO DECENT FOUNDATIONS, whatsoever. (These constitute 4 extremely serious and powerful criticisms.)

Piaget's SENSORI-MOTOR Theory of cognitive developments in infancy is great, with good direct evidence. Your cited desperate, needlessly limited "hypotheses" (by- analogy) are simply pure junk.

(It is amazing how the presumptuous can state their position: THEY explain and explain and explain again AND AGAIN, but such contorted elaborate unsubstantiated "explanations" HAVE THE STATUS OF FAIRY TALES.)

P.S. I am close to the point that I have read enough of the "embodied" JUNK; I will read more cited "embodied" articles when they have read much of my work HERE (on researchgate) and much that's linked-to (all totaling about 500 pages). Otherwise, those folks may have to cogently and elaborately describe any research they wish I read (and which I may not have read).

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Here is something that, in major ways, is the "opposite" of the 'theories' of "embodied cognition" -- and it is ultimately empirical and behavioral and environmental -- and does not minimize REPRESENTATION. It is in-line with the way memory really is, is ecological, and has assumptions consistent with biology:

Relative to modern psychology, I have gone from "embodied" unprovable 'theories'

(ridiculous to the extreme, due to limited thinking from false "assumptions" (presumptions)) TO

theory most thoroughly EMBEDDED in the environment:

"How can good true empirical psychology, alone, make it more than plausible (and very likely) that FULL, true artificial intelligence is possible?" LINK:

https://www.researchgate.net/post/How_can_good_true_empirical_psychology_alone_make_it_more_than_plausible_and_very_likely_that_FULL_true_artificial_intelligence_is_possible

There are 300 pages of explication in my Questions and Answers on researchgate and another 200 pages, in 2 large papers, linked to

from researchgate.

"How can good true empirical psychology, alone, make it more than plausible (and very likely) that FULL, true artificial intelligence is possible?"

I will address, JUST FROM THE STANDPOINT OF PSYCHOLOGY (i.e. behaviors and environmental aspects), ALONE, not only how robots can/will become conscious, but also how FULL artificial intelligence (complete simulation of all major human behaviors) will be possible :

All qualitative changes in behavior (particularly, especially including cognition and cognitive processes) have as their key CAUSE(S), at their inception, SOME OVERT RESPONSE(S) _TO_ particular aspects of the PRESENT environment. (The overt responses, in the case of an organism well-along in its ontogeny, may well be as subtle as perceptual/attentional shifts (<-- and these behavioral responses come to be discovered and defined, likely involving eye-tracking technology).)

Subsequently, ALL other (less dramatic) changes in behavior ALSO involve current behaviors (but now including internal behaviors, like thought -- largely basically and clearly mimicking what was at one time OVERT), triggered BY the present environment (aspects or circumstances), and otherwise behaviors are just altered by simple associative learning [and dissociative (discriminative) learning], of the sort already basically understood; again, the "internal" (aka covert) behaviors can be assumed to be in essence quite similar to what they were when last seen as overt behaviors -- altered only by being in combination given environmental triggers and thus their combination, and given the various representations (the more subtle responses) that have developed previously -- and all, such as these, still clearly like and clearly related to what was/were overt behaviors (BEHAVIOR PATTERNS), as I've already indicated). [(Affected behavior during qualitative changes in cognitive processes and behaviors changing during simpler learning may well (LIKELY) involve not just single behaviors, BUT BEHAVIOR PATTERNS, and ALWAYS some environmental aspects or circumstances are involved in behavior being triggered or associated/dissociated -- i.e. this encompasses ALL behavior change and behavioral development.)]

In short:

ALL behavior and behavior changes, involves existing behaviors (many existing because of our types of memory ("open", limited capacities) and, relatedly, many showing developed subtleties of response, aka "representation") _AND_ some key environmental aspects or circumstances; at times, because of special key environmental circumstances, we are impelled to put behaviors and representations together in new ways (THE behavior change AT FIRST (during its inception) may be as simple as perceptual/attentional shifts, and the triggers may be as subtle as those aspects of the environment being perceived or perceived more clearly (or attended to) together in qualitatively new ways); and the organism will have qualitatively new kinds of thinking continue emerging ("flower") via continued environmental interaction; outside of KEY qualitative shifts, all behavior changes occur because of the simpler associative/dissociative (discriminative) learning, due to relatively simple sequences or combinations of environmental experiences.

Thus speaking about behavior change and behavior (and the implications for AI):

Since the environment, as a new combination of aspects or circumstances, OR as new things are perceived and/or become salient IS ALWAYS INVOLVED in behavior change or development, and since behaviors that were at one time OVERT and changed relatively little and only by relatively simple processes ** (as they come to differ from their first overt appearances) _THEN_ ALL IS DEFINED FOR THE STRICT EMPIRICIST (at least eventually, as we study, observe and discover -- with new technologies likely involved); AND also, given all involves direct, observable, PROXIMATE current aspects of the environment AND understood behaviors (BEHAVIOR PATTERNS), THEN all can be programmed and become part of artificial intelligence (this will include

whatever must be and is CONSCIOUS at any point). If one is a strict empiricist, then one would believe that true artificial intelligence is possible.

**** FOOTNOTE:** THUS covert behaviors are still recognizably related to when key aspects were overt, at their inception.

NOTE: There are 300 pages of explication in my Questions and Answers (both under my Profile and then under Contributions) on researchgate and another 200 pages, in 2 large papers, linked to from researchgate (the major one of the 2 large papers referenced below). [It may help to see the Project: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> .]

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

An approach clearly devoted to empiricism (to clear, real empiricism) will, as a matter of course, be dedicated towards discovering major directly observable proximate causes OF clear major BEHAVIOR PATTERNS in response (and, of course, influencing them, directing learning). Such clear empirical findings and results could be "mechanized" in an AI robot -- science and AI need the exact same things.

Each person is in a "box" (with respect to their thinking); isn't it important to recognize precisely what your "box" is?

Each person is in a "box" (with respect to their thinking -- even me); isn't it important to recognize precisely what your "box" is? Your box may be more open or closed. Many need not only think "outside the 'box'" but must realize that they are IN THE WRONG BOX.

I finally state this issue/problem expressly, with THIS question. BUT, I have covered what you need to think about to evaluate the situation and to answer this question for yourself (and perhaps for some others, who you guide) elsewhere.

The case I have made for a long time is illustrated by the following type of instances I critique: SEE (for one sort of example):

https://www.researchgate.net/post/Can_someone_explain_to_me_how_embodied_theory_explanations_of_the_thinking_of_older_children_is_not_ridiculous

Can anyone with great imagination "see" what I am pointing to in "A Human Ethogram..."(perceptual/attentional shifts w/ each of the cognitive stages)?

Can anyone with great imagination "see" what I am pointing to in "A Human Ethogram ..." ? : In particular: I point to perceptual/attentional shifts as the manifestation of innate action patterns that almost assuredly (and necessarily) occur at points during ontogeny, directing (and providing for and/or greatly influencing) some major new learnings that occur as the qualitative cognitive (stage) shifts, during child development (especially, in 4 stages between 2-18 y.o.); DOES ANYONE HAVE ANY SPECIFIC INSIGHTS into what these "look like" more specifically and in particular **? (This will provide much better guidance for others [(not me)] in using and analyzing data from eye-tracking research on children of different ages, towards the actual discovery of these phenomenon. ***)

If you have any such insights and can write about them, please do so. It would be greatly appreciated.

** FOOTNOTE: While I do have regrets I could not (and cannot) do this myself, I could only do what I could at the time (it was 1982-1985, I was about 30 y.o. and the technology to do such research did not exist -- only very recently has the needed eye-tracking technology and computer-analysis software existed to permit the needed research; if I had seen this technology and especially if I had seen it in use, it is possible I could have had the needed insights I am now seeking from others).

*** FOOTNOTE: I am now retired and, even if I was clever enough (which I find doubtful), I now cannot pursue any such research myself. (I don't even know what eye-tracking technology looks like or how it needs to be set up; I DO KNOW it is powerful enough to make the needed discoveries -- based on how it has already been used.)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Isn't full, direct, proximate empirical grounding (distinct, clear & replicable) simply empiricism itself & doesn't all else fall unacceptably short?

I say so.

[Re: full, direct, proximate empirical grounding* (distinct, clear and replicable):]

All science should be at least be clearly and beyond doubts pointing that way (i.e. at least clear in outlining the actual way-and-means to that objective) by having the best operationalizations (or the clearest best-partial operationalizations) POSSIBLE, BUT without sacrificing that very prime objective (which is perhaps a major caveat -- making some positions seemingly incomplete, when they are just as they must be, "pointing").

Is there any excuse for anything else in science? Isn't anything else simply NOT science? (Are you an empiricist?)

* FOOTNOTE: Of course, grounding (while it always must there, OR have promise of being "there", through clear, needed observation(s) and investigations) cannot be expected to be everything or be total or complete. This would be a misunderstanding of the nature of science and its continuous progress. (No one is taking the real fun out of any of this.)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

I believe I understand the good point you make about "sufficiently unified". In the case of understanding human behavior, it is doubly true: Being unified: Necessary not only for good understanding but even for the possibility of understanding the Subject (the human); and, also necessary for the development of the good understandings the human itself comes to have, i.e. FOR/IN the person itself -- what one looks to finding evidence of in the subject matter (itself), if one is a cognitive psychologist (and, as Piaget and other developmentalists have "seen" things: cognition and cognitive development is central overall).

I show appreciation for the need for having a perspective and theory that is sufficiently unified IN:

https://www.researchgate.net/post/Re_Theory_or_models_Why_is_there_no_concern_about_thinking_about_too_much

But, also I show the appreciation for this in: (also see any follow-up Answers/responses I make to any of these questions):

https://www.researchgate.net/post/FOR_science_dont_we_have_to_hang_to_the_utter_essentials_by_our_fingernails

https://www.researchgate.net/post/Shouldnt_any_Developmental_Psychology_Theory_offer_clear_Empiricism_and_how_to_maintain_that_AND_outline_a_clear_Epistemology

https://www.researchgate.net/post/What_are_necessary_features_of_good_general_psychology_theory

https://www.researchgate.net/post/Wont_research_confusions_about_investigated_aspects_of_cognition_be_diminished_if_they_came_to_be_known_to_reliably_sub-serve_some_greater_behavior

https://www.researchgate.net/post/What_would_you_look_for_in_a_new_cognitive-developmental_theory
(see my Answer in a response below the question)

and some other posts.

Dear

My proposal is not that all "full, direct, proximate ... distinct, clear" [(directly observable empirical)] causes be all found right away (in some ways this will no doubt forever remain an ideal goal), but I do say that any research you are doing (AND the theory behind it) should at least POINT clearly _AND_ direct one clearly in the direction toward important proximate causes -- just doing the best possible now. [On the other hand, with eye-tracking technology, I do believe that some proximate causes (major ones) may be close at hand; also, identifying some of the MAJOR proximate causes will likely suffice -- it might be impractical to find all.] Testability, with such clarity as to yield near-complete inter-rater agreement, IS essential (this will indicate clearly pointing towards proximate causes, as a matter of course). Also, as I have said before, one sign that psychology has a proper scientific perspective certainly will be thinking and talking in terms of BEHAVIOR PATTERNS and not just "behavior(s)" -- this will show realistic organismic connections with the environment; RELATEDLY : "Learning" will be seen not as some ubiquitous thing, but as learningS, being of various sorts -- and not just ad hoc "social" OR otherwise "basic" (this latter now imagined to be simple and supposedly quite

arbitrary). (Learning processes may be simple, while TYPES of learning, found/discovered to be, certainly need not be simple.)

It should never be the case that speculation goes "beyond empiricism". Thus, I agree with the statement: "I wish more avowed empiricists accepted that 'Speculation does not go beyond empiricism'." I more than question the notion of "blue-sky speculation". Speculation (to well-occur) must be in some reasonable "container" and, so for example: in the case of psychology, "contained by" major super-ordinate systems with some clear empirical bases, such as cognition and cognitive processes (all memory-based) -- thus (hopefully) limiting speculation about "more" or about related things or about specifics to other POSSIBLE (additional) congruent processes [AND, in the case of specifics, being clearly towards more clearly "containing"/determining PROXIMATE CAUSES (the direction to that well-defined, with the previously described excellent inter-rater reliability)]. [And, this situation (of determining or clearly moving toward proximate causes) MAY (at times) also exist with respect to understanding "more" and to understanding related things -- OTHERWISE hopefully DISTINCTIONS are similarly being well-made (that is: very reliably).] (All this, in a real sense, is just maintaining a logical structure; and to do otherwise is to fail to do that.)

Dear

You talk about physics, and I talk about psychology. I do nonetheless believe there must be some similarities in core fundamental, foundational principles in SCIENCE in general. [Extremely important principles, well-known and being much more important than simply testing against the 'null hypothesis' (though this may be one reasonable eventual goal); and, among important fundamental aspects of science, and not-yet-mentioned here: knowledge of one's ASSUMPTIONS, their foundation or lack thereof, and their repercussions.]

Why do psychologists, etc. just keep making things up?

You should outline a system of thought (and observation/action and/or a VIEWPOINT which will lead to observations, actions) that clearly (unambiguously, verifiably) directs observers and researchers TO distinctly be moving toward reputable empirical goals and thus toward FINDING observable, direct, proximate causes of behavioral phenomenon (involving external aspects of the environment, of course) ** and/OR ** a research program to test clear hypotheses of such causes (if yet possible -- but, best not to "move too soon", here).

Much that is written nowadays (guessing maybe 99.9%+) is something else AND, to me, no matter how seemingly inclusive or clever or seemingly integrative (and so forth) it seems to be ****, IT ALL HAS THE STATUS OF FAIRY TALES, if it is not making EMPIRICAL PROGRESS -- which can only be done by being engaged in one of the 2 activities noted in paragraph 1, above. Paragraph one indicates basically the requirements of being engaged in an empirical activity (and of being an empiricist)

**** FOOTNOTE: Only the subject matter: the clear overt behavior(s) (or, likely, overt behavior patterns) AND the aspects of the environment they involve (and they ALWAYS involve some) can define the "skeleton" or core of what is/becomes an inclusive, integrative, etc. theory. Eventually clear overt behavior patterns will necessarily and clearly indicate the kinds of memory, concepts, and thought there really are and then they will properly be part of the theory (and direction for further observations and research -- again on: observable, direct, proximate causes).

[Overt behaviors may be subtle, especially later in ontogeny, and may involve things as subtle as systematic eye-movements (indicating perception/attention).]

No ideas (concepts, conceptualizations) that are founded just by-analogy should persist -- if you are not "moving off" these, you are clearly failing to accomplish the prime objective. All "embodied" theories are obviously just "made up" fairy tales with no chance of finding reliable, valid distinct external environment aspects (direct, observable, proximate causes). SAME FOR: Relational Developmental Systems Theories (including the 'Bioecological Approach' and sociocultural theory).

"Attached" is part of a "new start";, which can be a very good thing (and result in "throwing out" nothing good):

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

What can one now accept except a new good core empirical theory?

What can one now accept except a new good core empirical theory, like my "A Human Ethogram ..." (NOW RESEARCHABLE, with new eye-tracking and computer analysis software). I contend it is relatively safe to accept some of the notions of different sorts of memory (but none that indicate a human-within-the-human, that is: the meta "stuff" and executive functions "stuff"). Otherwise the present notions of different types of memory seem to an extent to be both satisfactorily defined and limited (and ultimately, for content, dependent on the findings coming from the core empirical theory) -- in short these are capacities, basically, and they are otherwise self-correcting concepts. Emotions seem clearly enough defined for the concepts to not be misleading (and the ideas of these conceptual aspects of thought-on-behavior also seem be flexible and easily correctable). THIS IS ALL THAT YOU NEED, I SUBMIT as an outline to start good full-bodied research (of course, otherwise stemming from the core theory). This is a brief statement of an outline I have provided to AI (see my other project : <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence>).

How can good true empirical psychology, alone, make it more than plausible (and very likely) that FULL, true artificial intelligence is possible?

I will address, JUST FROM THE STANDPOINT OF PSYCHOLOGY (i.e. behaviors and environmental aspects), ALONE, not only how robots can/will become conscious, but also how FULL artificial intelligence (complete simulation of all major human behaviors) will be possible :

All qualitative changes in behavior (particularly, especially including cognition and cognitive processes) have as their key CAUSE(S), at their inception, SOME OVERT RESPONSE(S) _TO_ particular aspects of the PRESENT environment. (The overt responses, in the case of an organism well-along in its ontogeny, may well be as subtle as perceptual/attentional shifts (<-- and these behavioral responses come to be discovered and defined, likely involving eye-tracking technology).)

Subsequently, ALL other (less dramatic) changes in behavior ALSO involve current behaviors (but now including internal behaviors, like thought -- largely basically and clearly mimicking what was at one time OVERT), triggered BY the present environment (aspects or circumstances), and otherwise behaviors are just altered by simple associative learning [and dissociative (discriminative) learning], of the sort already basically understood; again, the "internal" (aka covert) behaviors can be assumed to be in essence quite similar to what they were when last seen as overt behaviors -- altered only by being in combination given environmental triggers and thus their combination, and given the various representations (the more subtle responses) that have developed previously -- and all, such as these, still clearly like and clearly related to what was/were overt behaviors (BEHAVIOR PATTERNS), as I've already indicated). [(Affected behavior during qualitative changes in cognitive processes and behaviors changing during simpler learning may well (LIKELY) involve not just single behaviors, BUT BEHAVIOR PATTERNS, and ALWAYS some environmental aspects or circumstances are involved in behavior being triggered or associated/dissociated -- i.e. this encompasses ALL behavior change and behavioral development.)]

In short:

ALL behavior and behavior changes, involves existing behaviors (many existing because of our types of memory ("open", limited capacities) and, relatedly, many showing developed subtleties of response, aka "representation") _AND_ some key environmental aspects or circumstances; at times, because of special key environmental circumstances, we are impelled to put behaviors and representations together in new ways (THE behavior change AT FIRST (during its inception) may be as simple as perceptual/attentional shifts, and the triggers may be as subtle as those aspects of the environment being perceived or perceived more clearly (or attended to) together in qualitatively new ways); and the organism will have qualitatively new kinds of thinking continue emerging ("flower") via continued environmental interaction; outside of KEY qualitative shifts, all behavior

changes occur because of the simpler associative/dissociative (discriminative) learning, due to relatively simple sequences or combinations of environmental experiences.

Thus speaking about behavior change and behavior (and the implications for AI):

Since the environment, as a new combination of aspects or circumstances, OR as new things are perceived and/or become salient IS ALWAYS INVOLVED in behavior change or development, and since behaviors that were at one time OVERT and changed relatively little and only by relatively simple processes ** (as they come to differ from their first overt appearances) _THEN_ ALL IS DEFINED FOR THE STRICT EMPIRICIST (at least eventually, as we study, observe and discover -- with new technologies likely involved); AND also, given all involves direct, observable, PROXIMATE current aspects of the environment AND understood behaviors (BEHAVIOR PATTERNS), THEN all can be programmed and become part of artificial intelligence (this will include whatever must be and is CONSCIOUS at any point). If one is a strict empiricist, then one would believe that true artificial intelligence is possible.

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How can good true empirical psychology, alone, make it more.... Available from: https://www.researchgate.net/post/How_can_good_true_empirical_psychology_alone_make_it_more_than_plausible_and_very_likely_that_FULL_true_artificial_intelligence_is_possible [accessed Aug 29, 2017].

Brad Jesness ·

An approach clearly devoted to empiricism (to clear, real empiricism) will, as a matter of course, be dedicated towards discovering major directly observable proximate causes OF clear major BEHAVIOR PATTERNS in response (and, of course, influencing them, directing learning). Such clear empirical findings and results could be "mechanized" in an AI robot -- science and AI need the exact same things.

Would Skinner support my view (He would if he wanted to be 'the ultimate empiricist'.) OK?

I submit that if Skinner was forced to/or came to accept major concepts related to cognition and cognitive development, AND had the new technologies (esp. eye-tracking) THEN he would happily see my view and back me. Modern psychologists who cherish empiricism should all very, very much like my completely direct observational proximate-cause empiricism.:

[https://www.researchgate.net/post/How can good true empirical psychology alone make it more than plausible and very likely that FULL true artificial intelligence is possible](https://www.researchgate.net/post/How_can_good_true_empirical_psychology_alone_make_it_more_than_plausible_and_very_likely_that_FULL_true_artificial_intelligence_is_possible)

I believe it is the ULTIMATE empiricism possible and it is possible. Minimally, each new aspect of behavior (change in behavior patterns) would be DIRECTLY observable (though may be subtle) and has corresponding clear DIRECTLY OBSERVABLE environmental referents, i.e. proximate cause(s), at least AT THEIR INCEPTION (an important "caveat"). All my writing here on researchgate describes and/or indicates HOW THIS IS POSSIBLE AND PRACTICABLE (<-- I can't believe that's a word). You might ask: Why have others not thought of this and proposed this? I have argued several times that it is because they have core basic "assumptions" that literally do not allow such ideas (their thought and imagination is limited by these and NOT because my perspective is "hard" or unlikely): these assumptions (of theirs) are actually unfounded, baseless presumptions and what are alternative "opposite" assumptions (I detail) are actually in every way more likely true (for one thing: more congruent with biology). My perspective is a huge advance (act. an alternative) over "embodied" 'theories' -- being much, much more empirical (always); this perspective is an EMBEDDED perspective (embedded in the environment) -- something psychologists, at all times in the history of Psychology [supposedly] have sought. This perspective is Behaviorism -- as it realistically CAN be (all behavior and environment, all BASED on directly observable behavior and directly observable environmental aspects).

People occasionally ask me: "what is your question, then"; IT IS ONLY: what is "taking" you [so long to come on-board (I have been waiting 35 years, though I understand that only lately has there been technology (eye-tracking) to test my specific hypotheses -- which also need further refinement and definition, perhaps because I have not even SEEN eye-tracking technology; but I have seen what sorts of things it can do (in papers and reports), so it should work)].

[Yes, this is another shameless way to try to entice others (empiricists) to explore my perspective and approach. (I wonder if psychologists have any idea the extent to which those-who-want-to-explain human behavior HAVE TURNED AWAY FROM PSYCHOLOGY -- in effect, it has lost its credibility for many concerned thinkers (so much so that I have seen more than one thinker argue for a "quantum" psychology -- which should

remain unfathomable and unheard of); psychology has also lost its practicality for any related endeavors (e.g. AI); all these problems Ethogram Theory would take care of.]]

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

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Article A Human Ethogram: Its Scientific Acceptability and Importanc...

Dear

You speak of "disturbance of mental activity (primarily cognitive functions are violated)" . Nice account of the "embodied" 'theories' around today -- only it is strange (unlikely, unfounded, baseless) 'assumptions' (rather than "withdrawal from society") which "got them"; in fact, the embodied people have gotten a lot of social support, since their poor, very likely false 'assumptions' (presumptions) are quite prevalent: But, still, there is isolation: bad firmly-held assumptions very reliably completely limit thought AND the consideration of other reasonable likely (and fruitful) possibilities -- this is because some REAL (not unlikely AND researchable/testable) possibilities (hypotheses) require one admit other assumptions. And at the same time the poor assumptions keep one(them) in the status quo or in the same vein. Perhaps a clear example is in order:

The bad assumptions, e.g. "all significant innate factors are present at birth" * , make one expand early explanations of behavior (i.e. sensori-motor explanations in the case of 'embedded' "theory") IN SPITE OF THE FACT there is NO decent supporting evidence and the motivation for continuing with some such accepted explanations (here: Piaget's well-supported great sensori-motor theory of infant cognitive development) is done all simply with such assumptions and then JUSY by-ANALOGY (I can see no other impetus and just-BY-ANALOGY is not an acceptable to move forward EVER).

I summarize the BIG 6 bad ones elsewhere and also state the much more likely alternatives. Here, with the link below, you can find a post where I describe the good alternatives (the bad prevalent 'assumptions', because they are familiar, should immediately come to peoples' minds -- they are opposites of those I state, indicating the seriousness of the problems of modern theorists, very much including: the embodied theorists):

https://www.researchgate.net/post/What_can_straighten_out_the_mess_that_psychology_is **

* FOOTNOTE: Another of the 6 baseless, unfounded "assumptions" which quickly comes to mind as likely relevant here and as one limiting the thought of other theorists is: "the more learning the organism does, the less innate guidance". This thoroughly prevents the thought that a lot of learning requires a lot of types of learning and rather complex types -- AND which really could/would unlikely reliably and universally occur WITHOUT INNATE GUIDANCE (emerging at points over all of ontogeny).

(My perspective also eliminates needless ridiculous nature/nurture debates.)

** FOOTNOTE: Let me quote another post of mine where I list most of the FALSE ASSUMPTIONS: (quoting that post):

Perhaps more central is many theorists have assumptions that completely bias their outlook (AND their possible outlooks) AGAINST perceptual/attentional shifts being part of significant behavior patterns that may occur at the inception of new qualitative ways of thinking (in children, during ontogeny). The unfounded assumptions which prohibit even the consideration of such absolutely (otherwise) possible elements of development include:

- 1) the old unfounded: all that is innate is at-birth (or MAJOR bias this way)
- 2) the unfounded and likely false pseudo-assumption: the more learning an organism displays, the LESS innate guidance mechanisms involved
- 3) the contrasting of what is innate to what is learning -- IN ANY FORM AT ALL: THIS IS A WRONG DICHOTOMY AND DUALISM.
(There is evidence that it is only reasonable to view the "2 kinds" of factors occurring in effect at the SAME TIME (simultaneously, blended).)
- 4) The failure to get away from some idea that some significant behavior patterns (e.g. some abstract thought) can occur completely internally.
[(We are simply not that smart (even with our awesome memory abilities): new levels of thought will involve some new or newly

emphasized environmental aspects -- ONE PROXIMATE CAUSE)]

5) The abject inability to construe behavior patterns

expressly AS BIOLOGICAL FUNCTIONING.

[I probably should have also listed the profound bias against inductive work and (rather) pushing AND supporting coming up quickly with entire hypothetico-deductive systems (which, from a science standpoint, are grossly premature).]

(end quote of another post of mine, from UNDER my question: Why aren't you also looking for more "embedded-ness" in/with the environment? -- one of the Answers)

Here is another post of mine (a Question) that covers a lot of related points:

https://www.researchgate.net/post/Are_there_good_reasons_psychologists_should_not_be_considered_scientists

And, looking at my answer to the following question lists other reasons Ethogram Theory (using the alternative assumptions) is good: https://www.researchgate.net/post/What_would_you_look_for_in_a_new_cognitive-developmental_theory

Can someone summarize the ethological view on human behavior?

Here is my point of view as an ethologist: I think in terms of NO hierarchies (or "behavioral levels") which I have not seen the evidence of: the development of (AND in terms of directly observable proximate causes). I DO most certainly believe that thinking goes through qualitative changes, that are hierarchical -- but I have nothing to do with defining the levels or the hierarchy (in any way in advance OR outside seeing pivotal changes or processes occurring as the organism, with corresponding environmental-aspects, show change).

Again, while I do believe development and learningS show qualitative changes, I do not in any way presume to be able to define them or even "see" them (understand them in any good or useful sense), if I have not clearly detected/determined the directly observable proximate causes (or processes) -- that are involved in any shift in BEHAVIOR PATTERNS. I think in terms of behavior PATTERNS, not single behaviors or sets as I might define them, BECAUSE: I define nothing; the subject matter (the organism's-behavior-and-corresponding-aspects-of- the environment) through its change processes WITH observable proximate causes: this is what informs me to such a degree that only the Subject itself can be seen as providing any and ALL definitions. ALSO: Seeing behavior PATTERNS (vs "behaviors") is important because that way you see behaviors in their real context and, in a real sense, behaviors are defining the behaviors around them (this is the nature of classical ethology, as are the aforementioned aspects of my thought). (Yet I do note patterns associated with biological principles and well-founded assumptions -- as behavior is an aspect of biological functioning.) In summary: behaviors define other behaviors and observable behavior change allows one to see the direct proximate cause(s) of the processes and of any overall behavior change.

On what is really a related matter: I never ever, ever speak in terms of what are "the effects of nature (heredity)" OR "what are the effects of nurture". For a good developmentalist I believe any such things, that have major effects, very likely occur (in effect) phenomenologically SIMULTANEOUSLY -- i.e. are in the behavior together, literally at the same time. The nature/nurture "thing" for any supposed reason is, for me, a "non-starter" (a more-than-needless, likely misleading, debate).

Putting things together using one's existing concepts of "Behavioral Levels" (or "spheres of behavior" or whatever) (even with the 'good' goal to "cover all bases") seems to have little to do with empiricism and is more like story-telling. I am a strict empiricist. Organizing things "in advance" appears to have no good use, unless direct investigations (involving direct observations) bear them out -- and one is more likely to actually see things before one can understand things (in a way that is continuously useful, as science).

I REJECT the hodgepodge Relational Developmental Systems Theories (including the 'Bioecological Approach' and sociocultural theory), e.g. Overton et al, which have no clear system and represent subjective researcher intuition (the 'researchers' are the "relaters"), and the modern "embodiment" theories -- which are simply inspired by-analogy with the great work and findings of Piaget on the sensori-motor bases of learning IN INFANCY, and are just by-analogy (conceived, posited, 'hypothesized') and in-reality baseless. I similarly reject all the other obviously made-up "stuff", no matter how big a system or how well it is seemingly "thought-out".

I would recommend all read my

Article, "A Human Ethogram: Its Scientific Acceptability and Importance":

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

Dear

I, myself, think in terms of NO hierarchies which I have not seen the evidence of: the development of (AND in terms of directly observable proximate causes). I DO most certainly believe that thinking goes through qualitative changes, that are hierarchical -- but I have nothing to do with defining the levels or the hierarchy (in any way in advance OR outside seeing pivotal changes or processes occurring as the organism, with corresponding environmental-aspects, show change) -- in any way.

Again, while I do believe development and learningS show qualitative changes, I do not in any way presume to be able to define them or even "see" them (understand them in any good or useful sense), if I have not clearly detected/determined the directly observable proximate causes (or processes) -- that are involved in any shift in BEHAVIOR PATTERNS. [I also think in terms of behavior PATTERNS, not single behaviors or sets as I might define them, BECAUSE: I define nothing; the subject matter (the organism's-behavior-and-corresponding-aspects-of-the environment) through its change processes WITH observable proximate causes: this is what informs me to such a degree that only the Subject itself can be seen as providing any and ALL definitions. (Yet I do note patterns associated with biological principles and well-founded assumptions -- as behavior is an aspect of biological functioning.) ALSO: Seeing behavior PATTERNS (vs "behaviors") is important because that way you see behaviors in their real context and, in a real sense, behaviors are defining the behaviors around them (this is the nature of classical ethology, as are the aforementioned aspects of my thought) . In summary: behaviors define other behaviors and observable behavior change allows one to see the direct proximate cause(s) of the processes and of any overall behavior change.

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P.S. I eschew the hodgepodge Relational Developmental Systems Theories (including the 'Bioecological Approach' and sociocultural theory), e.g. Overton et al, which have no clear system and represent subjective researcher intuition (the 'researchers' are the "relaters"), and the modern "embodiment" theories -- which are simply inspired by-analogy with the great work and findings of Piaget on the sensori-motor bases of learning IN INFANCY, and otherwise baseless.

I would recommend all read my "A Human Ethogram ..." :

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

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Is it true: Innate Guidance IS Involved in the Development of more 'Abstract Thought' OR THERE CAN BE NO TRUE Artificial Intelligence?

If one presupposes (and that is what it is: presumption/belief, and not well established or well-founded assumption) that the development of each and all of the hierarchical levels of thinking and learning (aka "abstract" thinking) do NOT involve innate guidance of basic sorts of perception/attention for the development of new ways of learning and

thinking, then you are left with 2 possibilities:

- 1) Simple learning processes (alone, and unaffected in their nature) are behind all learning (this includes both the classic simple types of learning and the vaguer ideas/notions of "social learning").

The result here: each individual is VERY individual and learning is quite arbitrary -- prohibiting any standardization of the understanding of behavior needed for AI.

OR

- 2) development continues to change in character due just to the expansion and elaboration of sensori-motor responses (and elaboration of Piaget's finding that sensori-motor developments are behind basic object knowledge in infancy) (this is what is now known as "embodied cognition"). This simply-by analogy 'conceptualization' of the development of thinking and learning provides no insights, has no real good basis whatsoever, and has no promise of any real contribution to understanding or clarity -- (see "The Poverty of Embodied Cognition", cited below; full text available at <https://link.springer.com/content/pdf/10.3758%2Fs13423-015-0860-1.pdf>).

Thus, here again we have a situation where the modeling of human thought is impossible because the [unlikely] "evidence" is always way too indirect to be clear (and thus clearly replicated).

BOTH of these outlooks are based on the presumption that all significant innate factors are present in infancy AND that "higher levels of learning" involve LESS (to nothing) that is innate. (Both of these presumptions has a long history in Western thought, along with notions of dominion and other atrocities.) Both of these outlooks completely doom any real true AI to non-existence.

There is a more reasonable alternative to each of these "views" with Ethogram Theory taking opposite, though more likely, positions on each of these issues (and ethology's alternate assumptions are more biologically congruent and likely). Here: Important innate guidance determines perceptual/attentional shifts which alter the course of learning and thinking [the innate factors being essentially (and, in actual effect) simultaneous with the learning -- or mixed in, if you like]. These perceptual/attentional shifts hypothesized are _NOW_ TESTIBLE AND VERIFIABLE. With the new eye-tracking technology, etc. we now have, if these exist (and we know how to look), we shall find these in replicable studies.

This will also make human behavior quite possibly replicable in true real artificial intelligence. This is not "a way" to AI, but among all current alternatives, is THE WAY for true full artificial intelligence (take it or leave it). For the beginning of the basic perspective, see the "Human Ethogram" reference, cited below. (For more guidance on the development of true artificial intelligence, see: _

<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Article [The poverty of embodied cognition](#)

Doesn't our Understanding of the Memory Capacities/Capabilities Inform Us that Innate Guidance to Learning During Ontogeny would INCREASE LEARNING?

Yes. And, I could also give you the answer [as I indicated (or implied), elsewhere] that innate guidance for new types of learning just gives us new types of learning, and we still have all the other types of learning (and related representational and response capabilities), thus the new types of learning just "add-on" (to what we

could and CAN otherwise usefully do). Thus the net result gives us: MORE LEARNING. This has seemed to me to be a good-enough explanation, but other things are involved, in particular our various types of memory; thus questions could arise, regarding these types of memory: whether there would be any limiting effects OR learning-capability-related changes to THESE capacities (and/or related abilities) DUE to changes in the ways we learn.

Thus more explication is possible and needed: Looking at our present understanding of our memory types (based on the strongest and most replicable evidence in all of psychology): The memories are seen as a rather open system; they all do have some capacity limits, but they are in no way seen to provide any explicit/express structure and surely no content (as in any way commonly defined) -- NO content not related to experience. Now, our visual-spacial memories are limited/restricted to the what we can sense, but by not much else (they are thought to have limited capacity, though this may be difficult to assess). The other memories are very open when it comes to processing experience ("chunking") -- clearly very much related to systematic experience (AND the fact that experience is systematic is not limiting in producing limits to learning, in any way commonly thought-of). Clearly all learning is related to memory and memory of previous learning and experience. These last few statements describe an otherwise clearly "open" system. There is no way that any emerging innately-based guidance(s) to learning (which I see likely proximately-manifested, behaviorally, in perceptual/attentional shifts *) will otherwise "warp" OR limit any of the memories; added learning, now possible due to innate guidance(s), is clearly then just an add-on, with all other types active as much as ever (as appropriate, as needed anyway -- there is nothing else to make it otherwise within scientific definitions of the memories).

Thus, even looking at all one can consider (and using our present understanding of the memories from good research and realizing that working memory is the very BASIS of present experience -- basically, it IS present experience): Any changes in the way (or what) one learns is not limiting BUT would in a real sense INCREASE LEARNING (learning capabilities and even capacities, through better "chunking").

There goes the old myth, that where there "more learning", there is less (or no further) innate guidance, for that additional learning; in fact, there MUST BE INNATE GUIDANCE **. Such are biological systems: systematic (and universal and reliable). (There are no qualitative changes cited for any of the types of memory per se corresponding expressly to qualitative changes in learning, thinking, and representation; thus the innately-based guidance mechanisms (or something, and I have no guess what else there could be) ARE NEEDED for there to be an explanation of such qualitative changes, and one grounded in experience and clearly relevant to memory.)

* FOOTNOTE: The hypotheses about perceptual/attentional shifts (more specified versions, anyway) are NOW TESTABLE, research-able with the new eye-tracking technology, etc. They could be verified and replicable results might well be obtained.

**** FOOTNOTE:** It continues to be most unfortunate that psychology continues to be seriously inconsistent, contradictory to itself (for the most part, and in effect, mindlessly). HINT: Look at your assumptions (which are baseless and not well-founded) and realize there are better (more reasonable and biologically consistent) alternatives. (I have tried to help -- see the cited work, below -- and I continue to try to help; and NO ONE has paid me or does pay me to do this.)

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Dear

Please explain your remark: "As you can see, this conclusion was untenable." (I see nothing untenable and you showed nothing as untenable.)

I do not like your unsupported pronouncements; you have no authority with me, and I do not accept statements, especially vague qualitative ones, as true ON the basis OF authority. I hope you understand this. Trying to just make unexplained pronouncements and have them accepted and trying to find vague new statements to indicate that you think I am "nuts" (i.e. out-of-my-mind or insane) is simply rude and unacceptable. (Your 100% disparaging remark to(about) me in your "Answer" to another Question (https://www.researchgate.net/post/Would_Skinner_support_my_view_He_would_if_he_wanted_to_be_the_ultimate_empiricist_OK), even more clearly shows your damning, hostile intent to denigrate my credibility ; I have "Recommended" both your nasty responses to me, so people can see the unkind and hostile reactions you have had -- and perhaps wonder about your motivation.)

Secondly, you say: "Memory is inextricably linked to other complex processes in the brain (dominants, motivations, instincts, emotions ...)". I do not deny emotions as important -- they are simply not central in "containing" behavior (or memory) overall and can be added in later in one's conceptualizations, so obviously then, I do not agree they are "inextricably linked" -- and ALSO BECAUSE THEY DO NOT ALWAYS OCCUR AND ARE NOT NECESSARILY PRESENT; emotions are important aids to guide responses, but not THE guiding processes of MAIN major behavior pattern change (IN FACT, the development of some emotions themselves relate very much to the cognitive developments, which are those main sorts of behaviors I look at, not vice versa). [(And, just for the record: Do you see ANY simple processes or are all things "complex"? Do you know that that would never be of the nature of science?; science finds simple, elemental things, to be clear and to progress clearly. Perhaps you are "inextricably" brain-biased and not a good behavioral scientist.)]

Then, I have a problem with you speaking in terms of "in the brain"; I believe there is a behavioral science (called mainstream Psychology), studying ONLY behavior patterns and the corresponding proximate observable environmental aspects (and other behavior-patterns-and-proximate-observable-environmental-aspects that

occurred in the developmental past of the organism AND MAY CURRENTLY ALSO BE RELEVANT). In short: behavior-patterns-and-observable-environmental-aspects IS THE FULL COMPLETE SUBJECT MATTER -- for my psychology and for many, many psychologists.

With regard to motivations -- I never find the need to identify such separate entities; organisms act and they act differently in different circumstances (understanding that would include implicitly understanding anything you call 'motivations').

Finally, most of the time regarding already-developed behavior patterns (those existing later than infancy), it is outrageous and untenable to think you can partial out, from any significant important behavior pattern, "instincts" that have to do with those patterns or as clearly distinct factors in any further major developments in behaviors -- you cannot do it (and you could not show otherwise). That is a groundless, baseless ignorant and less-than-useless (destructive) claim. Instincts (innate action patterns) are OFTEN more than inextricably linked to behavior patterns: they are essentially, in effect, "mixed in" OR PART of the behavior patterns (whichever ones are relevant to the current research) as those patterns advance (progress) as new, later stages of development emerge. [To say it just a bit differently, yet perhaps more to the point: at the inception of new major behavior, innate action patterns, in effect, ARE the new aspects of behavior/response patterns, eventually resulting in the major behavioral changes (most certainly including cognitive developments) --- and of course, at the inception of major new behavior: the involved behavior patterns are directly and observably involved with clear present aspects of the environment. This simply and necessarily is how to be an empiricist in Psychology; to argue against this point of view, I believe, is very essentially arguing against empiricism -- against rationality and logic.]

If you can't be not be rude and cannot be clear enough in what you are talking about to be making a cogent, clear argument, you will find that what you are doing will have no effect on me (or anybody) reading your pronouncements.

[Perhaps you are wondering why, if anything I say is good, correct, and useful, that I do not get more responses (Answers): For more on my view AND to perhaps understand why I do not get a lot of responses, SEE: https://www.researchgate.net/post/What_is_really_central_in_real_thinking_its_points_of_inception--but_lets_say_more2 AND ALSO (especially) SEE MY ADDED Answer below that question for the real explanation. Present day psychologists are extremely and unreasonably, even irrationally, opposed to some of my core views (or they think they are), for sure: THIS IS WHY THEIR IS LITTLE RESPONSE (again especially see my follow-up Answer, BELOW that main linked-to question).]

What can be done when psychologists refuse to consider what likely exists /is real AND work/write in terms of fictions that produce only fairy tales?

The very arguably VERY LIKELY real, not considered (but, in-fact, rejected out-of-hand, distinctly based on groundless/baseless BELIEFS): significant new innate guidance to learning emerging at points THROUGHOUT ONTOGENY. Some of the related consequences of this are: (1) NO end to the nature/nurture dualism (though some pretend they have resolved this "debate" or dualism, it is easily obvious they have not) AND (2) what psychology offers about behavior is absolutely inadequate for any decent artificial intelligence -- psychology is less-than-useless and hampers real, true AI progress (to put it short and simply: because psychology lacks an sufficient or reasonable empirical basis). [I have argued at length on both of these matters/issues, and other related or resulting problems, in several of the 300+ pages of my Questions and of my Answers here on researchgate (under my Profile, under Contributions, then under Questions and under Answers); also see my "A Human Ethogram ...", cited below.]

NOW: That with so little evidence and otherwise so clearly wrong, that they may readily be considered nothing but fictions:

- 1) "Meta-processes" and/or separate/distinct "executive processes": I do not think it could be more obvious to have what is clearly a homunculus (a man-within-the-man) -- enough said.
- 2) Embodied cognition: ideas formulated on and simply by-analogy ONLY to Piaget's great findings of the beginning of object knowledge with sensori-motor responses. Piaget could show his great findings; the "embodied" people cannot even begin to (the entire theory is baseless and of no use and has no promise -- see "The Poverty of Embodied Cognition" cited below -and see a Comment on this article's page OR go to <https://link.springer.com/article/10.3758%2Fs13423-015-0860-1>, to learn of/get access to the full-text pdf). (It is never, ever good when an analogy lasts, much less when it is central to a "perspective" -- this is what I learned clearly in college and I have many times seen it is so.)
- 3) Because it comes up quite often and is "heralded" by fanatic believers (and that is all that they are), let me point out the hodgepodge Relational Developmental Systems Theories (including the 'Bioecological Approach' and sociocultural theory) -- which have no clear system and represent subjective researcher intuition (the 'researchers' are the "relaters"). Psychologists have not learned to let the Subject (the organism-and-aspects- of-its-current-environment) both define terms and define how things relate -- and the "theorist" NEVER, without such as a clear impetus. Real things (and relationships between things that develop) have at least close-to

directly observable proximate cause (and, in some good sense, ALWAYS DO -- once well "pointed to" they could and likely would be found); this is really simply empiricism itself (necessary, and nothing but THAT).

What we are "told" by these stooges** (though there is a lot of verbose, senseless talk and 'clever' thinking) about these "systems of thought" has no status in science (and likely a low status in "thinking"); what they are presenting are either very similar to fairy tales OR they are fairy tales. (I would "go for" the latter, because even fairy tales have some relation to reality -- odd or weird or wrong as it may be.)

** FOOTNOTE: Literally stooges, because they have obviously not well thought-out things for themselves and have followed the lead of mis-guiding others, thus fulfilling the definition (of this term in psychology)

[Please feel free to join me in railing against "the machine".]

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Article [The poverty of embodied cognition](#)

How can it be we can think about only 4 "chunks" at once, & yet people can't believe that ALL behavior change (at its start) is based in the concrete?

I should note: that I am talking about NEW aspects of behavior patterns (I have no argument with the idea that things-known can be "put together", though not in qualitatively new ways).

Truly NEW learnings (as in qualitative changes) must be concrete : EVEN the inception of the most 'abstract' types of representation and thought (and learnings). [(Though it used to be said that we can deal with 7 + or - 2 "chunks", lately there is a consensus developing that: for significant processing/learning, working memory uses only about 4 "chunks".)]

If you accept the results on our types of memory (about the strongest and most reliable and clearest results in all psychology) and if you have any reasonable (and common) definition of thinking and of specific progress

occurring with that thinking, you must believe that EVERYTHING mental (covert) and reliable must have (at least at its inception) directly observable concrete proximate cause(s) in aspect(s) of a clear and present environment.

Much of the learning that occurs would likely require this just based on CAPACITY issues; in any case, it should also be clear that without this being the way it is, it is not likely learning would reliably reflect our environment (errors, like those that do occur would occur "all over the place" -- or tell me why this wouldn't be the case).

Accept all this and BONUS: You are an empiricist !! [Here is perhaps another interesting thing to think about, if you are an empiricist: If concrete aspects of the present environment would (sometimes?) not need to be involved in significant NEW learnings, THEN the person would have to successfully remember such the "things" that are involved -- AND somehow develop and involve the new type of learning, as well. Perhaps some think this is what some old-time philosophers did, BUT they had already developed adult thinking, thus all the major qualitative changes -- in learning and thinking -- had ALREADY occurred (and see my first statement, at the top of this page).]

Go ahead and try of describe 4 "chunks" (some with NEW content AND EVERYTHING PROCESSED properly) which does not hinge on direct experience in the environment ! (Do not try to describe the case with the environment as somehow being represented in 'sensori-motor' type responses, and THEN with those going forward -- this last part BEGS THE QUESTION, don't you see?; "Embodied 'theory'" is not only not well-founded but obviously incomplete on how behavior change can move forward, thus begging the question; and this is not to mention the 'evidence' is poor, outrageously indirect, and the theory has been shown useful for nothing and there is no reason to believe it has any promise -- there is no reason to 'believe it' at all, unless perhaps you fear a professor. SEE: <https://link.springer.com/article/10.3758/s13423-015-0860-1>)

- 1) Given what is not possible, just indicated, you need to change in some ways: it is not likely that it is fruitful or useful to think in terms of single behavior (or sets you define) but in terms of BEHAVIOR PATTERNS (discovered); (2) you must accept there is some not-yet-commonly-recognized guidance for perception/attention/learning: INNATE guidance, even very late in ontogeny; (3) that it is highly unlikely that it is adequate to try to delineate only the simplest learnings (classical and operant) AND the vague "social learnings" (otherwise) as the only learnings we type and classify; I see that we do this as another sign that psychology has not yet hardly even begun; (4) You, related to (1) - (3), need to accept something like Ethogram Theory -- which rather well justifies itself and provides a way to define what must be defined and sees things in terms of the way they must be (or sometimes perhaps, in part, describes the way "things" could be, while remaining utterly directly empirical); it also shows all the major theories as clearly flawed (and convincing so, EACH in very similar ways). It is time for "out with the old and in with the new". (I have other essays here on researchgate for explication, describing other related perspectives and implications and ramifications.)

[In short: with the brief, clear indications of a good argument, above, you a NEED a new way of thinking, such as I describe in "A Human Ethogram ... ".]

Dear

I do like your attitude (in a way), but we must be careful. Your response does make me have to address some important issues (though I have very briefly addressed them before).

I do not believe behaviors always have unique, measurable concrete aspects: covert behaviors, like thoughts at times, have (at most) very, very subtle behavioral manifestations -- again, which I doubt are measurable (OR at least not uniquely measurable) . I also believe that non-unique overt response(s) may characterize learning (e.g. putting together combinations) involving the well-established behavioral representations.**

ON THE OTHER HAND: What I do submit and argue does have clear (and unique) concrete aspects (and MUST, for an empiricist) is completely NEW (or at least the qualitatively different and new) responses to aspects of an environment. These, I believe, MUST have CLEAR concrete directly observable overt aspects (proximate causes) which characterize THEM, in particular, at least at their inception; BUT these too can be rather subtle, for example, they may be perceptual/attentions shifts, clearly detectable only with new eye-tracking technologies, etc. (and that IS what I have argued in "A Human Ethogram ..." -- MANY years ago, but with the hypotheses only NOW researchable). THIS unique overt direct observability IS TRUE EVEN AT THE INCEPTION OF NEW 'abstraction' capabilities -- so, Jerry Decker, I am to AN EXTENT "with" you.

Again, though, I do not think ALL behaviors have clear (uniquely measurable) overt aspects. All of psychology has long abandoned the idea that all behavior is overt (or that all that is worth studying is overt) -- and part of what I have expressed is surely part of what 'they' meant when abandoning the idea that 'all behavior is overt' (thus, they have decided not even to stick to just-overt-behaviors in what they try to address, explain, and measure (indirectly) -- otherwise they would have remained like Skinner and just looked at obviously overt behavior, thinking that was at least adequate to explain all behavior).

** FOOTNOTE: I believe the well-established learnings that include and ARE our representations (AND even some learnings involving these) may have behavior aspects as subtle as, for example, "pausing to think" -- and one pause may look quite a lot like other pauses, though for a variety of reasons. I have little to no doubt that one person can "pause to think" (e.g. 2 seconds) and another person can "pause to think" (e.g. 2 seconds) and their thinking may be very different and not even about related things; the pauses (in several different environments or the same environment) may have to do with very different things (or occasionally somewhat the same things).

Something else: One problem I have with your statement is your thinking that abstract thought can "drive behavior" (though I suppose at times it may); but positing a particular such DRIVE is not necessary and may make one miss when the organism has completely new (though related) interests -- the direction and "drive", then, is different.

What is really central in real thinking (its points of inception -- but let's say more)?

What is really central in real thinking (its development)? I say: special and especially important PROXIMATE causes that are, at necessary times (points in development (ontogeny)), observable. ("Observable" both to the Subject and to the scientist.)

I submit that the real CORE (beginnings and THE BASES) of THINKING (itself) are certain (or a certain type of) PROXIMATE CAUSES and that, now with new eye-tracking technology, etc., these major directly observable proximate causes can be found with real-time study. THOSE THAT ARE ESPECIALLY IMPORTANT, during key points ("stages") in development (ages 1-18 y.o. +) (ontogeny): in rather "quick order" being obviously KEY in resulting (and realizing) new ways of categorizing and new ways to understand causation -- much of the point of THINKING. These would not only be proximate causes in the sense of something (here: environmental-aspects-and-associated-behavior-patterns) preceding something, that is, behavior[-pattern] change, BUT also in playing a distinct role in changing the nature of learning (actually: representation, memory, and learning). Thus, the great importance of likely then-OBSERVABLE (at that point in ontogeny) (via eye-tracking) perceptual/attentional shifts that usher in each new stage/level of representation (with memory changes) and new learnings, and soon shown through and/or with problem-solving <-- yes, THAT TOO: all done by the individual organism, to a most notable extent BY ITSELF.

These seen-to-be-pivotal environmental-aspects-and-associated-behavior-patterns would only NECESSARILY be observable BEFORE the major new representational abilities and problem-solving abilities WELL-FORM (through 'behavior' and 'experience') (AND, then of course, WITH CONTINUING DEVELOPMENT, there can be this sort of significant thought which is covert -- presumably (hopefully) still bearing some "resemblance" to when last overt).

Doesn't this sound important? Better discover these if they exist (which is likely, if you are an empiricist, with an appreciation for biology, anyway) AND reap the benefits. Will it be artificial intelligence or psychology first? (I don't care but my bet is with artificial intelligence.) [These would be the concrete empirical real-world bases of fundamental types of 'abstraction' (or abstract thought) ITSELF.]

[For my AI friends, let me put another feature of the view (above) into focus, perhaps aiding perspective: If artificial intelligence people want a real-time system, first find out how the HUMAN is a real-time system. At least this would be perspective-helpful.]

See the Project associated with the main paper, below ("Human Ethology and Development (Ethogram Theory)"), AND also see, the other associated Project: <https://www.researchgate.net/project/Developing-a->

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

You might ask: If this (what I said, above) is true and we have eye-tracking technology, why haven't we yet looked for (or just found) these perceptual/attentional phenomenon?: Well, here's a partial list of "why"'s (which often should all be put-together to appreciate the full 'problem'): (1) contentment with existing systems;

2) great long-standing "contentment" with assumptions (which are really just beliefs) -- those that have existed historically for a very long time but still are baseless, unfounded, and unproductive (AND THERE ARE BETTER ALTERNATIVES) (two examples of such present and long-standing groundless beliefs: 1. "All significant innate factors are already present in infancy" and 2. "the more learning an organism does, the less innate guidance" (this seemingly having the not-even-need-be-stated 'automatic corollary' that "'higher thought' could never involve anything innate")); these have not just limited thought but limited possible thought-systems and limited the very 'direction' of our thought (the contorted, ill-founded, totally unsubstantiated "embodiment theories" are examples of the perverse things wrought of limited thought); It is extremely arguable that an OPPOSITE of each and every one of these beliefs ('assumptions') is true (AND these are biologically-consistent alternatives: they are better, even if just because of the biological consistency AND they have as much or more good foundation as the traditional 'assumptions' and are more likely true -- there are a total of 6 or 7 of the bad ones (these and the alternatives are described and discussed in some of my other essays)) ; (3) great contentment with generating or elaborating our own (or using our great professors') hypothetico-deductive systems -- heck, that seems to be all we do in other contexts and that seems great; this extreme deductive "systems" thinking is also associated with a poor observational base (we basically don't observe before we "theorize" and leave the Subject "behind" when one should be always observing as much/many relevant behavior patterns/environmental aspects as are possibly informative: h-d systems should come only when the force of necessary structure in the raw data compels it); (4) a strong sense that the terms we use are fully (or certainly sufficiently) meaningful just as they are (and as they have been) used, when they are not (e.g. 'learning', 'reinforcement' -- 2 biggies); (5) No connection between key perceptual/attentional shifts and our intuitive sense of what is important . These bases of thinking are rather quickly and possibly widely used and elaborated (in big part by the contributions of memory) -- and all this always occurring naturally, so key phenomenon, important at the inception of types of thought, are barely noticed even given the importance of their results (and perhaps because of the great inherent limitations when considered by themselves, since these p/a shifts are buttressed by what comes forward from memory -- possibly making the shifts phenomenologically seem very small, plus they could pass quickly with new representation coming on quickly) ; [still, something like these shifts I believe can be shown to be a rational and logical necessity for an empirical approach -- for this reason alone, they cannot be reasonably dismissed by a scientist]; and (6) it may not be easy to parse these phenomenon out of the mass of eye-tracking data (and may require a person of great knowledge, including of eye-tracking; intelligently programmed computer-analysis software may well be required).

This is not meant to be an exhaustive list -- just what quickly came to mind; I have written about a number of these matters. I hope all this helps (and helps "my cause"). I probably also should have had: (7) [convenient] 'confusion' of conclusions with assumptions (believing some of one's conclusions ARE assumptions), this likely being a side-effect of only having some groundless beliefs as assumptions. I surely should have listed this, since this is a major contention about how prevalent theories are wrongful in my big paper, "A Human Ethogram ..."; this paper also describes an ethological, biologically-consistent system for describing and viewing and tracking behavior without any of the old, bad 'assumptions'; and it describes the major universal repercussions of the

perceptual/attentional shifts and tries to show how they are likely and sufficient "for the job"; READ THAT NOW, IF YOU HAVEN'T YET:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses .

P.S. There is also an overemphasis and overestimate of the role and importance of [often ill-defined, and largely unsubstantiated] "social learnings" -- likely because we are very social and love that, but we should not be irrational and fail to have the view of the centrality and importance of the individual organism in its own development; (Seriously, though: "Social learning" is also called upon A LOT because there is a lack of consideration of -- or even the ability to even think of or conceive of -- other factors for learning.) There is also a similar overemphasis and overestimation of the role and importance of language (which I see as rather easily refuted) (these "rate" enough to be considered (8) and (9)).

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

Isn't a major part of science (incl. behavioral science) finding relatively simple, important elemental things, to be clear and to progress clearly?

[I shall concentrate on my science of interest (and what I know about) : psychology (cognitive-development psychology, in particular). Still, the principles I try to indicate should be of a general nature, true in-general for all sciences. This should also be applicable to artificial intelligence (computer science) as well. (Readers may be relieved to know only ONE sentence relates particularly to my theoretical view; still I do provide the reference to my main paper, at the bottom).]

WE need the relatively simple, elemental, foundational things (good ones looked for and found) to provide the actual real foundation of good science and allow for real common understanding and giving us clear directions (for more and different, but related, research) and allowing for clear progress. This, in fact, by-necessity or by-design, is the way things are and the way things work in other sciences -- look closely and see.

IF you start out with ALL behaviors-of-interest (typically a LOT of behaviors for a psychological scientist, or an AI person) and these and their change (or causative) factors, both "BEING COMPLEX", THEN views of any behavioral-use/change-event-instance always then is said to involve several things, AND that with a lot of inherent uncertainties (here, there, and even "who knows where"). THEN you are relegated (doomed) to devising your own complex models "to explain things" (NOT A GOOD THING) (tell me: how could it be different?). Such models so devised, no matter how seemingly inclusive and clear and logical and seemingly rational (and clever) and no matter how good some of the "explanations" seem to be: I contend that this is never correct (or, even if somewhat useful for 'applied work', at least it is not correct in the long run); it is

eventually clearly seen as deficient and the model beyond repair; if one continues to 'honor' the "system", one is "stuck". (There is a lot of writing by those with an interest in true artificial intelligence that say exactly this same thing, e.g. "Building Machines That Learn and Think Like People", by Lake et al , 2016)

In psychology, for example, in such a way: You will never be properly representing the CORE Subject of psychology (fundamental, foundational behavior-patterns-AND-environmental-aspects) -- no chance of this; you will actually not be clearly or usefully representing THE PERSON. This I maintain is necessarily true when EVERYTHING of interest to you is very multi-faceted (with multiple causations and "complex").

The the need is for something relatively simple as a clear (elemental) part of the foundation of a science.

FIRST: Here's one 'good' example of a model in psychology: In trying to explain everything (really!) about 'higher' cognition and cognitive processes, information-processing theories seemed very productive in the mid-1980s (e.g. John Anderson's ACT models). This finally became seen as an unacceptable model and as NOT the way things really are and AND thinking this way (basically BY-ANALOGY) did not provide good-enough (or even good) explanations and did not provide for good continuous progress (but some may still like i-p 'theory' (models) and disagree with this assessment; on the other hand, AI people are clearly "on my side" with regard to these models -- again, see the citation above).

For psychology, I submit we must find and recognize through observation (and reliably): BEHAVIOR PATTERNS -- the first recognition of the REALITY of this reality is seeing real patterns, FOUND directly, though direct concrete observations at appropriate times. Soon through continuing work we can find the essentially "containing" SYSTEM (and not of our invention)(eventually enveloping all the most KEY things, aspects of behavior) BY continuing viewing actual behavior pattern changes in response to new aspects (or new patterns of aspects) of the environment (<-- this also not defined by us). (You know I believe the fundamental BEHAVIOR PATTERNS are "perceptual shifts" (and to make more people happy, also referred to as "perceptual/attentional shifts").)

Given my basic perspective: I believe that real decent, good psychology may only begin now, using the new eye-tracking technology (and computer-assisted analysis). Some do not like this, because they say: "Psychology is not an infant science"; BUT I have very effectively in many, many ways shown it still must be considered an "infant" science (given the way it actually is) and so, with the mess psychological 'theory' is in, starting all over should be more of a relief than a trauma. (For one reference to an essay, where I show that psychology should be considered an "infant science", see Answers under:

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Until you see psychological researchers and theorists talking in terms of BEHAVIOR PATTERNS (the key word being PATTERNS), and those clearly have been discovered in particular (distinctly distinguishable through/with

direct observation), the science of psychology has NOT BEGUN -- to an ethologist this lack of well-identified behavior patterns would be in and of itself an absolute certain sign that psychology is not of the nature of a good science (or, yet, a science at all) (no doubt this is why psychologists (in the main) have mischaracterized ethology and tried to "kill" it over the last 10-20 years, with some success (see the publications fall)).

[Here's a nice little 'saying' I developed for my AI friends, perhaps to encourage them to do the work of psychology: If artificial intelligence (AI) people want a real-time system, first find out how the HUMAN is a real-time system.]

What should be the reaction to certain Perceptual Control Theories or Perceptual Control System Theories (or aspects thereof)??

You can offer-up your views. Instead of repeating over 7 pages of my critiques, I will just let you know where they are:

I have provided my feedback at the following locations:

The critiques I have provided were responding to:

https://www.researchgate.net/publication/317005478_A_General_Architecture_for_Robotics_Systems_A_Perception-Based_Approach_to_Artificial_Life (the paper) -- a Comment to that (and a Reply (a P.S.) to that Comment)

and to some Comments following one of the very recent Updates of the related Project, below (the recent Update by Rupert Young -- to which I made several Comments/responses):

<https://www.researchgate.net/project/Perceptual-Control-Theory-PCT>

(the Project)

Of course, also I have 'attached' my major alternative view (empirical and research-able and testable and verifiable hypotheses -- with NEW eye-tracking technology, etc.): see "A Human Ethogram ...":

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Article [A General Architecture for Robotics Systems: A Perception-Ba...](#)

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Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Re: Perceptual Control Theory

THE FIRST LINK'S CONTENT:

I have a somewhat similar system, it is biological, and involves emerging "perceptual/attentional shifts", these being the first (and the concrete) inception of each level/"stage" of thinking. These now, with eye-tracking technology, can be seen (at the appropriate points during ontogeny) -- if the kind of hypotheses I put forward are correct (and they ARE testable). Unlike your system, it does not involve a 1-to-1 "checking back"; the perceptual/attentional shifts guide attention and new learning and experience, which itself is clearly sensed as helpful by the organism (and rewarding). Of course, much from past such "shifts" have resulted in major representations and the elaboration and relating of these representations, brought forward from the memories, which contextualizes the environment into which these new emerging aspects of perception (or perception/attention) occur. These perceptual/attentional shifts also provide for seeing the new parts of the environment (or parts seen in new ways) resulting from their emergence. These "shifts" are necessary in the long run [of their consequences] for new conceptualizations and for new causal understandings. Much simple associative/dissociative (discriminative) learning and experience is involved as the organism moves forward (and much interaction with the memories and development of the memories is involved, too). These shifts, though subtle, should now be detectable with eye-tracking technology : both behavior patterns and corresponding current environmental aspect that are involved (but just at certain point in ontogeny). As in your perspective, each of these developments (the concrete inceptions of each new cognitive development), and especially their results and consequences, are hierarchically related to earlier shifts (specifically: their results and consequences); the use and development of our memory capacities are much involved. See:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Also see a lot of my related essays on researchgate, as my Questions and Answers (under my Profile and then under Contributions (as Questions and as Answers)

THE OTHER LINK'S CONTENT:

I do have some reservations in recommending this Project, so hear me out:

Dear Rupert Young

One thing that must be kept in mind when trying to imagine or conceive of my somewhat (roughly) similar outlook, is that an adult or older child will only make sense with previous similar knowledge of the younger human (where what I address will be easier to see THERE -- and some of that seen earlier BECOMES representation, knowledge of causation, and may well be covert and yet very much be some key parts of the "pieces" hierarchically related with progression to the next level/"stage" of cognitive development (Ages

covered are: ages approx. 1 -18 or more). Anyhow,

I think what my biological human cognitive-developmental ethological position (completely empirical -- with everything based AT LEAST at its inception in directly observable behavior patterns, in response to, and soon changing in-response-to clear present observable aspects of the organism's current environment (proximate causes)) has to offer is: through finding key elements of perception (as the central way to advance understanding) -- literally seen as you can now/ or could "back then" see them -- allows one to see the effect of the perceptual SHIFTS (of the developing organism during ontogeny) on behavior patterns and THAT SHOWING US major 'containing' "goals" of the organism . It also shows us the environmental aspects (in some situations, more and more) to consider (the organism with known-from-past-developments and from current SHIFTS in behavior patterns observable now) : we know something for sure about the goals and about the environment. (KEY previous developments of behavior-patterns-in-response-to-environmental-aspects will undoubtedly have become representations and can undoubtedly be used in covert cognition and cognitive processes -- and thus these will have to be inferred as needed, but DO have some relationship to past overt behavior-patterns in direct response (back then) to environmental aspects.)

Now, the REALLY good thing is that hypotheses related to my theory (in "A Human Ethogram ...") are NOW TESTABLE/verifiable, using new eye-tracking technology (likely with computer assisted analysis) -- though it may be very difficult (or not so much) to see in behavior patterns that which are obviously directly related to perception. Longitudinal developmental study (all that with eye-tracking) will have had to be done, starting at about 1 year of age -- this MAY make later discoveries not so difficult, as one might imagine. ALL THESE RESULTS ARE APPLICABLE TO ARTIFICIAL INTELLIGENCE: Here's a nice little 'saying' I developed for my AI friends, perhaps to encourage them to do the work of psychology: "If artificial intelligence (AI) people want a real-time system, first find out how the HUMAN is a real-time system. "

I do believe that, without such research and findings, it will be very hard to define goals, and hierarchical goals, and though however flexible (even infinitely) they may be, are (otherwise) without doubt within essentially predicted (in-advance) parameters. Let's get rid of all such prediction of main goals -- and find the evidence of goals in cognitive development VIA COMPLETELY DIRECT OBSERVATION, of both subject and the environment. Right now whatever goals you conceive of and whatever hierarchy, though all modifiable will be limited by something(s) in your initial conceptualizations . As an ethologist, I believe in defining NOTHING whatsoever in any sense myself : MOST is inductive learning from a lot of direct observation (and definitions coming from that -- obviously needed inductive conclusions about behavior patterns). (And using hypothetio-deductive systems only when forced to , as then needed -- but even then always questioning and using them with care, keeping track of all elements of such a "system" and being able and willing to modify it as REALLY needed.)

Another thing, while aspects of memory allow for the existence of parallel processing (for example : essentially any or most contextualization of the "background" of working memory), the currently operating working memory (at least in some major senses) in the phenomenological present is SERIAL (only something like that is in line with all the most excellent findings (about the strongest in all psychology), on the nature of the memories).

See <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> in addition to: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology> (BUT YOU MIGHT WANT TO START BY FOLLOWING THE

DIRECTIONS IN THE MOST RECENT UPDATE OF THIS LATTER PROJECT); but then DO read "A Human Ethogram .." for that is the ultimate justification (in every sense) of major "containing" cognitive abilities; fortunately, the types of memory are all more of a capacity-nature and more open (very open) (providing no content or structure , that is, not based on anything other than on developments and all the special learnings, BUT having their capacity limits).

In short,: Your system seems to start with predicted goals that, while modifiable, would be modifiable (even if infinitely) within some parameters (at least some implicit parameters); my system for understanding and research can take care of that: It is researchable with the human, providing some great detail and specifics of some major goals, any guessing removed.

And, my perspective also totally destroys and nature/nurture dualisms: The very expression of the innate, related to cognitive (emerging at points, throughout ontogeny) is manifested completely, in effect, within the perceptual shifts and these occur, in effect, simultaneously with associated learnings -- so the innate and the learned can be seen basically as simultaneous (or one "mixed in" with the other, if you like).

----- "A Human Ethogram ..." very well recognizes that the particular perceptual shifts have not been identified and thus only describes their nature at a very general level: qualitatively, in a sense. Yet the major consequences OF the related cognitive developments are also described -- basically integrating the best of classic developmental psychology theory.

AND:

Dear Rupert Young

You say: "Perceptions exist only in the context of the architecture of a particular neural system and do not directly represent or correspond to objective properties or events in the external world. ..." Yes, I know this view. BUT the development of the visualization and conceptualizing things and fully understanding of the causation though sometimes during development involve covert behavior (thought, etc.) MAY ultimately involve and may "hinge on" and be-in-their-inception: [basic] perceptual shifts (that ARE a subtle BUT overt behavior patterns) and they may be clearly (AT the point of their inception) have clear directly observable environmental aspects that they involve then, as objects of perception and/or attention. This simple follows from a strict empirical view. We can certainly come to represent things and aspects of things (ways of things) which then we combine "in our heads" in completely unique ways. But, it has NOT been shown that all covert human behavior cannot all be meaningfully similar or related to what initially was at one time overt -- and it would be damned good to give that strict empirical proposition a try (especially, since such hypotheses are now testable, with eye-tracking technology, etc. . All this is shown (i.e. the basic proof provided), described, made plausible, and made to seem good (and to have great consequences) in "A Human Ethogram ..." (though I am biased). (Worth a look though, right?) :_

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

You also say: "... the world elements themselves, on which the perception depends, do not change, but the internal variables, which combine to form the perception, do." It was the perception that in less-abstract

versions of your system, determine behavior and external environmental actions and results, correcting them; now you have causation flowing the other ways. This seems like a self-conflicting aspect of your system -- likely because it IS YOUR system, and the aspects and ways the "internal variables" are and are controlled [(these, previously known as: "higher order perception")] IS controlled by your pre-programming. IN CONTRAST, Ethologists have NO system, in a very real sense.

Good ethology, as a completely all-things-at-least-directly-observably based IS thus fully and truly SELF-correcting system (for any question that remains, there is further direct empirical research (of observable things (proximate causes) that can be done to re-answer any question, better answer any question, or confirm an answer to any question (replicability)).

And, a good strict empirical ethological understanding has NO NATURE/NURTURE DUALISM -- ANY! My approach (I won't say 'perspective', because, in a real sense, I have none (or hold to none)); anyway, with my approach there no such thing as something that will not appropriately change in the science thoughts or views, based on the better/best empiricism: ultimately everything is based on: directly observable behavior patterns and corresponding directly aspects of the environment (at some point during ontogeny, at least at their INCEPTION). Covert thought (representation) and thought processes (e.g. on causality) may well and certainly does develop -- BUT, if behavior is sufficiently monitored and tracked, to a strict empiricist, any such covert stuff will be able to be clearly seen as related to what was ONCE overt (and THUS the covert may be sufficiently understood and used in other understanding you need with/of development at later stages -- where new levels in the hierarchy of cognition develop). There is no evidence to the contrary. At the same time, the approach and strict empirical 'view' totally destroys any nature/nurture dualisms: The very expression of the innate, related to cognitive change (emerging at points, throughout ontogeny) IS manifested completely, in effect, AS the perceptual shifts and these occur, in effect, simultaneously with associated learnings*** -- so the innate and the learned can be seen basically as simultaneous (or you can see nature "mixed in" with nurture, if you like).

*** FOOTNOTE: ... and in the responses to currently fully direct observable aspects of the environment.

The system, being a discovered, ethological, fully directly-empirically-documented (and understood) system takes care of all: what "internal variables" (covert representation, thought, and thought processes are seen to (FOUND TO be possible), and thus correctly posited during further observation, including during further ontogeny). THESE things, wrought of perception are not changed fundamentally internally per se (at least may well not be intractable) and continue to seek verification in the environment (and, yet, at times, during ontogeny again "shift" by new perceptual shifts). This is the VERY basic sort of perception which is very barely if at all influenced by intentions or conscious learning or experience, THEMSELVES (see recent paper by Carlos Montemayor and Harry Haroutioun Haladjian); they DO make us (whether we know it or not -- and we often may not) amenable to new experiences and new types of learning (or should I say that the other way around, who knows?).

I think the only other things (perhaps providing a slightly different, i.e. additional, look at the perspective), I provided ABOVE.

Regards and with respect,

Brad Jesness (https://www.researchgate.net/profile/Brad_Jesness2)

P.S. Your whole quote, from which I told sections, read: "Perceptions exist only in the context of the architecture of a particular neural system and do not directly represent or correspond to objective properties or events in the external world. For example, when viewing a random dot stereogram (or a picture in an art gallery) it may be necessary to adjust one's perspective (focus or viewing position) in order to form a recognizable perception of what is being viewed. In this instance, the world elements themselves, on which the perception depends, do not change, but the internal variables, which combine to form the perception, do. In behavior arising from perceptual control it is these internal constructions that are controlled, and not the external world; though there may also be manipulation of the physical world. This can be demonstrated by creating a simulated neural architecture that is able to perceive a bowie (a perceptual signal combining both sound and vision) and control the perception by changing the position of the rover in which the architecture is embodied. The basic form of the perception is shown in Figure 5...."

I have a type of "perceptual control system" (one that allows for evidence of each of several emergences BEING manifest CONCRETELY, seen in new response patterns in the actual environment (at key points), i.e. they are discoverable (though likely subtle); it is what's behind a developing cognitive system (system of useful classification and used in seeing causal relationships), emerging in "parts" during ontogeny. At each stage, when some new perspective-via-perception needs to/or is ready to become effective it does -- it emerges. It IS innate action patterns which are "perceptual/attentional shifts" directing important attention and important learnings (of course, results from previous "shifts" (incl. representations) AND previously further developed representations "come forward" from the memories and contextualize the environment into which the new perception/attention emerges; clearly it is related to previous such "shifts" and their results (again, incl. major key representations in memory)). These shifts are the concrete bases of each qualitative shift (level/"stage") necessary for the next major cognitive development and have a hierarchical relationship with earlier cognitive developments (roughly similar to what you propose) (each of which concretely began with "perceptual shift", as they all do).

This system is biological, as maybe kinda seemingly true of yours in a way, BUT yours requires feedback to verify the new basic aspect of perception whereas in my system it is not such 1-to-1 verification that goes on, just new functional behavior RESULTS (again, including incorporating results of previous such "shifts") which are found to be of notable value for the organism (and thus rewarding to use and elaborate). This perspective I speak of is described in "A Human Ethogram ..." AND now, with eye-tracking technology, the sorts of hypotheses about these perceptual/attentional shifts are researchable, testable, and verifiable -- in short they may be found in behavior-patterns-and-relevant-environmental aspects of the current circumstances.

[Oddly, the first version of this Comment, I thought had totally disappeared, so the version you read (above) is a total new second essay (and perhaps not as good as the original version; it is hard to redo essays and sometimes the second version is worse). IN any case, this first version can SOMEHOW be read as a Comment below a copy of the 55-page paper you can get to with this link ??!! (TRY IT)]:

Article A General Architecture for Robotics Systems: A Perception-Ba...

Could some behavior change have overt aspects so subtle as change in time environmental aspects are gazed at &/or significant decreases in gaze time ?

[This is a thoroughly empirical cognitive-developmental approach to research and theory.]

I have tried to conceive of what possible overt behavior-pattern aspects AND clearly observable environmental aspects might always be able to be found at least at the inception of any major behavior change (including, and especially, the beginnings of major qualitative shifts in learning and conceptualization during ontogeny). I settled (by its possible adequacy in-the-'complex'-context-of-behavior -- and with nothing else historically noted as something apparently happening nor anything else imaginable) on the idea that perceptual/attentional shifts could indeed suffice. These may be enough to have a behavior that can be seen (using eye-tracking technology) and also to be able to see (or see with knowledge of past such developments) the clear environmental aspects involved as a new way of learning begins.

I believe as empiricists (and in trying to be completely strict empiricists) that at some points in ontogeny with major behavior-pattern changes there ARE such overt corresponding aspects (proximate causes: subtle yet clear behavioral redirection and still-detectable corresponding environmental aspects involved). But, I am always wondering: in how many contexts do these (or similar things) need to even be that overt as one generalizes a new WAY of viewing and conceptualizing and relating things or happenings (<-- also corresponding to new representations)? AND, finally, what signs may there be of lesser changes such as some simple new combinations, extensions, and/or elaborations of the new major behavior patterns (conceptual knowledge, thought and causal understandings)?:

Could these be undetectable? Maybe, but I don't like it and I think it best to assume otherwise UNTIL THERE ARE LESSER THINGS (clearer and more basic "chunks") to be manipulated and changed in/by working memory. So alternatively (to the idea of them being undetectable): couldn't some of these such "lesser" behavioral changes involve yet subtler yet still overt things: so subtle as change in amount of time spent on some environmental aspect(s) which are gazed at &/or significant decreases in gaze time? This would be better than NO overt signs -- though I believe eventually (at each stage beyond infancy or toddlerhood) behavioral change well-established CAN INDEED have no further direct signs AS it undergoes SOME further changes through thought (and thus those behavior changes only being "seen" to exist indirectly "in" overt behaviors patterns (i.e. by inference viewing overt behavior patterns as more of a whole -- yet this still retaining our empiricism).

So, even the most subtle should be detectable indirectly by changes in things observed and/or acted on. One can expect to have a background of cognitive-developmental knowledge in order to do this OR even in order to detect gaze-time changes, mentioned before.

Let me say it again, another way (as I likely all too often do):

Once perceptual/attentional shifts have been reliably seen and associated with ... and cognitive developments, one may come to have in-the-context-of-ones-knowledge the ability to see these subtler things just mentioned (and to "see" in a way: final intermediaries to or the final results of what are in-some-sense completely covert behavior patterns (and behavioral (concept) change). (Yet, these (again) are empirically assessable; even the last-mentioned cognitive changes would be assessable, as outlined above.)

As you can see: It is my contention that INDIRECT evidence is what one must "fall back on" ONLY when the "chunks" working memory would have to deal with can be dealt with without direct external supports -- these would be relatively simple elaborations or combinations (made in thought only). Still, when of some importance even these should be INDIRECTLY assessable in behavior (looking at more of it): there nearly never is anything, and NEVER anything for a strict empiricist, IF generally true about people, THAT DOES NOT have an environmental manifestation that can be found ("indirect evidence" does not mean "not really there"; if you were able to look at enough behavior and "have it in perspective", there no doubt would be some DIRECT manifestation. BUT: in addition: there are, of course, possible individual differences: this is why often you look for types of things and not a given particular behavior -- the TYPE of behavior, often is "the behavior", with a clear specifiable and particular nature. ALSO: 2 "things" (aspects) perceived and/or attended to need not be in the same space-and-time: one must account for very noteworthy abilities related to impressive visual-spatial memory (even in many mammals and birds this is quite impressive; I have little doubt it is impressive in humans too). This v-s Memory may "make for" apparent violations of the rules-of-what-to-expect, but I believe the "rules" hold -- you just need to have existing possible views and/or analysis stemming from the manipulations of v-s memories as part of your perspective as you observe. BUT:

None of this will lead to not having to have the direct actual environment (with some important aspects) before (i.e. in front of) a Subject for KEY MAJOR behavioral change (behavior pattern change, in what are often called "stages") in childhood/adolescence to begin.

And all this remains ALL "just" real psychology, as originally intended: the science of behavior -- actually: of behavior patterns and relevant environmental aspects as proximate cause of behavior change (new behavior) -- and NOTHING ELSE.]

For a start to get a better idea of the MAIN basic, empirical, behavioral perspective (if you have not already) read the 'attached' (It is an modern, empirical ethological overview of the 5 main stages of cognitive development and some of the major consequences , describing how the stages may be begin as perceptual

(perceptual/attentional) shifts, as described above, and outlining the nature of these NOW TESTABLE hypotheses.) :

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Doesn't AI need TO WORK-IN developmental processes (ontogeny) IN THE ROBOT to understand & emulate the changing & hierarchical nature of "LEARNINGS"?

Doesn't the Artificial Intelligence field need TO WORK-IN developmental processes (ontogeny) IN THE true-intelligence emulators to understand and track the changing and hierarchical nature of "LEARNINGS"? (These are also cumulative processes: where older behaviors, "lower in the hierarchy" are still functional, as needed.)

Seems like a huge oversight. (Of course, to do this understanding the corresponding processes in the human is needed; STILL, IT IS AN OVERSIGHT !)

My guidance (and potential contribution) HERE comes from: "A Human Ethogram ..." which, because it outlines a completely empirical approach to discovering the aspects of human cognitive development, is amenable to AI. PLUS (and this is a big plus): all the hypotheses that stem from this view are NOW (thanks to eye-tracking technology, etc.) testable and verifiable. AS FOUND, they may be emulated -- nothing of their nature would prohibit that (this is what you get with being entirely empirical and empirically based).

See:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

P.S. The Ethogram perspective (noted, above) is truly autonomous-ness (autonomy) INCARNATE -- and unique in this way. The perspective also FIXES Perceptual Control Theory (another approach OFTEN offered expressly to AI people -- but PCT is self-contradictory UNTIL FIXED): SEE my Comment UNDER Rupert Young's Update, under <https://www.researchgate.net/project/Perceptual-Control-Theory-PCT>

And then, I offer a lot of the rest of the understanding of human behavior (the open systems, but "gate-keepers" : the memory capacities/systems) under my Project:

<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

I do believe this is the basic "kit" for true artificial intelligence and also for a good and progressive understanding of human behavior patterns.

I might say (with regard/respect to the above citations): "It is good to have the '2 ends' and to have one with fixed aspects and the other in a significant sense "open" and then to allow good research to 'fill in' 'the middle'."

Psychology: If you can't define a standard for empiricism in the field, how can anyone (realistically) judge "how empirical" any given perspective is?

If you can't define a standard for empiricism in a field (pretty much "as a whole", i.e. an over-arching view), THEN how can anyone judge "how empirical" any [other] given perspective is? As indicated, it seems to me this would need to be an over-arching view, subsuming more piecemeal perspectives. Without this, do we really expect students (even grad. students) to be able to formulate comprehensive ways to judge the quality/completeness/express-ness of the "empirical foundation" of any given approach? (AND, related to this: Do we even examine or evaluate the 'assumptions' that come into their determinations? Can assumptions be left UNPROVEN??) If students cannot and/or do not do this sort of evaluation on their own (and there is no over-arching view, guiding and supporting their considerations), then does it really simply become: "what people like (including what they like to assume)" (or what their professors like) AND THAT IS ALL? Is this ok? Would this work? Are models fine, even if they really simply come from some person's (or peoples') imagination -- and "seem" to fit??? (While I believe BIOLOGICAL systems can be self-correcting, I do not believe "trumped up" models would be like this.)

[Perhaps, the real question is (and what essentially needs to be answered here is) : WHAT ARE THE ROCK-BOTTOM CORE EMPIRICAL BASES (directly observable behavior [patterns] and corresponding directly observable environmental aspects) which exist and are key for each new major COGNITIVE DEVELOPMENT? (My answer may be found in: "A Human Ethogram ... " :

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

]

Dear

I agree with you (EXCEPT the "(or anyone else)" part) when you say: "However, I don't think it's either feasible or desirable to expect students (or anyone else) to 'formulate comprehensive ways to judge the quality of the empirical foundation of any given approach'."

But, that said, I believe the "formulation of comprehensive ways to judge ..." must be done and must be established clearly, or it should be clear there is a structure and mechanism working toward this (and HOW) -- at least by leading persons' in the field.

I was not expecting to leave this to individual students; that is why I said "define a standard for empiricism in a field (pretty much "as a whole", i.e. an over-arching view)" -- and there I was referring to perspectives offered (OR which POTENTIALLY MAY BE OFFERED) that can be seen as well-established in the field as a whole (doing much of such evaluations "for" students, and for each other too). **THUS:**

Good standards must be met. In particular: the field as a "community" must have established standards for what degree of empiricism is possible in different circumstances AND where the highest level of empiricism can, in fact, (at least potentially) be shown: SPECIFICALLY: a way behavioral changes CAN/or may-well-be-expected- to-be-shown clearly related to both necessary types of proximate causes (as required for psychology, THE SCIENCE - AS DEFINED): (1) the overt, directly-observable behavior patterns AT THE ROOT of major developing behavior patterns and (2) the corresponding directly observable aspects of the environment. The best-possible relationship of behavior patterns OTHERWISE (in other circumstances (of study/research)) _TO_ such ultimately best-possible empirical definitions should be clear in a perspective/theory, along with its associated, justified and proven assumptions. Lacking any or all of this, the field lacks a KEY it cannot afford to lack. **IN SHORT:** We need standards for: " (i) coherent, (ii) testable, and (iii) ...reasonable theoretical framework " AND THAT, just described in 2 parts (directly above), must be its nature. (We do not have that now, the "long history" of psychology NOTWITHSTANDING : Psychology is an infant science (even when viewed as generously as is reasonably possible); I have well-argued this, in detail, in other essays (Questions and Answers) here on researchgate.)

Your statement about "... rather my focus would be on whether it is testable/falsifiable" really just BEGS THE QUESTION. Its answer is NOT self-evident (for anyone). We need (and are lacking), and MUST have, STANDARDS FOR "testable/falsifiable" : evidence from direct observation _AND_ (IN ADDITION), if the circumstances are not that, how the INDIRECT EVIDENCE _IS_ RELATED TO _THAT_. Otherwise the psychology HAS NO GOOD FOUNDATION at all -- and I do not believe it is possible to argue otherwise.

The idea of "camps of researchers with very different perspectives regarding even the most basic assumptions" is not acceptable. Unless assumptions are proven (or you are seriously working towards proving them) _AND_ the relationship of YOUR findings to ACTUAL empirical findings (i.e. the relationship to 'the highest level of empiricism') ARE understood (OR might well be, given your approach), THEN you are in trouble. And, specifically: _HOW_ your data from these other circumstances relate CLEARLY to the FOUNDATIONAL EMPIRICISM, though indirectly, must also be based on ESTABLISHED (WELL-FOUNDED) assumptions. We should not have a situation where " proponents of the different camps tend not to take seriously the assumptions or the 'empirical basis' of the respective other camp ". That really, simply (and for-sure) IS NOT OKAY.

The " Given our brain's processing limitations " consideration: you will find I always take this into account, both for the Subject (of study) and for the student/researcher/theorist; I have entire Questions and Answers (essays) addressing this. We MUST be realistic about our Subject and about ourselves. And, I believe currently WE ARE NOT: we do not "see"/interpret/hypothesize (any of those) CLEARLY IN ACCORD WITH ESTABLISHED PRINCIPLES OF MEMORY (findings about our types of Memory -- among the strongest and most consistent and well-established findings in ALL PSYCHOLOGY). Psychology practitioners ('scientists') contradict themselves, even by

contradicting their best findings, by their own behavior (including their thought formulations) AND often in the basic view of their Subject (subjects).

Your re-statement (at the end of your essay) that " However, I don't think it's either feasible or desirable ... to 'formulate comprehensive ways to judge the quality of the empirical foundation of any given approach' ", after all else you say, I FIND TOTALLY UNACCEPTABLE. You want to accept defying empiricism and the very foundation of the science of psychology (and thus, the very DEFINITION). Though much work remains in establishing the foundation (as I described, above) BECAUSE THIS HAS NEVER BEEN WELL DONE, it still needs to be done. It may be possible to do it ONLY now, with new technology (eye-tracking technology and computer-assisted analysis). I have put forth a foundational proposal in my paper, "A Human Ethogram ..." -- a perspective which NOW, thanks to that new technology, has a basic sort of hypotheses that are NOW TESTABLE. See:

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

"I am sorry" (as they say) for/to Psychology that it may be ONLY NOW that is gets a true and good and real and best empirical foundation. But, if complying with the standards indicated above can ONLY BE DONE NOW, we must (in a real sense) accept that Psychology, itself, has only just begun.

[Frankly your answer ended up being the accepted, though unreasonable gobbledegook , much of it often spouted off by rote in the field. Obviously, I cannot view that kindly. I know you meant well and were trying to help, but I, myself, may have more of an Answer here, than a Question.]

P.S. Much more of the actual work in formulating a research project may well and justifiably be direct observation of the Subject, with a broad understanding of ontogeny -- yet as much as possible showing inter-rater reliabilities (SO IT IS STILL GOOD RESEARCH) -- RATHER THAN going through the deceptively apparently-acceptable procedures described by Karsten Steinhauer to generate a hypothesis (which are more based on traditions, than on good sense). Doing it properly (making it much of the nature I just described) then results in a hypothesis that is really just an aspect, perhaps a small aspect, of the actual overall research. The "procedures" outlined by Karsten Steinhauer will arguably lead to poor-quality hypotheses rather than better ones from a working with and in a TRUE CONTEXT (certainly a "true context" is not today's psychology theories or models).

The attitude I learned from the old-time ethologists was NOT to look for something to test, but LOOK and possibly find something to test. See what ALL you can see reliably "THERE", that is more of the research than ANY hypothetico-deductive "system" (ESPECIALLY better than any h-d system of "understanding" NOT generated by necessity through engaging in an observational process). And it is nice if, in the process, you find things consistent with BIOLOGICAL and necessarily applicable principles.

Dear

The eye-tracking patterns we could discover would likely be very good indicators of perceptual or perceptual/attentional-related behavior patterns and could only be seen with such technology. I propose that discovering such patterns would necessarily involve the correct understanding of the human developmental

context and memory (as much as possible) -- and involve as much as possible real knowledge from real observations occurring over quite a significant period of study, "seeing" (also with eye-tracking) the quite likely SIMILAR, YET DIFFERENT, cognitive developments of younger children (during ontogeny) -- AND then richly seeing present phenomenology and with eye-tracking technology (computer-assisted analysis may also be of help here). One would not expect any "earth-shaking" things to just "pop up" and/or be obvious -- thus, your argument about eye-research so far is irrelevant.

Plus note: if the kind of behavior change instigating the inception of new cognitive abilities (new types of learning) could only be of the nature I indicated, then IF THERE IS ANY REAL EMPIRICAL grounding possible for COGNITIVE-DEVELOPMENTAL-BEHAVIORAL SCIENCE, I would suggest we look hard and look intelligently. (I doubt such phenomenon could be found "just looking/ just watching" but eye-tracking and related technologies would be involved.)

Nowadays the empirical basis for all (each) significant new type of cognition is often imagined "embodied" by 'theorists' using nothing but pure analogy to Piaget's sensori-motor Period (and they have yielded no significant meaningful research findings and seem to have no promise -- as reviewed and assessed by respectable peers; these 'theories' have only weak indirect evidence for them, and that situation will never improve). I offer the more consistent-with-psychology's-definition approach for understanding cognitive developments: look for the EMBEDDED-ness (in/with the environment) IN/with corresponding BEHAVIOR patterns. Given the much contextualization brought forward by the memories (memory capabilities), these could easily be (and likely ARE) as subtle as "perceptual shifts" or "perceptual/attentional shifts" and I think it is arguable that there is no other sort of thing which "it" could be. And, thus, failing to find these is in a real sense a failure to find behavioral/environmental referents for major cognitive [behavior pattern] changes -- an attitude amazingly many psychologists seem to, in effect, accept (though some go the goofy route of "embodiment"). If you want to test if empiricism works (which of course it does, so of course you do), you basically MUST take my route. (You don't really think people conjure-up the raw basic ingredients of "abstractions" in their 'minds' 'purely' by manipulations of thought "itself" (an oxymoron), do you?)

For a person seemingly aware of "our brain's processing limitations", you most certainly, happily use the word "complex" more than enough. Truthfully, I find that more than suspicious when looking to understand or describe one's subject (doesn't use of the word "complex" arguably more often indicate a person's confusion?). Simple is all we understand. "Chunks", then better "chunks" and then still better "chunks".

Not only are subject matters described by you as complex (again and again), but the teams you indicate might have to be put together seems like it would necessarily generate complexities/confusion (and from my perspective the need for that really has not been indicated or certainly NOT for study in the psychology field, which is BY DEFINITION: behaviors and corresponding environmental aspects). (It is true, you do express much skepticism about such teams.)

About the one-theory issue. My Ethogram Theory is not a theory but simply an argued-for necessary approach (and just a starting approach, with a few necessarily applicable biological and empirical assumptions) -- not anything like what anyone would see as like other [full-blown] theories, and thus I guess it is NOT one (but sometimes you can go far with very little, by starting and continuing correctly). In the main paper I show the other classic perspectives as all poorly founded and using presumptive conclusions as explanations -- and more recently I have described their failings as related to likely-false, unfounded (certainly unproven) 'assumptions'

and have detailed these and shown the more likely , more biologically consistent alternatives. (It is adherence to false assumptions and considering NO others that is behind the development of goofy 'theories' like "embodiment" 'theories' AND it convincingly explains the absolute inability to take other not unlikely perspectives.)

I would add that taking a perspective like mine and finding some of the empirical (shown/environmental), basic core, directly-observable phenomenon I hypothesize for cognitive development is not only necessary for a foundation of psychology, but it is also necessary if there is going to be any hope for true artificial intelligence. True AI Robots ("learning" and operating autonomously) must have as their impetus for change (for ALL realistic change in their behavior patterns), clear concrete aspects of the environment -- and those processed correctly, yet allowing enough "openness" for the behavior of the AI machines not to be stilted: The robots have to be open to all possibly relevant experiences AND have the ability to represent, classify, etc, and discern causality by way of aspects of cognition which have developed -- all stemming from FROM concrete aspects of experience combining with that which had already been correctly, stored, related, classified and understood -- to THEN (at the appropriate time) correctly allow similar progression to the next level/"stage" of cognition (initially shown in aspects of their perception/attention), and to thus begin to show impressive new sorts LEARNINGS and "appreciations" of related-ness and classification, and that leading to the development of further understandings. This is exactly what I see the perceptual or perceptual/attentional "shifts" doing for the human -- and having the very same role there as they would in AI.

IN fact, because of the intransigent ways of psychology, I have "packaged" a good core of understanding of key capacities and key behavior patterns and what would be indications OF/for major core impetus-es for behavior development FOR ARTIFICIAL INTELLIGENCE people. (The latter part is simply, again, the "A Human Ethogram ... " paper, describing the key approach and what we must come to see and then understand -- perhaps in the human first, before used in AI). See: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

Though the authors are not of a correct theoretical persuasion ** (in fact, some are "embodiment" thinkers, way "off-base" in their thinking and analysis), STILL the following study indicates the potential of eye-tracking technology to possibly DO WHAT I THINK NEEDS TO BE DONE to provide a empirical foundation for cognitive-development understandings:

Article Eye-Tracking Piaget: Capturing the Emergence of Attentional ...

and here is a link to the whole article (as a pdf):

https://edrl.berkeley.edu/sites/default/files/Abrahamson.Shayan.Bakker.vdSchaaf.2016.HD_.pdf

AND:

Here is one having to do with art appreciation, which is certainly not directly of the same nature as the work I say is needs to be done, yet nonetheless shows the great potential of this technology (AND in it is NEW, at least

the unobtrusive yet detail-providing tools developed quite recently):

<https://thepsychologist.bps.org.uk/volume-29/november-2016/window-soul-and-psyche>

Here is another study that, while dealing only with infants, still shows the POTENTIAL OF this NEW TECHNOLOGY to track attention/gaze associated with cognitive development:

(use your pdf reader to see this):

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=13&cad=rja&uact=8&ved=0ahUKEwilvdXv0vPWAhVI5mMKHbYAHE4ChAWCDEwAg&url=https%3A%2F%2Fwww.researchgate.net%2Ffile.PostFileLoad.er.html%3Fid%3D5882e6bd3d7f4b341669ba49%26assetKey%3DAS%253A452826913611778%25401484973757789&usg=AOvVaw10N5mbN_zdiJnHmZaE-MGc

**** FOOTNOTE:** This is a note I sent to Dor Abrahamson: (I do NOT support his approach):

Dear Dor Abrahamson ... As you may know I do greatly oppose what clearly seems to be your theoretical persuasion : the "enactive" and "embodied" 'stuff'. I do offer a potentially correct alternative (which is more consistent with necessarily applicable biological principles and which has better, more-likely and testable, assumptions) : it has the organism's basic new-learning-initiating processes (ultimately clearly related to qualitative shifts in thinking) EMBEDDED in/with the environment AS perceptual and/or perceptual attentional "shifts". Unlike your approach this approach is absolutely grounded in foundational empiricism: directly observable proximate causes (OVERT behavior patterns [(subtle)] AND corresponding environmental aspects). [Your approach, in contrast, relies on weak, indirect evidence and, according to peer reviews, has not helped and shows no potential -- because of the total reliance on indirect evidence; YOU MUST FIND THE TRUE EMPIRICAL GROUNDING, even IF your theory TOO, along with my approach, may have some truth to it (there ARE other highly likely potentially detectable OVERT behavior patterns at the base of what my approach would find and that would also be a base for yours, to the extent it is helpful at all and true (which frankly, I doubt).] This (my approach) requires the most modern eye-tracking technology, but still may offer the first real foundation for cognitive-developmental studies (/theory). It is possible psychology (as a real empirical science) can only NOW begin. Psychology may have to accept this.

[For more on why I am dissatisfied with Abrahamson's view, see my Comment under the paper he has just provided the full-text for:

Article Eye-Tracking Piaget: Capturing the Emergence of Attentional ...

]

Don't "Embodiment" 'theories' needlessly over-complicate or destroy possibilities for Artificial Intelligence (and for Psychology, if anyone cares)?

I would say the answer is clearly "yes", because of their insistence on actual physical activities (sensori-motor behaviors), literally being internalized, as the basis of thinking. This would require AI people to gather all the

important "sets" of overt behaviors (behavior patterns) AND have them integrally USED in cognitive processes (in the development of those processes).

These viewpoints defy Piaget and defy reality and defy testability/verifiability (because it requires belief in things for which there could ONLY EVER be indirect evidence). Such modern theories have been negatively reviewed and rejected by peers. And, fortunately, gathering such sets of behaviors (those every-one important behavior patterns) is entirely unnecessary. Given the likely and potential nature of visual-spatial memory (with the other types of memory also), and given the likelihood of internal representations of aspects of experience and the environment, PER SE, without any new or noteworthy sensori-motor bases, AI need not have this problem.

See my Project which provides an outline for AI, which is based on direct empirical observation of perceptual and perceptual/attentional patterns ("shifts") AND then on representation (as above), possible with our Memories, and otherwise just involves: associative/dissociative learning.

"Enactment and "embodiment" theories are a skewed, stilted "blight" on psychology, in general (also); they are stories, they are fictions.

People, it is all via hypotheticals, based purely on analogies with the sensori-motor focus in infancy (the latter being USEFUL and well-demonstrated by Piaget and others), that they, given related basic false assumptions, are compelled to this view. As much as Piaget would have been delighted to continue to "see" sensori-motor activities involved and WOULD HAVE BEEN HAPPY TO speak of sensori-motor links in later stages: HE DID NOT. He was a constructivist, who very much spoke mainly (if not only) in terms of REPRESENTATION in the Periods after infancy. Any claims to the contrary are revisionist history and false.

Dear

The matter of representation (which I, of course believe is essential) becomes much easier when one understands the possibilities of visual-spatial memory and how much that is part of what is going on -- it is kind of like a frequent-picture-taking camera, but has selective aspects (which need to be discovered); dealing with processing it will be something like face-recognition software.

I most certainly WOULD say that virtually nothing should be based on models WITH WHICH ONE ENTERS A FIELD OF STUDY OF THE SUBJECT. Models are bad, unless literally "called upon" by other data. Perhaps this was part of the concern. Inductive work always precedes hypothetico-deductive systems, if things are done correctly; thus, this said, the Subject will force the definitions of any "models" needed (and how needed, and as needed).

Psychology, by definition, is study of behavior patterns and the associated environmental aspects (and at some points this must be DIRECT observation of EACH -- for empirical grounding) . You will NEVER find this writer ever just talking about "the mind".

Evolution is WAY to far from any direct behavior pattern/environmental aspects to be any kind of big issue for

me.

Dear

My question very much included addressing AI (even mainly), but I guess only some psychologists MAY realize the repercussions of "embodiment" (as the "embodiment theorists" mean it) versus alternative views. In its lay meanings (and meanings in other fields), "embodiment" seems/sounds good and in some senses may well be good. But the interpretation others in other fields (other than psychology) give it is either a different and/or a very generous interpretation, since it does sound nice and holistic. The problem is: in psychology they make it up, though it is supposed to represent the way behavior is; in psychology this is an unjustified conceptualization and arguably not due to the facts (or good or necessary) but due to assumptions. AND: AI being "saddled" with this means AI would have to simulate/emulate sensori-motor behaviors as the basis for all developments of cognition (in ontogeny) -- and it is very hard to build all that musculature (etc.) sort of things into AI. While I think AI people will, in some sense, have to imitate ontogeny factors (and as they relate, and as they are ordered) THESE ARE NOT THE TYPE you would want to deal with NOR is it necessary: there are alternatives that would require less and be more accurate and real and more justified by the facts. Perhaps, as far as AI is concerned, my post (Question) was mainly to warn AI people what psychological "theories" you should not try to emulate, for several reasons. [To warn AI was one of the intentions of the Question (as just described), but to point up undue problems due to unjustified conceptualizations is what it was to point up for psychologists (though perhaps they will not read the Question, and if they do, the likelihood is they won't care).]

It is natural that AI people would not know this sort of instantiation of the meaning. I guess, ideally, I would have people who have studied cognitive psychology and human (child) development in detail, but who have now turned to AI, reading and thinking about the Question. (I could only be so lucky that such persons with that background would be ones to follow me and my Questions; the Question being categorized, among other things (Topics), as relevant to "Embodied Cognition" was supposed to attract the psychology researchers/theorists.)

Dear

I would maintain that as far as cognitive capacities and abilities (and their development) are concerned, AI could not likely have a better idea of how to do that than by knowing what unfolds in the ontogeny of a human. There is obviously a lot of potential there; and, imagine THAT nearly error-less and without the irrationality -- emulating the very best of humans !

Thus, it is my concern not only for psychology, but for AI (and other related fields), that the nature of cognition and cognitive development have a proper, justified, most-empirical "account" (with the key points of assertions directly observable and replicable). "Embodiment" 'theory' has ONLY supposed _and_ indirect evidence everywhere, for everything -- except, of course, during the (Piaget's) sensori-motor Period of infancy.

As I have maintained, there are extremely unnecessary reasons why "embodiment" of 'thought' IN SENSORI-MOTOR ACTIONS is the ONLY idea some psychologists have; I see it as because of false "assumptions". Because of THESE certain UNFOUNDED likely-false "assumptions", these are the only ideas THEY CAN HAVE (you cannot bend your thinking "out of line" with your 'foundational' 'assumptions'/presumptions -- even if those "assumptions" are without any good foundation OR even if they are FALSE). These "assumptions" include (1) "all that is innate is largely present at birth" and (2) "the more 'learning' there is, the less innate guidance" -- also including taking that to mean: less (or no) innate guidance involved in the inception of qualitatively new ways of categorizing and relating things. I BELIEVE BOTH THESE ASSUMPTIONS ARE both UNFOUNDED AND FALSE. They are certainly unproven. AND: the natural consequences of having to have ones conceptualizations being IN ACCORD with these "assumptions" basically eliminates the possibility of thinking of new significant innate guidance involved with/in the inception of qualitatively new types of learning/thinking. This is what I believe (at the root) leads to stilted, inadequate, not-directly-testable, and down-right-weird conceptualizations, such as that of the "embodiment" 'theorists'.

My perspective (in "A Human Ethogram ... "), though justified by assumptions that are more-likely true and are more consistent with biological principles, CANNOT EVEN ENTER THE MIND OF THE EVER-PRESUMPTIVE psychology researchers/'theorists' (even for proper consideration). This wrong-"assumptions" problem is basically a historical problem in "Western" psychology/culture, DUE TO THE SAME GROUNDLESS PRESUMPTIONS in classic philosophy (there, also not empirical-grounded or well-related to direct observations AT ALL, at any point).

My perspective is a more parsimonious, clean, well-justified perspective, HYPOTHESIZING clear directly observable behavior patterns (and environmental aspects) AT ALL THE KEY POINTS OF COGNITIVE DEVELOPMENT. This perspective, involving perceptual "shifts" and/or perceptual/attentional "shifts", not only has a better foundation (arguing strongly against "embodiment" 'theory'), but also FIXES SELF-CONTRADICTIONS IN what is known as Perceptual Control Theory -- another presently skewed-by-false-'assumptions' 'theory'. To read the core of my approach to understanding cognition and cognitive development, see: _

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

For more of the "kit" I have developed for true artificial intelligence people (including a good, verifiable perspective on the NECESSARY types of human memory -- much of that coming from some of the GOOD research in Psychology), see: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based->

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

What are major, key indicators, IN GENERAL, of good science?

My answer: Being able to reliably communicate, with relative ease, a correct and good summary of a lot (a rather large "amount" -- covering or "containing" much) of verifiable phenomenology (somewhere(s), clearly appropriately, with a foundation(s) in [overt] directly observable events, as proximate cause(s)). This would be associated with a series of communications and investigations, propagating more about this AND of this nature -- a "series of indicators" : such is the continuing and continuous nature of good science. (This is what is really the scientific method -- no mere form, but substance BASED IN DIRECT OBSERVATION, with continuations of related inquiries and findings.)

[Does any established science violate this definition? Is more absolutely (always, necessarily) needed in a general definition? I could have noted "timely", "place-ly" experiments, but I believe this is covered IN the definition above, and I do not want to ONCE AGAIN overemphasize this hypothetico-deductive "bent" -- a great, often-arrogant, distracting bias, which skews behaviors away from good science (e.g. see: models, analogies, homunculus/ homunculī (of the 'theorist'/'researcher' and not of the Subject, and absolutely never for-certain - or even likely -- the best we can do)).]

Dear

Much of my points (of the Question/my Answer) were to indicate or state how important it is that all relevant context be clear and [(relatedly)] claimed-phenomenon therein be understood (i.e. demonstrably 'seen-the-same' by all and replicable). To the extent that there are clear contexts (or "is clear context") and some key clearly-related DIRECTLY observable empirical foundations -- to that extent an instance of "science" (via these 2 aspects) can be 'good' or 'bad'. I think you DO find a lot of variability on these aspects, with some models having (at best) ONLY indirect evidence -- which to me is so 'bad' as to be unacceptable (there must be clearly _related_ directly observable environmental aspects _and_ behavior patterns, associated with one's findings).

[It seems possible that research could lack one or both of these necessary aspects and still fulfill the requirements you mention (or claim and seem to fulfill them).]

I would agree that "process concepts" end up being very important plus methodology most certainly needs to be detailed, but the above-described aspects (in the Question) are more fundamental/foundational and important (though both the aspects you note are also clearly important and essential). Also, I would like to say: as important as 'process' is, we cannot afford to pretend OR indicate we understand that more than we do (I

truly wonder if we can ever clearly, fully understand biological/behavioral processes (those involving behavior patterns) or other processes seen in our sciences, for that matter).

Major central question of AI?: How can "something" be (in much of its nature) "bottom-up" _AND_ (also) a start of a new "top-down" structure/ability?

Here is how I would state the Question in a bit-longer form:

Isn't a major central question of AI (and OF psychology)(and related to biology principles as well): How can "something" be (in much of its nature) "bottom-up" _AND_ (at the same time) a start of a new "top-down" structure/ability?

My "Answer"/notes on this: You cannot guess all the things "bottom stuff" might be useful for or part of; you cannot suppose to well-guess the nature and limits (or even the full set of possible parameters) of the things at the "top" in your "top-down" thinking: THUS, your models are bad both ways. How about finding that which IS "found" by some of the "bottom stuff", using the bottom stuff, but which is also the start of a new great 'top-down'-type of functioning (e.g. a new way to classify, classifying NEW sets of aspects of the environment/environmental change), using some bottom-up as components, helpers and pieces to be found anew, as used in new ways, in the new developing [begun-to-be-'known'] context? Some such thing could be "seen" (in a sense)(BY the individual organism, itself) before its nature is fully formed or/and before it is really functional (in other words: before it is useful/well-used, and LIKELY even before becoming ANY center of attention, i.e. before clearly conscious **) -- and given how it develops and what is involved in its development (plus how variable and open its development must be), this is the way it WOULD BE. [(Doesn't this provide both the kind of openness and adapted-ness required (biologically) -- and required in real AI?)]

This is the way I see that which is SOUGHT, and first sought-to-be well-hypothesized (and then found) AS indicated (just indirectly, which is now the only way it can be) by its special-typical "products"/results/consequences described in "A Human Ethogram ...". Yet the "products", etc., should be guiding one toward hypotheses of new actual direct-observables (being seen, very likely requiring the use of new technology, eye-tracking and computer-assisted analysis ***), though also requiring imagination and one well-learned, with good knowledge of earlier similarly-qualitative new learnings and developments in ontogeny. In "A Human Ethogram ..." the NEW behavioral "ingredients" in these key learnings changes are simply perceptual "shifts" (or perceptual/attentional "shifts") -- which would suffice.

SEE:

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

AND <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

** FOOTNOTE: It would be this way if you need all the "pieces" (AND perhaps put together anew) before the top-down thing is literally notable.

*** Because they would OTHERWISE not be seen (ARE not seen) by us or the organism (clearly, consciously).

P.S. This is an empirical foundation for cognitive-development studies and theories (some foundation is presently missing from the psychology of cognitive development -- HERE IT IS !)

Another P.S. It may be too damned bad, but surely may be true that: some more discoveries in behavioral (biological) science ARE NEEDED before true AI can be done (it is not like that field has not have time to try with the knowledge we have or the models they generate from their own minds).

P.S. What, better than what's described above "to build an integrated system that is self-consistent" (" it is crucial to build the system around a general and flexible core") (Wang 2004 and Pei Wang, Ben Goertzel 2012)]? And, how else are you going to get "substructure upon substructure of causal information connections, which in turn form architectures within architectures within architectures, nested at numerous levels of granularity, each having a complex relationship with the others both within and between layers of granularity"? Only "thing" other than via something like I propose, would be : BY MIRACLE. It is really time we "get real" ! (And as Thorisson has said: "the fundamental principles of an AGI must be addressed holistically" -- this is another characteristic my perspective on the human [developing] conforms with.)

And, by the way, if psychologists cannot or do not do the foundational work you need: It is not necessarily terribly or especially difficult to find and work with someone who can. To get an idea of what's needed, see:

https://www.researchgate.net/post/Are_Embodiment_Theories_Enactment_Theories_1_PIECE_OF_RESEARCH_away_from_becoming_trivialized_we_all_no_longer_doomed_to_poor_evidence?

P.P.S. This also approach/research I recommend (quite interestingly) is a way to "see beyond ourselves" (what we can usually see) -- isn't that what we would like to do? Even if psychologists cannot see this, AI people may see that doing such things could get a long way fast.

I agree with the following quote byThorisson (but do not find using the word "complicated" helpful [(let's be optimistic !))]: "architecture must have built-in ways to compare its own status between days, [etc].... might involve pattern matching of large parts of the realtime mind, that is, the part of the mind that controls the creature from moment to moment at different points in time. For a large, heterogeneous architecture such architecture-scale pattern matching can get quite complicated. But it is unlikely that we will ever build highly intelligent artificial systems without it." Look for congruity or consistency with what I say must be "looked-for" and discovered: can you see a similar role "in the system" -- OR AT LEAST A KEY PART IF IT (for real, really). That context in which the new emerges and the new becomes established may surely be complex, though [(YET not a "complex" you imagined OR imagine (as a whole anyway), but a complex you will have evidence of from substantial longitudinal developmental research (if that's done))].

My perspective is also in-line with Thorisson's proposal for good AI architectures : "same small set of basic principles can be used throughout to construct every function of a cognitive system".

Dear Kristinn R. Thórisson and his followers:

Want to see the SPECIFICS: See my Comment under:

Chapter A New Constructivist AI: From Manual Methods to Self-Constru...

WAIT : Let me quote what is said in that Comment:

I can tell you that getting an answer to how to achieve 4 out of your 5 or 6 new characteristics needed by your proposed constructivist approach (and by AGI) is NOT difficult. It just requires that you are able to believe that developmental psychology still needs some foundational work (foundation work which finally provides SPECIFICATION of Piaget's EQUILIBRATION type 2 **, which he only said is "due to maturation"). And:

Once you can acknowledge this (above), can you accept an answer that puts behavioral patterns (new to be discovered, with new technology) in essentially a biological-type perspective? [(Of course you can !!)]

HERE, Professor Thorisson, ARE YOUR "SEEDS" !! -- ALL HERE IN THE MAIN QUESTION ABOVE (to which this is an "Answer") AND THE LINKED-TO PAPER.)

** FOOTNOTE: Also see the following Q and A, to avoid going a DISTINCTLY INCORRECT DIRECTION:

https://www.researchgate.net/post/Do_you_know_why_Piaget_himself_would_NOT_approve_of_Sensorimotor_Contingency_Theories?

and see my other Questions (with Answers) about "Embodiment" 'Theory' -- something basically in the PLACE OF filling out Piaget's view; and its peer-reviewed in published work as hopelessly ill-founded and offering little (or nothing) (yet this is where some cognitive psychologists WOULD direct you; AND, I have already seen the idea of "embodied" thought in some major artificial intelligence essays, so this advice I am giving you comes none too soon).

Will intelligent robots have imagination and if so what kinds of thing will they imagine and why?

Are "Embodiment" 'Theories' & "Enactment" 'Theories' 1 PIECE OF RESEARCH away from becoming trivialized & we all no longer doomed to poor 'evidence'?

Normally, in psychology, one piece of research never means much; but hypothetically it could. If someone could show in one clear research project (with eye-tracking technology and computer-assisted analysis software) a single clear set of perceptual "shifts" (or perceptual/attentional "shifts") clearly related to a patterning in subtle overt behaviors AND extremely reliably related to qualitative changes in learning (those, related to conceptual

development, developments in understanding) THEN there would no longer be a need to find everything "embodied" -- as prescribed by "Embodiment" 'Theories', those all based on no good evidence and ONLY on pure unfounded analogy to happenings in Piaget's Sensori-Motor Period.

If someone would (could, shedding baseless long-standing 'assumptions', which are actually just beliefs or presumptions, in the role of assumptions) AND realize that basic perceiving (basic perceptual processing) may change regularly in BIG ways in "stages" with ontogeny (child development) THEN this research could be done, with the results I indicated in the Question.

And, more specifically, what this implies (and why conventional 'thinkers' with their 'assumptions' cannot even conceive of it) IS:

that you can believe (as I see likely and biologically consistent) that truly basic perception can change in such big ways, meaning that there can be NEW innate guidance TO (innate 'action' patterns IN) patterns of perceiving, and that they have NOW-directly-observable, measurable manifestations in OVERT, though subtle, behavior patterning (NOW discoverable/verifiable with new technology, as indicated above). THAT IS THE "TICKET" for the kind of advance over the "embodiment/enactment" 'theories' indicated in the Question. (The "embodiment" (aka "enactment") 'theories' have, and always will have only poor indirect evidence, AND have been completely negatively reviewed (in PUBLISHED WORK) by peer-psychologists to be essentially useless and destined to continue to be hopelessly ill-founded and useless.)

Here is a paper, clearly indicating how perceptual "shifts" could be true (and showing with certainty how classic psychology theories are "messed up", based on pseudo-assumptions)(the paper from 32 years ago does the best possible, then -- BUT NOT THE BEST POSSIBLE _NOW_): SEE:

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

[Try to picture YOURSELF in Olso; have sense, good thinking, courage, and hope]

P.S. To those who might care: There may be money in the research, if good discoveries are made: Can you imagine the impact on real artificial intelligence?

Also see:

[https://www.researchgate.net/post/Do_you_know_why_Piaget_himself_would_NOT_approve_of_Sensorimot or Contingency Theories?](https://www.researchgate.net/post/Do_you_know_why_Piaget_himself_would_NOT_approve_of_Sensorimotor_Contingency_Theories?)

How can those who come up with "complete models" of what they want to understand SHOW that their process was valid, given what we know about memory?

BIG OVERALL QUESTION: How would one outline the steps in their building of a model that at all points was consistent with what we know about memory? : IN PARTICULAR, I am talking about the limited capacities of the various memories, no matter how sophisticated the "chunks" are or how sophisticated the contextualization of the episodic buffer and working memory can be: THERE STILL HAVE TO BE DEFENSIBLE "CHUNKS" -- which can

be deliberately and clearly understood (or at least somehow particularly attended to), WITH NO JUMPS IN THE PROCESS OF DEVELOPING A MODEL BEING TOO BIG. (This may seem like an unanswerable question, but in arguable terms, and at least with arguably decent rough characteristics, we could show likely compliance with findings on and principles of memory. BUT IN THE MAIN: NO ONE even TRIES in Psychology -- violating some of the strongest, consistent, long-standing, replicable empirical findings in all of psychology (on the Memories). Stop pretending the inadequacies are necessary; try to stop "steeping yourselves" in inadequacy.)

This is why I totally hate MODELS; they are allowed to involve some incredible "cleverness" of those who develop them, the BIG QUESTION is never asked (seemingly, or at least it is not asked well), and the "clever" never feel the need to question themselves (nor are they required to): the huge "match" of features they PRETEND IS CLEAR; this leads to both ridiculous 'theories' in psychology -- and great fragmentation; this clearly is a (THE?) major problem in psychology. (Though there are several who awe us with their "cleverness" -- and apparent detailed 'thought' (e.g. like "by analogy" or borrowing a full model from another field. LOL).)

By the way, in other sciences the BIG QUESTION _can_ be answered, because at each critical (conceptual change) point, ONE CAN ACTUALLY ASK?: what's your direct observable replicable evidence. AND, IN ANY GOOD SCIENCE, these questions INDEED CAN BE, AND ARE, ANSWERED (there are citable empirical directly observable reliable reasonable PROXIMATE causes for all, at each step). Psychologists, pay attention: that is what real science is like. STUDENTS, beware: You cannot continue to accept "the basic research is still being done" and "this is a complicated topic" FOR DECADES -- you settling for what may very much in crucial ways be complete B.S.. (Too much use of the word "complex" or "complicated" very often indicates confusion -- not anything like deep knowledge, which you still wait to understand.)

I propose a way to approach understanding cognitive development that, as clearly outlined, DOES (and will, at each step) allow for some key directly observable proximate causes "FOR EVERYTHING". It is a good process, and TOTALLY IN-LINE WITH what we know about the Memories (demonstrably, at each step -- no matter how a reasonable questioner "divides" things [(concepts, explanations)] UP). See:

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

It is clearly a core cognitive-developmental approach with as much direct empirical foundation imaginable. Take it, or use your "models" -- and stagnate, with PSYCHOLOGY AS AN INFANT "SCIENCE" (at best).

[I also listed this post under the topic, Artificial Intelligence, because THEY need to know where/what psychology really is !]

The new technologies (eye-tracking and computer-assisted analysis) which most probably will be necessary to verify hypotheses formulated from my accounts (and which are also, to a great extent: the accounts in major classic developmental theories) of the major systematic species-typical, cognitive and behavioral/emotional consequences of some key developments _AND_ accepting my perspective's plausible characterization OF the key phenomenon (perceptual or perceptual/attentional "shifts") behind/involved as key causes for the learning leading to the cognitive bases behind those consequences (all THAT ultimately yielding the specific hypotheses - beginning, though, with findings on the "shifts"). It will all be a well justified approach (and always with changes in the account of behavior patterns developing and the understanding of that developing, BASED

clearly very much on what has been SEEN or is clearly practically observable).

These are phenomenon which will be well-BASED and, FOR THE FIRST TIME BASED ON PHENOMENON (directly, reliably-seen, overt BEHAVIORAL PHENOMENON with excellent, specific inter-rater agreements) WHICH ARE NOT CAPABLE OF BEING SEEN, WITH ORDINARY UNASSISTED SIGHT TODAY, BUT which NOW MAY BE SEEN (actually SEEN) with the new technologies. In short, the new technologies may well represent something like the invention of the microscope for other sciences (of course, especially including biology -- of which behavior patterns should be seen as a subset). Something like this, looking to see that which may be well be THERE and very important and NOW can be seen, could provide great progress for the field, and just in these MAJOR SORT OF STEPS, integrally involving these new sort of observations, fill in a lot of empirical holes.

These very findings may also be foundational for the creation of real artificial intelligence, AGI -- making what they are simulating in a real sense for the first time NOT MODELS, but now including more aspects of real-time now-observable and primary, central phenomenon (behavior patterns) as some of the major essential "ingredients" driving the development of many major other important behaviors (all in empirically-grounded, concrete terms, and thus certainly, in acceptable and practical ways, able to be simulated).

Isn't it sensible and reasonable to believe that any good theory for AI would be absolutely dependent on good theory in cognitive psychology?

Quoting Pei Wang in the 2012 masterwork Theoretical Foundations of Artificial General Intelligence: On a theory of real artificial intelligence:

"... still a small number of AI researchers who believe that such a theory is possible, and worthwhile to be investigated. The best known work in this direction is the "Unified Theories of Cognition" by Newell [31], in which he argued for the necessity for AI and cognitive science to have unified theories, and proposed his theory, which attempts to cover both AI and human intelligence."

This supports my point: It is sensible and reasonable to believe that any good theory for AI would be absolutely dependent on good theory in cognitive psychology.

Fortunately, I can offer you some sign of for advancement in the science of cognitive psychology:

https://www.researchgate.net/post/Have_things_having_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_may_be_used_for_investigation_of_important_observational_specifics?

I would argue that 4 out of the 5 or 6 requirements for a good AI (AGI) as formulated by Thorisson, are satisfied

by doing research (and succeeding) using this perspective. Moreover, I submit: that psychology is not so sophisticated that an AI team could not educate a team member to get all the background needed from psychology and do this research. Then perhaps your team can develop even greater AI.

For more details, see the RELATED PROJECT: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

If you can't sense a Biological nature in your conceptualization of cognitive-developmental psychology, could your conceptualization be correct?

I would say: no. I have found that it is possible to "feel" (on a good basis) such a "match". And since behavior patterns and behavioral development through ontogeny IS biological, your conceptualization of cognitive-developmental psychology -- as it actually occurs/unfolds -- should have some characteristics of biological things, AS THEY develop and adapt.

[For example: Regarding key functioning moving development "forward": one should see definable types of behavior patterns which are supports-for, KEY behavior patterns "behind", AND those that are "forerunners of/for" elaborations, integration, and consolidation AND these should have a definable regularity, characteristic of a biological adaptation process. (I try to show the way with the "A Human Ethogram ...", using all the terminology of classical ethology (the BIOLOGY of behavior) AS INTENDED (as defined). (Click my name to get to my Profile and see this paper under Featured Research, Research Items -- and also see the "Human Ethology and Development (Ethogram Theory)" Project, under Current Research, Projects -- just start by noting this Project's description.))]

Do modern developmental psychology theories (& others) reflect the possible richness of the 'environment' OR the rich behavioral response patterns?

Do modern developmental psychology theories reflect the possible richness of the 'environment' OR the rich, often subtle, behavioral response patterns?

[I have 'environment' in quotes because this is, of course, the present physical environment AND also how that is richly contextualized by our Memories -- the latter being as much part of the environment.]

My answer to the question is: "No." And the reason is simple: The first task of a science is to properly embrace (and represent) ALL of the relevant phenomenology it addresses. Modern psychology theories all clearly fail at this, and especially theories of child development (ontogeny) -- which is a main core of the failings of the other theories (e.g. personality theories, learning theories, etc., etc.).

[Example of the Problems: In my view: When we start to really come to know 'learning', we no doubt will know it is actually 'learnings' (qualitatively different at each level/stage). With this knowledge we will come to see that IN THIS INFANT SCIENCE OF PSYCHOLOGY WE MOST OFTEN (IN THE MAIN) DO NOT EVEN KNOW WHAT WE ARE TALKING ABOUT WHEN WE SPEAK IN TERMS OF "LEARNING".]

The main reason for the major failure is: inability to properly represent covert behavior ("cognition") AND provide ANY sufficient (or ANY) good empirical foundation for it (really!!) -- in my view, no doubt these are high-related matters. Basically in today's theories, even the neo-Piagetian theories, major qualitative changes "JUST HAPPEN" -- in Piaget's theory these are the major stage changes Piaget never explained and just basically said are "due to maturation" (aka equilibration type 2) (and that's all). He, like others then and now, then looked for elaborate WAYS of thought-processing (largely "in itself") which (supposedly) yield the full range of human processing and analysis abilities (representation, thinking, and understanding). Such accounts are of "things" VERY, VERY unlikely OR impossible, given the good knowledge we have of the Memories and given the universality of cognitive abilities. But, just as important: these accounts are UNINTELLIGIBLE, because of a lack of key-point directly observable proximate causes (<-- this, at the very crux of it, IS EMPIRICISM). Without empirical foundation there is no way we all understand things in the same way AND certainly NO ONE really understands covert behavior which develops no matter how great their intuition. (Our thoughts on cognitive behaviors are both highly individual and "free-floating".) One clue to how psychology is an INFANT SCIENCE is the rare, truly meaningful, citing of BEHAVIOR PATTERNS; we still most often speak in terms just of "behaviors", though supposed SETS and/or TYPES of these. (If one appreciates biology at all, one knows that everywhere there are actual BEHAVIOR PATTERNS involved.)

We have new modern technological tools AND IT IS TIME PSYCHOLOGY START AGAIN. SEE:

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

P.S. Psychology theorists and researcherS are basically HOPELESS in their appraisal of their OWN FIELD, think that we have to settle for the ways we do things because that is the only possibility. AND, THIS, IS SUPPOSED TO BE A SCIENCE??!!

[If you don't have better ideas than I present, you must look at "A Human Ethogram ... " . AND: Today, the sort of hypotheses this paper describes and prescribes ARE POSSIBLE TO INVESTIGATE (i.e. test/verify) (with new eye-tracking technology, etc.). Come on, babies, GO FOR IT. Let's begin the science anew.]

(One should interpret silence to the view, just expressed, as agreement.)

Dear

The richness of the environment-and-behavior I was talking about is the FULL relevant phenomenology which must be included in a true and thorough science of psychology. I believe (as I must) that some of this phenomenon, now neglected, includes key foundational empirical things (for example: the behavioral-and-environmental context needed in searching for the empirical foundations of developmental levels/stages). We have some strong clues that psychology is falling short from the lack of a biologically-congruent vocabulary, for example (again): NOT seeing, and NOT speaking in terms of, BEHAVIOR PATTERNS.

In short, I am not talking about much that is very specialized, but rather, "looking large".

I do not think in terms of a researcher providing what she/he thinks is "enrichment", even if successful results in some sense are obtained (e.g. $p < .05$). My perspective eschews the researcher (or theorist) themselves DEFINING ANYTHING (that closes the door for much more open discovery extremely quickly) -- as much as I would not like a biologist defining a cell (or its functioning) in ways that are clearly and simply merely based on what she/he is imagining; the Subject matter should force any definition and if that is not happening, then you are not doing science correctly (which is really putting it very mildly, since the words/phrases, irrational and lacking empiricism come to mind). I do not consider this an opinion, but a many-times established FACT. (The history of pseudo-science and science is replete with FAILURES due to operating mainly on one's own "theory". I am confident that in future history, this is the way the vast majority of what has been considered 'psychology' will be 'seen' and remembered -- and, actually, typically, EVEN NOW it would be impossible to indicate otherwise.)

Step 1: Admit the Answer to the Question: Can species-typical qualitative changes in learning (w/ ontogeny) be related to ANYTHING of the individual?

Can species-typical qualitative changes in learning (with ontogeny) be related to ANYTHING (distinct and directly observable in the environment and in the response) of the individual human?

If "NO", that leaves a very big open question, doesn't it? [(Please, don't think "no".)]

Is saying 'No', above, "OK"? [(Please, don't think "yes".)]

This is a basic question behind MANY other major, key questions (and this is just one class of ramifications which makes the question important), so it's not OK not to have an answer.

Is it "OK" just to make-up (or work-to-"find" and indicate statistically) basically very tangential or just-supposed and UN-clearly associated/related "behavior/response", "'behavior'-and-'response'" not ever clearly of/in the functioning OF the individual human, nor even CLEARLY related to anything (directly observable) there? AND, _then_ call those 'explanations' for major behaviors, and indicate that it is just THOSE all those interested in psychology should attend to, deliberate on, and try to "study" further?

[(Please, don't think "yes", "yes".)]

IN ANY CASE: The only "therapy" I can recommend is the ENTIRE BOOK on this topic which I, in effect, wrote here in Qs and As (I gave -- about 400 essays), all here on researchgate in the last 11 months. Psychology theorists, recognizing you have a problem, read all that and see if the direct answer you end up finding there (and which is otherwise consistently and in many ways justified by the REST of the perspective) helps -- OR if it "triggers" in you another direct answer, with an empirical way to establish that answer: based on directly

observable overt behaviors (responses) shown by an individual human AND (at the same time) aspects of the environment (some directly relevant, clearly observable parts/aspects of that organism's current environment) -
- that the individual human is THERE directly responding to. (In short, in other words, provide an outline for YOUR answer of a way to answer it empirically in the science of behavior, aka "psychology" -- completely empirical, at the very core (completely, as just described), and involving and requiring, for each and any significant increment of behavior change observed or inferred, overt behavior patterns and aspects-of-the-environment ONLY.

Have Technologies, in the role of a MICROSCOPE for psychology, been developed, which can now be used to investigate important observational specifics?

There was an attempt to previously pose this important Question, but the writing needed editing and clarification, plus many ancillary remarks/extensions. The Question hopefully has been well put HERE, and some needed postscripts provided in this same post as well.

The Question:

Have technologies, with the importance of, AND essentially the role of, a MICROSCOPE been developed which could be used for the parsing out and investigation of very specific, likely important, particular, directly observable behavior patterns? (This post will be about the nature of such things which may be seen only with eye-tracking and related technologies.)

I am talking about NEW directly observable, NEWLY reliably-seen subtle but OVERT behaviors -- see-able by using the new technology BUT OTHERWISE NOT NORMALLY OR RELIABLY SEEN, and thus not yet expressly any key part of any key theory, BUT likely destined to become THAT. I think we now have technology capable of allowing us to do that : eye-tracking technology (perhaps with computer-assisted analysis). AND, of course, ALL THIS good use of the new technologies, roughly described, HAS YET TO BE DONE.

I have a some imagination for the nature of SUCH NEW-TO-BE FOUND AND SEEN BEHAVIOR PATTERNS, termed "perceptual shifts" in "A Human Ethogram ...", and having the ROLE THEY ARE HYPOTHESIZED TO HAVE THERE at the inception of major cognitive-developmental changes. This involves coming to literally see what normally is NOT parsed out or ever clearly seen, by either researchers or the developing organism (as a clear set of things ATTENDED TO, or to attend to) during key points in ontogeny, BUT STILL are manifested in OVERT AND SEE-ABLE BEHAVIOR, right THERE at key points, QUITE POSSIBLY IN THAT ROLE hypothesized, DIRECTING ATTENTION(S) (I will call these "attentions noticed", though they are not in any conventional sense noticed -- they simple DIRECT attentions). There are, of course, both those "attentions noticed", the nature of which was just indicated, and attentions "conventionally noticed". AND yet those not so-expressly noticed (the former), though not part of deliberate attention, in any sense, are THERE consistently affecting the direction of behavior, including eye gaze -- and which soon come to affect attention. AND these, due to the perceptual "shifts", reliably see-able and possibly reliably SEEN in specific-typical ways, are likely having important species-typical roles in developing "HIGHER ORDER" LEARNING AND that YIELDING HIGHER ORDER REPRESENTATIONS (including "abstractions"), providing for further "higher order" OVERT species-typical OVERT behaviors. (It is also noteworthy that having

such as these "shifts" are the only way to have a empirical foundation for qualitative changes in learnings -- otherwise developmental psychology, in an essential way, LACKS an empirical foundation.) (It may also be becoming clear to you why the term "PERCEPTUAL shifts" rather than a later-used term, "perceptual/attentional shifts", is the greatly preferred way to refer to the "shifts", i.e. the terminology without the "attentional" part -- and that is clear in "A Human Ethogram ...", where "perceptual shifts" is always or almost always the terminology used.)

IN ADDITION: It can be clearly shown how major classic psychology developmental (personality) theories are clearly seriously flawed YET ALL OF THEM, AND JUST THEM, still the only ones always found in General Psychology and Developmental Psychology and Cognitive Psychology textbooks. YET, in fact, they can clearly be shown to involve inappropriate ways of developing 'assumptions' AND that these assumptions (and other even more basic 'assumptions' held) are unfounded and baseless and unjustified _AND_ have better-founded, better-justified ALTERNATIVES (consistent with biological principles).

Plus (in the main "Ethogram" paper), a related alternative/resultant approach to studying development (AND using this new, newly observable, data on behavior patterns) prescribes a way to see the development of cognitive and cognitively-related behavior patterns ALWAYS GROUNDED (at least the inception of ALL central key behaviors) IN reliable, direct-observable, concrete behaviors BY DESIGN (by biology), and it correctly applies and uses the full terminology of classic ethology.

For the basic perspective and for one outlook on pseudo-assumptionism see "A Human Ethogram ...:

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

For explication of THE false, even more BASIC, unfounded 'assumptions' held (and at the very base of modern psychology theory, and which are behind the other aspects of the seriously flawed classic and current explanations given --as described in "A Human Ethogram ..") AND for an explication of the better alternatives: see a lot of my essays in Questions asked and Answers given, here on researchgate (start at my Profile, click Contributions, and then finally click Questions and click Answers). Start here: Brad Jesness

ALL OF THIS, IN CERTAIN MAJOR WAYS, PROVIDES FOR REAL ARTIFICIAL INTELLIGENCE and remarks pertaining to that are in the "Answer", directly below this "Question".

P.S. Each of the perceptual shifts are likely not applied to a single context:

These are OVERT DIRECTLY-OBSERVABLE phenomenology, related to the INCEPTION OF new ways of perceiving (new THINGS OF PERCEPTION), RESULTING in coming to ATTEND to NEW patterns (or key parts of patterns); AND, from such new "outlooks", then comes: new ways of learning and then new ways of thinking/acting. This PHENOMENOLOGY is what must be discovered:

All this, BEGINNING WITH THE EMERGENCE OF PERCEPTUAL "SHIFTS", periodically occurring DURING THE COURSE OF ONTOGENY (child development), would likely be impossible to guess BUT MUST BE DISCOVERED. BUT THEN, ALSO: The range of application of such shifts (or types of shifts) and what range/sets of new learning possibilities are associated with _EACH_ SUCH _INSTANCE_ of qualitative change (i.e. with EACH of the "perceptual shifts" during development) are not known. So, these are additional details, which must also be

discovered.

Another P..S.

I also want to address possible limitations you may imagine if major behavior pattern changes are directed in a major/main way by perceptual shifts. In fact, I would like to describe qualitatively the nature of some of the broad phenomenological change possibilities which may exist with perceptual shifts as a first major proximate cause of new behaviors (covert and overt). In fact, this description of possibilities seems to me to provide the needed "openness" and great behavior change variability (providing for different results) of various relations-to-the-environment that is allowed-for WITH having perceptual shifts in such a prominent role.

How can experiences with what MUST BE CONSIDERED the main operational environments, experiences in such an environment of the human, be imagined to change (and yet stay the same in some ways)? [By operational environments, I mean environments that are acted in, however subtly (as subtle as eye gaze patterns), and providing for any significant behavioral changes (in the broadest sense: including any significant memory changes and other covert and/or overt behavioral changes).]

Such "operational" environments must include, because of continued effects (behavioral changes), any changes that can result from and, in the same environment which was "operated in" BEFORE, and that is "operational" AGAIN with any noteworthy significant instance of interaction providing for change: properly INCLUDING relevant MEMORY and cognitions, with aspects of those or/and of what is classically considered overt behavior strengthening/weakening OR CHANGING. AND, YET also, very importantly: meaningfully-the-same environment may be adaptively and essentially newly INTERACTED WITH over again (but now IN NEW WAYS), at each stage/level, for each key conceptual/relational new understandings which are to result. We would like to think that there WILL continue to BE relevant "CONSTANT ASPECTS" (AMONG relatively constant effective factors _OR_ yet-present contextual factors at all points related to development) which make an environment (some environments) "the same one" -- and this may to a notable extent be true. Of course, the relatively constant aspects WHICH ACTUALLY ARE IMPORTANT AND EFFECTIVE in and for change will not remain precisely the same going from stage to stage; and, conceivably these may well not remain the same at all (as far as the ones active for new overt or covert behavioral change, changing Memories included).

Thus, from the perspective of the operational environment, the idea: "there WILL BE "CONSTANT ASPECTS" which make an environment "the same one", certainly need not be true (and may effectively not be true), nor anything close to the "whole story". The important environmental behavioral aspects, including the relative "constants", may accrue with development AND not only "constants-THERE (present)" may change that way but key new subsets of experience may need to be defined/found (by the organism -- and discovered and seen by researchers) AND some new aspects included, while some 'old' ones excluded -- at least as far as being operational-for-change is concerned. As reliable internal representations develop, it is even conceivable (again) that there is effectively a completely new operational set of relative "constants" of that level/stage. So, with ontogeny unfolding, in types of circumstances/situations it is perhaps best to consider the possibility that the previous significant actual [relative] constants THEN may have very little -- and perhaps even nothing -- of the same nature, NOW: This is comparing that which in past instances (interactions) gave rise to previous behavior pattern change with what is happening presently with and in current behavior patterns CHANGE/CHANGING. (And, similarly for the present new learnings and "insights", compared with earlier conceptualizations/overt

behavior patterns developed).

[Yet, something(s) might well impel us to continue to consider it a very similar environmental setting, to one earlier, perhaps very rightfully: somethings PRESENT, having to do with developments which have occurred and stabilized earlier but no longer be involved in significant species-typical behavior pattern change/development, may well BE THERE -- and in a role of providing a CONTEXT for new behavioral developments. Such could well, if conceptually "enough" and limiting nothing to-be-seen, provide for validly defining AN environment of learnings and development.]

NOW: in addition to the examples of some various natures of changing experiential circumstances (described above), there will be NEW [relative] CONSTANTS cross-environments -- considering, of course, the varying/changing/developing Memories-possible -- and that will be there with each new stage/level of cognitive development.

All these qualitatively described phenomenon, in the paragraphs above, STILL could very well have very much (and most) to do with the when/where/what of what I call perceptual shifts. Nothing more than a systematic series of perceptual shifts could still produce all I just described and this may be the most efficient, effective-yet-open mechanism for good adaptation to the environments the organism finds itself in (thus, something again, making the perceptual shifts with major roles likely). [It may well be that only perceptual shifts provide the openness and variability of responses needed for individual adaptation.]

Postscripts addressing possibilities for artificial intelligence:

What about this perspective for AI, without doing the eye-tracking research and getting and establishing some psychological findings:

A possibility (though I see this as very unlikely -- because it would take great insight) is: IF someone could guess a [set of] somethings that is perceived/remembered (and may well also be processed to some extent via working memory and possible contextualization contents there), before becoming [part of] an "object" of attention or even an attentional bias. And, if this beginning-with feature(s)-detection/selection (however it goes), influencing what WILL be attended to, has the result of yielding an appropriate SET of attentional sets which then appropriately and in a GENERAL cross-situational way YIELD correct associative learnings (aka "higher"-level learnings or "abstract learnings"), "whatever" the domain (at least to an extent) OR across-domains (at least to an extent) _THEN_ you would have simulated something in a role similar to my hypothesized "perceptual shifts". If this worked-well for functionality (as compared to other solutions), it would be a type of proof of concept, and perhaps it could be refined to be usable in real AI.

The guessing of somethings that are perceived (in such perceptual shifts) which guides attention and eventually yields a significant part of what is attended to would VERY much depend on FIRST "bringing forward" all the appropriate relevant situational Memories (of all sorts) before the "perceptual shift" itself: this is to have the correct and full real "seen-and-understood" situation-at-hand ** for any developments and eventual shifts in deliberate attention, and new learnings (<-- NOTE: it is conceivable some of the new learnings would precede eventual shifts in deliberate attention, so the ORDER of things, in the statement before THIS statement in-

parentheses, is not at all firm) .

**** FOOTNOTE: THERE MAY BE A SEQUENCE OF PROCESSING VIA CHANGING CONTENTS OF WORKING MEMORY** (contextualizations), ALL before the attentional biases produced actually result in processed-attention (aka deliberate attention)(some 'biasing' maybe preceding and some maybe following the full/true "perceptual shift") -- THERE ARE A LOT OF POSSIBILITIES which, if indeed possible, can be considered. (Of course regarding what makes such things possible: If there is such a sequence of processing before true attention, it will still have to be based on clear directly observable things (sets of things or things-with-establish thought) in the organism's/robot's past actual experience.)

[Regarding the portion of the statement, "some 'biasing' may be preceding and some may be following the full/true "perceptual shift"" : Of course a big part of what this "preceding or following" matter depends on it WHAT IS ACTUALLY _THERE_ TO BE PERCEIVED (specifically, what aspects of the real current environment are available AND COULD BE as-considered in a context (or resultant context): NEW.]

[The number and complexity of covert-processing sequences is greatly limited by the limited ("chunk") capacity of working memory -- so there is no infinite regression OR anything like that possible. That which is already established in memory, in contrast, is often a "BIG deal".]

The other AI postscript:

A more optimistic view for possible true AI progress:

I do make the idea of trying true AI (AGI) without psychological science findings seem hopeless, above. BUT: You do have a way to simulate key things (Memories) and establish MANY basic possibilities and test them quickly; plus maybe there is some way to 'see' various dimensions of possibilities (on which to systematically vary "values") regarding each of the established Memories (and eventually, in-combinations) -- all the facilities/faculties -- and also (at the same time) involving clear environmental aspects (systematically available and systematically found/seen/"accrued", even if in some same environment) -- AND including much cross-circumstance/ cross-memory 'sets' (giving real needed context). The various possibilities proposed ("values" set) might somehow be tried (and those and others systematically tried, and then also in reasonable combinations). This could answer major questions about whether it is "here" or "there" major changes need to occur (and establish some at-least a qualitative idea of reasonable "values"). [CAPACITY of working memory for "chunks" is the fortunate "bottleneck"/ limiter; possibilities may be many, but not infinite (with given 'experiences').]

Using decently well-defined dimensions seems like a challenge, but you can fully know the " 'grist' for the mill" (capacities and facilities provided and environmental-circumstance-aspects provided and responses you've enabled) and sensibly sequence 'experience' (with feedback (response) from your robot system) using the memories and abilities established . With good knowledge of all the possibly-involved Memories (their specific natures, and using that) and correspondingly envisioning (and trying) a series of environmental contexts and experiences "recorded" starting from KEY existing aspects (then systematically sequenced and "recorded" via working memory IN the Memories) perhaps you would have at least "enough" to 'see' something informative.

Reflections on the organismic context of perceptual shifts:

I, myself, still cannot really even guess at what specific concrete aspects of the environment might direct attention for the inception of a new "level" of thinking. (I have indicated their species-typical RESULTS in my larger papers (Research Items).) I do have a tendency to imagine that perceptual shifts have to do with some "gap" ** noticed by the organism between rich representations of important circumstances/situations: THEN, I imagine, when something "comes up" as a new aspect of a current environment that may fill the gap then it is 'seen' ('noticed' -- in the sense of "attentions noticed" in the Question beginning this thread).

The good thing about the "gaps" idea is it does expressly indicate a relationship between present representations and understanding and the new aspect(s) eventually yielding further understanding. There are gaze pauses likely in each context, both the known but incomplete, and the new where more is to be 'seen'. TO COORDINATE the represented/known/understood with the good-to-'see' new representables/knowables in the present environment is good -- this keeps the process very much like a biological thing should be. [This is as close as a "knowing before found" could reasonably be -- I think much more reasonable than what you find in current popular theories that are like that.] Also, you have more clues as to what the perceptual shifts will be, because of what-is-an-'issue' BEFORE a perceptual shift; potentially each may be equally 'seeable' with eye-tracking technology. Plus you have a pattern to look for : a "this" before "that".

FOR AI: Realistically representing the nature of key visual-spacial memories seems to me to be the main challenge and biggest challenge (the other knowledge and skill factors OF long-term memory are, of course involved, BUT those may be the easy parts). The other challenge is defining BUT NOT LIMITING the episodic buffer -- what is the "frame", what is the contextualization THEN yielding some of the "chunks" worked on in working memory?

Given our adaptive nature, the way all BIG qualitative changes in thinking occur ABOUT the same time may be related to TRUE analogies -- the same pattern for advancement repeated for developments in different domains. [I normally eschew analogies, but the idea of 'seeing' or looking for similar patterns (somehow) may be adaptive.]

** FOOTNOTE: an example of a 'gap' would be noticing differential responses to individuals in a social hierarchy, where the immature organism has not yet come to an understanding of the full nature of the bases of status. (It is from such things, that were the likely evolutionary precursors to 'abstract thought' -- AND involve some abstract thought themselves -- that we have the cognitive abilities we do).

As important as perceptual shifts may be, the empirical/biological/behavioral/assumptions CONTEXT and JUSTIFICATION of such a view would be just as important or more so. Readers can find the justifications for this "shifts" perspective, with respect to all 4 of those major types of considerations (just noted), in my main paper and in the many, many other essays I have written here, under Questions (I asked) and Answers (I've given). [(On my Profile page, find my Research Item, "A Human Ethogram ... ", and read that; also: click Contributions, and then click Questions, and Answers: You will find an entire LARGE book on the better justification and advantages of the perspective: for empiricism; with biologically-congruent explanations; having explanations in terms of behavior patterns (and environmental aspects) -- JUST those -- providing complete explanations (as psychology was intended); _AND_ ALL associated with well-justified assumptions.) Readers will also see the

huge short-comings of other classic and current theories, in each of the 4 big areas, "spelled out". The FULL CASE, argued and detailed.]

Do Analytical Philosophers basically just "fine-tune" concepts AFTER a major view has been accepted/adopted by psychology researchers/theorists?

I am wondering: Do Analytical Philosophers basically just "fine-tune" concepts AFTER a major view has been accepted/adopted by psychology researchers/theorists?

Do Analytical Philosophers ever analyze a whole psychology thought-system BEFORE it has been adopted? IF SO, YOU ARE INVITED TO ANALYZE MINE **. Do Analytical Philosophers ever contribute in such major ways to psychology?

Many posts are about philosophy contributing to science. I would like to know the details, beginning with the answers to the 2 major (related) questions, above.

** FOOTNOTE: If you are "game" to analyze my system, you may begin at:

https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics

The attitude of a philosopher seems to be to readily go off into thoughts and the analyses of them per se. I would submit this is not science, nor particularly productive (I would submit that one would immediately have some tacit/covert pet-concept skews (or hidden "axes to grind") -- and maybe some of these not even known to the philosopher him/herself -- by "virtue" of the nature of THAT "reflective" ACTIVITY ITSELF). I say: Stick very close to substance (concrete, directly observable), as much as possible. This is my outlook and

I believe that is demonstrably the outlook of science also.

A behavioral science perspective would have to be analyzed from the good of that outlook (and considering what is the known and/or the validly and reliably well-discovered nature of the Subject PLUS the recognition of necessarily applicable biological principles, when they are manifest in behavioral response patterns), with very little attention given to the relationship to any philosopher's ideas THAT generate (or to any thinker's ideas-based-response outlooks) in response. These 'things' (as they are apparently dealt with by most philosophers) are clearly NOT _of_ the Subject. BUT: Getting all understanding from the Subject is another foundation of science, widely agreed upon, and at least given "lip service" to, because it is recognized in science as THE focus (along with environmental factors).

It makes VERY little sense to me to "work on topics" (and then apparently go very broad). This seems to violate findings we have on memory and working memory, in particular, which is the basis of the opinion I gave in the second sentence of this 'Answer'-post. Doing what philosophers seem to mainly do may make sense to someone (and be of some good to someone), but is not of the nature of anything I understand as cores to science and is, in fact, lacking such foundations.

If one cannot achieve taking on exclusively the core foundational positions of science (and really nothing else), then trying to give any analysis of a good dedicated science approach to studying behavior (or anything else) will not be productive. In fact, if a philosopher cannot achieve this position, I would say there is very much something in analytic philosophy that would prohibit a practitioner (of that) from looking at a good science theory.

There may well be good science answers that cannot "break through" a philosopher's questions .

Is all the "meta" (metacognition, etc) "stuff", 'executive control', etc. and "embedded" & "enhanced" "stuff" driving all decent science people crazy?

They should be. They are poorly formulated, will never have any [even] clearly-related direct observable evidence (to me that's FATAL, in science of PSYCHOLOGY -- or any other science), and (conceptually) they are all clearly "red herrings" -- that will do more to derail and distract people from good science than well-inform OR provide for any continuing and continuous, progressive science (which is the nature of good science AND not "of" these ill-gotten concepts). They will not be of any great usefulness (even provisionally, or as "models"). In the long-run, they are destined to be only of VERY limited utility (of limited good [for people]) **, like "self-efficacy" (<-- or have we forgotten about that one already?). (They are like all versions of the homunculus (person-within-the-person).)

They just give limited researchers, in limited settings, who have no appreciation for foundational observational research (and inductive inference) -- and thus no appreciation for real science -- 'something' they can do (given all proscriptions of existing research and the dominance of their professors). A disgrace; and, ridiculous, if it were not so serious. It will take some people to STAND UP (but the cowards of psychology, lacking responsibility

and individual thinking will likely continue, perhaps forever -- there are no indications otherwise; they just make "hay" with the preconceptualizations (and presumptions) and related terms they already have).

There is nowadays a LOT of new and possible good investigations to do -- as my view and approach has indicated. (See my, "A Human Ethogram ...", for new types of well-founded (or clearly quite likely and up-front well-found-able) hypotheses that can NOW be explored.)

P.S. The "embedded" notions have already been peer-reviewed to be nearly worthless and with no prospects of becoming better -- so it's not "just me". SEE:

Article The poverty of embodied cognition

**** FOOTNOTE:** Unfortunately, this (and all that I have pointed out, above) is "ok" with the 'class' of psychology researchers and theorists we have had (and DO have) in psychology; they are "tools" of existing, repressive systems, that do not encourage any real individual thinking or advancement and achievement -- nor any sufficient self-assessment -- and promote NO real knowledge, of (or for) real science. These latter points are important ubiquitous flaws that can be seen across "issues"/problems in the field of psychology -- so much so that, unless you see no serious problems in psychology, you are likely able to see this assessment as correct (even if you personally "have gotten your head" where it doesn't belong).

Dear Kirk MacGregor

I appreciate your response. Some points of difference I have with you are that scientists are looking to have things more than rationally affirmed, but empirically shown (along with rationally affirmed) -- at least the foundational stuff and the other stuff must also be reliably demonstrated. Also: presuppositions are quite a problem unto themselves, if they have no empirical foundation bolstering them (or at their base) or if **THAT IS THE WAY** the supposed scientist **BEGINS** (and she/he is not just using presupposition to otherwise fill a "gap"). In distinct major sense, we must have no unidentified bases because such is necessary for empirical grounding (and science), that showing proven strong inter-rater reliabilities, with the occurrence of phenomenon itself . (So, it should be clear I am not talking about simply any well-argued or just-reasoned grounding, but scientifically shown grounding -- that, as just indicated.)

Does assuming the likelihood of cognitive stages make the empirical foundation of psychology (ontogeny) easier?

Does assuming the likelihood of cognitive stages make the empirical foundation of psychology (ontogeny) easier? [And, stages/levels of cognition ARE NOT based on anything UNLIKELY -- in FACTS, one can VERY WELL argue for the extreme likelihood of these stages/levels (and this has been argued for in several places in the readings cited below). Now, assuming this is established as a likelihood, what else must be made clear? (Some of what must be clear is "coming up", below.)]

FIRST, with respect to the answer to the Question: "Yes, VERY MUCH SO": Because, then, each stage must have

its inception (each one at a later point in development) _AND_ one must most-reasonably (on a most-excellent basis, congruent with necessarily applicable assumptions, and those ONLY) hypothesize the CONCRETE TERMS AS: actual, directly observable, overt behavior-patterns in-response-to equally clear (directly observable) environmental aspects. These MUST BE CITED, if one is an empiricist (AND, one IS an empiricist, if one is a scientist). And, hopefully, one can cite HOW these SUPPOSEDLY OBSERVABLE 'things' _ARE_ observable in a way that is now PRACTICAL (i.e. observable in actual practice, with tools-of-observation WE HAVE).

ALL THIS _CAN_ NOW BE DONE, TODAY !! The following paper provides a good part of the justification (of the nature described above) and indicates something of the NATURE of the hypotheses IN PERCEPTUAL-SHIFT TERMS: These perceptual shifts WILL have DIRECTLY observable MANIFESTATIONS (as was just said, and described) -- to empirically establish the organism ITSELF in/with its environment (as well as provide the scientist, the psychologist, with an empirical foundation for understanding -- from THAT concrete empirically-established point in development). Here's the paper to begin with: "A Human Ethogram ... " (

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

) And, then, for a full perspective and a large set of clear justifications (addressing all other major related assumptions and addressing many, many prominent issues in psychology today), see the Questions (asked) and Answers (given), under the profile, Brad Jesness , under Contributions, and finally, under Questions and under Answers.

After that reading: Do you understand? Can you see how it perhaps CAN now be done, with the new eye-tracking technology, etc.? Are there any better empirical investigations, for some major empirical foundations? (NOT likely, so we should try!)

If there is more that needs to be done, to start, that I can help with, then let me know. (Caution: I am old and tired AND in no sort of position to act, other than with the sort of direction I have already provided, i.e. I am retired and otherwise useless.)

P.S. For a most-likely guess to provide more on the likely nature of the perceptual shifts, see: [https://www.researchgate.net/post/Have Technologies in the role of a MICROSCOPE for psychology been developed which can now be used to investigate important observational specifics?](https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics?)

(It has been my hope to do the SORT of work those "steeped" in psychology DO NOT DO.)

ANSWERS TO QUESTIONS OTHER THAN MY OWN:

What is the best way of solving the problem of hypocrisy in religion?

If a religion has a correct understanding of itself (how it is being meaningfully expressed/interpreted), it

should ALSO tell you when you no longer need it. If it doesn't, it is already dishonest. In contrast, see: Buddhism **.

Even if you cannot 'see' "where you are" w/r to the behavior patterns, described and addressed, then it is dishonest. In contrast, see: Buddhism.

It is likely all would agree that dishonesty has a big relationship with hypocrisy, so not being dishonest may well be a major part of the answer.

[NOTE: I subscribe to only the rational and realistic (or possibly/likely realistic) parts of Buddhism; this leaves a LOT left, especially if you are reasonably open-minded. You can see my comprehensive summary of all the words of the historical Buddha (framed as just described) at :

<https://mynichecomp.com>.]

** FOOTNOTE: "If you meet the Buddha on the road, kill him."

Will intelligent robots have imagination and if so what kinds of thing will they imagine and why?

What is the difference between Rationalism & Empiricism, give your opinion ?

Dear

I will address your point from the standpoint of Psychology:

I agree with the last paragraph of your Question's statement. BUT (except):

" reducible to, sense perception " is too narrow. Ultimately reduced to: sense perception and attention AS directly observable proximate causes in behavioral change (along with some PRESENT environmental aspects, of course) -- THAT is what I would propose. This maintains some clear connection with good empirical investigations (and likely or possible findings), but is not overly restrictive considering what our visual-spatial, declarative, and procedural memories can "bring forward" -- which is INCLUDING the contextualization these memories do in the episodic buffer and for providing the basic context of working memory.

This perspective gives one a place to see where "rationalism" can come to be "seen" (even if ultimately mistakenly), yet this perspective seeks the directly observable UNTIL ALL behavioral pattern changes AT LEAST AT THEIR INCEPTION (<-- note this "caveat") have been seen and found to have both directly observable (though quite possible subtle) "starting" behavior patterns (including "simultaneously", WITHIN THEM, innate guidance) _AND_ corresponding clear observable aspects of the the PRESENT environment (at the time) DURING ONTOGENY.

In my view (as a strict empiricist in Psychology), this is as much empiricism as possible; BUT IS POSSIBLE and it is good strict (pure) empiricism. Thus, empiricism IS the basis for everything, including what you call "rationalism" -- the ultimate basis for nothing itself or at least nothing we can know.

The 'argument' that the "senses" are unreliable is taking a definition of "the senses" which includes the facile

and fickle (and the type of perception which is influence-able by us (humans)) -- this is not the BASIC sort (type) of perception, which has been shown to be something else and different; just stick with BASIC (non-influenced) PERCEPTION (and related attention) and you will have the GOOD reliability you need (to have an adapted and adapting organism). "The senses" does NOT simply mean one thing: theses are WORDS and sometimes refer to one thing and sometimes another, and you cannot pick which interpretation or combination of meanings suits your argument and 'reason' thusly. [It is human REASON which can easily be fallible, if not clearly sufficiently grounded (almost constantly) _AND_ SHOWN TO PRODUCE REPLICABLE findings (reliably communicable and agreed upon, aka inter-rater reliability). The fallibility of human reason has been strongly indicated countless times (it is more than conceivable that the greatest care (strict empiricism) is needed to prevent this).]

Dear

You say some nice things, then you say: "...THEN YES what you SAID would be possible BUT NONE OF THE IF is true and so the conclusion is untrue " (end quote). WHAT I JUST QUOTED (of you):

This is very simply an unjustifiable view you have, for a very clear, scientifically indisputable reason: MY VIEW IN ITS Entirety AND, at each point, is TOTALLY, TESTABLE/VERIFIABLE . PERIOD. You might benefit from seeing my most recent Question (with my Answer, there) see: _

https://www.researchgate.net/post/Have_things_having_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_may_be_used_for_investigation_of_important_observational_specifics? ; you are very simply "sticking yourself" in the past, with just what you already "know".

Dear

[I have read the well-regarded book Theoretical Foundations of Artificial General Intelligence (2012) and several other things on AI, so I DO KNOW what I am talking about there; my own field is psychology, developmental psychology (esp. cognitive) -- so I know that too. I was a very early cognitive-developmental human ethologist.]

Let me try to be more direct in expression of my view, hopefully making it clear how certain new ways of investigating and of thinking (via new discoveries) DO RELATE TO REAL AI: (I guess I should say to start out that: TODAY we cannot properly call any acts of a robot meaningfully related to anything one could call "imagination" -- BUT humans (psychology researchers/theorists) do not well understand imagination in the human either, and therefore clearly will not be able to simulate it.) Here is an overview of the details:

If we get results and findings giving us the further needed foundations of cognition and cognitive development, THEN: BECAUSE these are concretely based (at their inception) _AND_ all significant covert behaviors ** still clearly relate to EARLIER behavior patterns/environmental aspects which initially yielded clear overt behavioral changes [(and which the eventually-resultant covert behaviors (patterning) can still be seen as LIKE (when they were concretely-based), and thus are now justifiably inferred)], we can simulate all that concretely based stuff and the related covert and overt resultant behaviors and thus fully cognitively simulate the human -- which

includes imagination via the final possible states of working memory.

The definition of all other important things (motives and emotions) are all reliant on the developing and developed functional cognitive structures we must come to better understand and better know, SO the role of motives and emotions can be understood in those terms and needed species-typical biases in the salience of memories and imagined goals and responsivenesses then also simulated (as appropriate at each stage of development).

Thus, imagination in a robot could be possible. BUT if we cannot recognize we need more foundational knowledge of cognitive development AND that we likely have to use technologies (eye-tracking and computer-assisted analysis) to see and find things we cannot otherwise (normally) parse out and see (distinctly or separately) at all THEN there will never be meaningful imagination in a robot NOR will we well-understand the human, even in its key basic regards. We must realize psychology IS still an infant science and must start anew with new methods to see new things and then finally understand key basic things (all thoughts and assumptions contrary to this view are counter-productive -- and will never work for a really good constructive view -- and must be over-come with acknowledgement of real and likely possibilities). I will again refer all to papers under the 2 Projects (<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology> and <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>) AND to the hundreds of related Questions and Answers (essays) I have made on researchgate for A LOT of explication.

For more on what psychology needs (and how current problems in the field show that more foundation is needed, and of the sort I propose, and which is now possible to investigate and get findings on), _and_ which is basically, at the same time, ABOUT the high quality concrete knowledge which real AI needs, see the Question _and_ Answer to :

https://www.researchgate.net/post/How_can_those_who_come_up_with_complete_models_of_what_they_want_to_understand_SHOW_that_their_process_was_valid_given_what_we_know_about_memory?

This may provide a little more detail and perspective. Let me also add that getting "up-to-speed" with the current relevant knowledge and classic theories of psychology, and coming to an understanding all that you would need to understand in extant psychology IS NOT A HUGE TASK. You could put together an AI team with some providing the needed psychology background, even without employing professional psychology researchers -- it would likely have to be a team, though. AND, I suppose the team may have to include the finest among those seeking real AI (AGI), such as Thorisson.

**** FOOTNOTE:** This requires a full understanding of the Memory capacities and the various necessary species-typical type contents needed at each stage of development, for operation there AND, in the proper adaptive circumstances, providing a BIG part of the CONTEXT for those new developments and subsequent new types of learning (and eventually new ways of thinking).

Dear All,

I have not yet read all the answers above carefully, but shall do so after I more-impulsively give some feedback

of my own. This does address, as much as reasonable, the definition of "imagination". Obviously, imagination is openness to possibilities in experience (whether you make them happen, or discover them or think you may discover them/ do them). For a human this openness is great, but it is not without any parameters whatsoever. It may well, though, be without any parameters we can imagine, BUT which we might now be able to discover.

Always, in some very general sense, the human is 'goal'-oriented, to get something done, to progress, to fill needs or desires OR to return to some homeostatic state. Obviously this embraces a lot, yet we have to ask: HOW CAN WE EMBRACE THAT? For an empiricist, the answer is always that at KEY POINTS, directly observable environmental aspects are always involved as proximate causes, but so are behavior patterns [though NOT patterns we can imagine in advance (and, if the adult after-the-fact cannot imagine them, how can the developing child THOUGH HE SHOWS THESE VERY BEHAVIORS?).] HOW CAN THERE BE such behavior patterns also involved (along with environmental aspects) as DIRECTLY OBSERVABLE proximate causes of KEY behavioral change? The only likely, sensible, mature, biologically-consistent type answers (and perhaps, indeed the ONLY POSSIBLE ANSWERS) involve "innate guidance to behaviors seen in behavior patterns." Like Sherlock Holmes, you can come to this conclusion if just only by exclusion of other imagined "possibilities".

BUT, if we cannot imagine what is involved (as I have indicated), then how can we model it? We can't. BUT, WE MAY BE ABLE TO DISCOVER THEM: by seeing things we have never seen before, _AS_ [/how] WE HAVE NEVER SEEN THEM BEFORE ! It could be that the inceptions of new types/levels of learnings could be rooted in simple perceptual or perceptual/attentional "shifts" [and such small changes in developing attentions, IN AN OTHERWISE ALREADY ADAPTED COMPLEX OF BEHAVIORS, could well suffice for the major changes in perspectives yielding (and being) the inception of new types of learning, unfolding into new abilities of abstraction]. An empiricist cannot abandon the POSSIBILITY of such concrete signs (and what would Sherlock Holmes say?) How can we see what we have not seen, when it cannot be imagined? Of course, the answer is to "see" (yet it is seeing) IN NEW WAYS, USING NEW TECHNOLOGY, giving us a VIEW we have never had before and could not have without assistance. Two technologies ripe to work together to see what NOW can be seen are: eye-tracking technologies and computer-assisted analysis software. Yet, let me quickly say, though, that not even those technologies will likely yield results-seen, except by those with a most educated, learned and principled biologically-congruent) perspective. I , myself (like the rest of us), have only been able to imagine (OF COURSE) the possible nature of these "perceptual shifts" INDIRECTLY BY the species-typical RESULTS they yield (the CONSEQUENCES and ramifications of the new possible types of learning and levels of thinking), and this is what I outline in my paper, "A Human Ethogram ...". From this, though, a wise, learned person, using these new technologies, MAY be able to imagine when and where to look for the innately-driven patterns of behavior OR at least the new aspects of the environment which become subjects of attention (and new aspects of what is worked on in working memory) -- with a necessary understanding of earlier cognitive ontology, AND A FULL APPRECIATION OF THE contextualization of cognition (both simple and complex) BROUGHT FORWARD from our memory capacities. [The huge possibilities of our visual-spacial memory, along with our declarative and procedural memories, contextualizing the episodic buffer and working memory are awesome ; it is also the great possibilities of these Memories which make it quite plausible that a mere "perceptual shifts" in an otherwise adapted complex could well suffice for KEY behavior patterns changes (new learnings, yielding awesome new abilities -- including abstract thought).]

Now, everyone always asks me, when I give my "Answers": What does this have to do with the Question? Well, friends, THESE are the very open-type parameters which, though amazing and hard to discover AND VERY OPEN, do nonetheless operate in (and DELIMIT) human learning and development, INCLUDING ALLOWING FOR

(and being the basis of) IMAGINATION -- by the way: of course: such covert behaviors (as imagining) are part of our understanding of the very important (contextualizing) covert behaviors that ARE VITAL PARTS OF BEHAVIOR PATTERNS , themselves, in key environmental circumstances EVEN AS they (those patterns) develop through another stage. (Also, for the relevance of my answer, see the P.S., at the bottom.)

One more thing that makes all this hard is that it involves replacing some core 'assumptions' that, though baseless, groundless, without any foundation and needless (unjustified) ARE NONETHELESS WHAT MOST PSYCHOLOGISTS (and the rest of people) BELIEVE and this results in the absolute INABILITY TO IMAGINE BEING HELPED TO SEE MORE, because of the nature of what THAT "more" would have to be: in particular, innately-driven. Here are some of the worst commonly-held (baseless) 'assumptions':

1) All that is significant and innate is present at birth .

2) The more learning there is, the less innate guidance -- this taken to mean: OF ANYSORT.

Both of these assumptions can be justifiably replaced by THEIR OPPOSITES -- and that is more consistent with biology (and behavior IS biological functioning) and more-likely true. [(Number (2) may be seen only partially replaced by an "opposite".)]

ALSO, there is this good "sign":

Abandoning these false pseudo-'assumptions'/presumptions also totally eliminates the nature/nurture debate OR any duality there at all. THAT duality is not only not likely, but it is likely that innate aspects of behaviors are AT LEAST IN EFFECT simultaneously present IN behavior patterns (yes, even those patterns that are most deliberate/conscious and INVOLVE OUR ATTENTION !! -- which is the core of what I have been talking about, above). [For decades it has been known that there is no foundation for a nature/nurture duality, and this viewpoint GETS YOU OUT OF IT !]

The starting point for further understanding the full justification of my perspective is: "A Human Ethogram ..." AND I have explicated this view in HUNDREDS of related essays, in Questions and Answers -- here on researchgate (start at the Profile, click Contributions, the finally CLICK Questions and CLICK Answers). Here is a link to "A Human Ethogram...":

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

P.S. All this not only provides concrete foundations for cognitive science, but also similarly for artificial intelligence.

What are the causes of suffering?

Dear

What you say is so. To address that matter more broadly, though, I think it would also be good to point out that upsets that occur when " things don't go your way " OR because things change both are very much related to having yourself (A SELF) too much "in the picture". This is a major cause of hanging onto things (including thoughts) inappropriately. In fact it is a fundamental cause of craving and grasping and attachment, making that

a fundamental source of Dukkha ("suffering"). Also, having too much of a self, you imagine your involvements in causation clearly to an extent or level that is delusion (delusion being one of the "three evils" -- and, with ignorance, it is a (and in a sense: THE) pervasive cause of suffering). It is causation itself which one wants to come to see -- and YOU are not involved in the processes / series of processes there -- they being true, but ultimately just as they are and understandings that develop as one comes to "see things as they really are".

[Delusion is consistently present with the other two core evils: greed and hatred, along with, or being a major part of, the attachments involved (other major attachments due to ignorance, at the root). For more, I encourage people to visit and read my site, <https://mynichecomp.com> -- a comprehensive summary of what many believe to be the full collection of the words of the historical Buddha, the Pali Canon.]

P.S. To "Western 'man' " : please do not try to list all the causes of suffering -- that is really a height of delusion. (You likely add to the list in the process of believing you can do that, ad infinitum. If you lack that insight, it seems scary what else YOU might simply believe -- but that does display the nature of a core problem. Words do not signify a thing, or at least a constant, unchanging thing; words are tools, and even concepts are similar and similarly tools.)

Will intelligent robots have imagination and if so what kinds of thing will they imagine and why?

Dear All,

I have not yet read all the answers above carefully, but shall do so after I more-impulsively give some feedback of my own. This does address, as much as reasonable, the definition of "imagination". Obviously, imagination is openness to possibilities in experience (whether you make them happen, or discover them or think you may discover them/ do them). For a human this openness is great, but it is not without any parameters whatsoever. It may well, though, be without any parameters we can imagine, BUT which we might now be able to discover.

Always, in some very general sense, the human is 'goal'-oriented, to get something done, to progress, to fill needs or desires OR to return to some homeostatic state. Obviously this embraces a lot, yet we have to ask: HOW CAN WE EMBRACE THAT? For an empiricist, the answer is always that at KEY POINTS, directly observable environmental aspects are always involved as proximate causes, but so are behavior patterns [though NOT patterns we can imagine in advance (and, if the adult after-the-fact cannot imagine them, how can the developing child THOUGH HE SHOWS THESE VERY BEHAVIORS?).] HOW CAN THERE BE such behavior patterns also involved (along with environmental aspects) as DIRECTLY OBSERVABLE proximate causes of KEY behavioral change? The only likely, sensible, mature, biologically-consistent type answers (and perhaps, indeed the ONLY POSSIBLE ANSWERS) involve "innate guidance to behaviors seen in behavior patterns." Like Sherlock Holmes, you can come to this conclusion if just only by exclusion of other imagined "possibilities".

BUT, if we cannot imagine what is involved (as I have indicated), then how can we model it? We can't. BUT, WE MAY BE ABLE TO DISCOVER THEM: by seeing things we have never seen before, _AS_ [/how] WE HAVE NEVER SEEN THEM BEFORE ! It could be that the inceptions of new types/levels of learnings could be rooted in simple

perceptual or perceptual/attentional "shifts" [and such small changes in developing attentions, IN AN OTHERWISE ALREADY ADAPTED COMPLEX OF BEHAVIORS, could well suffice for the major changes in perspectives yielding (and being) the inception of new types of learning, unfolding into new abilities of abstraction]. An empiricist cannot abandon the POSSIBILITY of such concrete signs (and what would Sherlock Holmes say?) How can we see what we have not seen, when it cannot be imagined? Of course, the answer is to "see" (yet it is seeing) IN NEW WAYS, USING NEW TECHNOLOGY, giving us a VIEW we have never had before and could not have without assistance. Two technologies ripe to work together to see what NOW can be seen are: eye-tracking technologies and computer-assisted analysis software. Yet, let me quickly say, though, that not even those technologies will likely yield results-seen, except by those with a most educated, learned and principled biologically-congruent) perspective. I , myself (like the rest of us), have only been able to imagine (OF COURSE) the possible nature of these "perceptual shifts" INDIRECTLY BY the species-typical RESULTS they yield (the CONSEQUENCES and ramifications of the new possible types of learning and levels of thinking), and this is what I outline in my paper, "A Human Ethogram ...". From this, though, a wise, learned person, using these new technologies, MAY be able to imagine when and where to look for the innately-driven patterns of behavior OR at least the new aspects of the environment which become subjects of attention (and new aspects of what is worked on in working memory) -- with a necessary understanding of earlier cognitive ontology, AND A FULL APPRECIATION OF THE contextualization of cognition (both simple and complex) BROUGHT FORWARD from our memory capacities. [The huge possibilities of our visual-spatial memory, along with our declarative and procedural memories, contextualizing the episodic buffer and working memory are awesome ; it is also the great possibilities of these Memories which make it quite plausible that a mere "perceptual shifts" in an otherwise adapted complex could well suffice for KEY behavior patterns changes (new learnings, yielding awesome new abilities -- including abstract thought).]

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P.S. All this not only provides concrete foundations for cognitive science, but also similarly for artificial intelligence.

What are (or going to be) the main differences between AI and Human Intelligence?

Dear THREAD READERS:

I asked a similar Question, to the one which began this thread. It is :

"How would an AI robot, with all useful human abilities and human capacities, differ from a real human (and how need it not differ)? " ([https://www.researchgate.net/post/How_would_an_AI_robot_with_all_useful_human_abilities_and_human_c
apacities_differ_from_a_real_human_and_how_need_it_not_differ](https://www.researchgate.net/post/How_would_an_AI_robot_with_all_useful_human_abilities_and_human_capacities_differ_from_a_real_human_and_how_need_it_not_differ)) I guess it differs only in that it assumes the possibility of true AI.

In any case, I want to mention that thread and invite you there. I have put a lot of work into answering responses there and elaborating (even as recently as today). Please take a look. It certainly seems relevant to the Question here, "What are (or going to be) the main differences between AI and Human Intelligence?" (Of course, you will find my thread arguing for true AI and for basically a LACK of differences with the human.)

What do you think Lao-tzu meant by the virtue paradox?

There are some excellent answers already given. I would just like to say that in several Eastern religions (e.g. Buddhist sorts and some others) there TYPICALLY are MANY, MANY statements where there seems to be contradiction (one can find entire sets of these). It really, in part, amounts to an exercise in learning to see words just as tools and never referring to any constant or definite thing (the meaning is not THEREIN, but may be understood WITH THEM). Another E.G.:

"When all the world sees beauty as beauty, that in itself is ugliness"

IMPORTANTLY: A similar attitude holds true ubiquitously for CONCEPTS: In fact it has been said, "The secret of Buddhism is to remove all ideas, all concepts, in order for the truth to have a chance to penetrate, to reveal

itself." This is not to say we should not use concepts, because we should communicate; it means, though, that they refer to nothing that is for-sure or constant -- and this is clear, at least of those worthy of any consideration or discussion at all.

Relatedly: the Buddha: "When in the seen will be only what is seen, in the heard only what is heard, in the sensed only what is sensed, in the known only what is known, you will not be by that; when you are not by that, you will not be therein; when you are not therein, you will be neither here, nor there, nor in between. This is the end of dukkha [(suffering)]."

[By the way, this is NOT associated with empty-mindedness , but FREE mindedness (having some free capacity **) -- it can argued that a great deal of this is nibbana (nirvana) itself ***. ALSO, this is associated with a great understanding of causality (conditionality) -- which ultimately turns out to be understanding of true sequences, and that is all.]

** FOOTNOTE: Good understanding (consolidation and integration) IS associated with having more free capacity in working memory (better "chunks" and related procedures) -- thus this view is not only compatible with science, but may be considered the essence of good science itself (which is also, in essence, just clear, reliable communication (aka inter-rater reliability, in practical terms)). If attention (or "deliberateness" (broad sense)) is consciousness (as is well-argued), then working memory IS consciousness. [And all that "is anything" may become conscious; otherwise, is: to be known "by THAT" (opposite of the goal expressed by the Buddha, above, and associated with suffering/dissatisfaction).]

*** FOOTNOTE: This does not conflict with any of the contents of the web page cited below; if it seems to, THINK better (harder?).

For more about "the" central paradox (and Buddhism as optimism FOR science), see: <http://mynichecomp.com/paradox.html> -- and to get a comprehensive summary of ALL of the words of the historical Buddha (Pali Canon), see the main site (all from a naturalistic, realistic (real-world), and rational perspective).

To understand things, I ask myself: What is human consciousness?

According to Professor Jesse Prinz (a philosopher who has specialized in this area), consciousness is attention (which varies greatly situationally, though CAN, at least many times, be related to some parameters) and it (its "field") may be "wide" or "narrow" **. (Because of this "wide" or "narrow" part of his understanding, I prefer my own more 'goal'-directed view, coming up next.)

I say (similarly) that it is deliberate-ness (including in the broadest sense): it is what you are deliberating on (processing to use/change/understand (<-- which is a use) OR just to find or see -- AND all the experiential environmentally-related background context FOR THAT which is needed "from memory", including relevant procedures-learned). This, as I think it is with Prinz's understanding, is actually too broad to well encompass in even several sentences (and show the range of the "particulars", and the "non-particulars"). I believe you do have to just understand the definition, circumstance-to-circumstance -- and, there is nothing wrong with this; it is better to really understand this way, than to invariably MIS-understand with some poorly-developed "general

definition"; STILL, it is also not always a complex matter when done circumstance-to-circumstance (which, as I just indicated, may be absolutely necessary) -- providing SOME good news, and allowing a BIT of cross-circumstance knowledge of attention (consciousness) then being possible (e.g. some knowledge of sometimes-relevant cues for attention that exist across some circumstances, and even, PERHAPS some, involved nearly always -- but, I would not ever say always because , for example, some can conceptualize what you cannot and you can come to conceptualize many, many things you could not earlier in life, and the variety of foci seem effectively infinite, and very-greatly varied, with no-known (knowable?) effective "constants").

Even in Buddhism, where development of consciousness is one way to look at one of its prime objectives: Consciousness has defined limits. Why? Because wisdom very integrally involves understanding causations (and conditionalities) WHICH ARE SITUATION-BASED; though all phenomenon (except nibbana, aka nirvana) ARE "CONDITIONED", they most-certainly are not "conditioned" in the same way, and good and adaptive discriminations are also central to good understandings -- both these sorts of understandings, being refined, would find situations MORE different, AT LEAST RELATIVE TO COMMON UNDERSTANDINGS -- though maybe not to YOU (but THAT doesn't matter, since presently WE are communicating).

** FOOTNOTE: Here is a Jesse Prinz citation (a 1 hour video on consciousness and attention):

<https://www.youtube.com/watch?v=Ofdk648-KUo>

Dear All

If it seems evident that there is a lot of relationship between consciousness/attention and learning AND IMAGINATION (and, especially, if you see qualitatively different types of learning), you may enjoy my Answer under the Question,

https://www.researchgate.net/post/Will_intelligent_robots_have_imagination_and_if_so_what_kinds_of_things_will_they_imagine_and_why

I think it is fair to say that imagination IS much related to consciousness or at least to manipulation of ideas/images IN consciousness (to understand properties, relationships, and causality -- making it a very important sub-set of being CONSCIOUS (and changing, over development aka ontogeny)).

This allows one to reasonably imagine the existence of, and, with some established knowledge of earlier cognitive developments, hypothesize the possible qualitative nature of concrete referents (behavioral and environmental, of course) TO especially important states of consciousness _and_ for the progressive development OF [at least aspects of] consciousness (via changes in perception and attention and learning). Concrete bases are good for BOTH AI and cognitive psychology (my Answer to the linked-to Question provides a WAY to possibly discover these concrete bases and then clearly better understand consciousness).

We might rather try to just think out the nature of consciousness but, as an empiricist and knowing the limitations of working memory, I would submit that this thinking-out will never work. [The only way to know more than you can grasp is : bit-by-bit and how are these bits to be determined?? My answer: they (in a way) are NOT -- not by mere "force-of-mind"; but may be discovered and properly related by relating discoveries. (This can be done, because the SUBJECT forces you to do it right, or to put it another way: allows for self-correction -- this is why empiricism and seeking direct observations of immediate (proximate) causes [of change] is so important.)]

I do not think there is any way to escape the fact that developing true AI will require gaining empirical knowledge of cognitive development (and concrete proximate causes); then any AI limitations to consciousness or anything related to consciousness are unknown, but abilities may be quite substantial.]

Can philosophy help to innovate and develop scientific theory?

Dear

I like your statement, " both open and closed systems are needed for some things to be understood." I think this is very true. But, the trick is how to DISCOVER BOTH (and conjure up NEITHER). One thing is to take the possible correct perspectives. For the relatively (and yet clearly) "open" systems, I recommend the Memory capacities we have (also: it is one of the only areas in psychology, where the research makes sense). For the "closed systems": one must come to see the integral simultaneous roles of innate guidance patterns and aspects of the environment FOR developing /yielding DIFFERENT KINDS OF LEARNING during ontogeny -- my proposal on this can be found in my paper, "A Human Ethogram ...": this takes a sort of broad and developmental approach AND YET INVOLVES DETECTION OF SUBTLE BEHAVIOR PATTERNS (e.g. perceptual shifts or perceptual/attentional shifts and, detecting either, likely to involve eye-tracking technology).

NOTE: FOR perspective ON the perceptual "shifts", as behavior patterns and as major proximate factors (subtle, but observable) FOR BEHAVIORAL CHANGE (and new learnings), it takes an appreciation for our types of Memory capacities and WHAT THEY BRING FORWARD TO CONTEXTUALIZE OUR ENVIRONMENTS; this is especially important at the critical times I indicated.

P.S. This is precisely the concrete understandings of things true artificial intelligence needs TOO, so those thinking like me have that going for us. I have tried to provide the closest thing to a "kit" for AI; psychology is so near-hopeless, I get more hope from AI (it is expressed in another one of my Projects).

This is a post that perhaps I should not have made (because I am possibly too ignorant of philosophies -- but I don't think so, since I have judged them; thus, I should at least give you a chance to "straighten me out"):

I do wonder whether we really all understand philosophies the same way or well-understand them at all (are they: (1) "set up" to be clearly understood, and (2) 'seen' to be saying the same thing to all?) BOTH THESE THINGS ARE VERY IMPORTANT in science (though my understood-the-same-way point may well not be a requirement for philosophy -- I am a Buddhist, afterall; but the other point (sure understandability) seems essential).

I am wary, because personally I almost always can infer a non-explicit "agenda(s)" in philosophers' writings (and also, unfortunately, very-much-so in psychology models <-- and THERE it is bad, for sure), plus a built-in lack of certain or at least clear understandability -- and I believe NOTHING needs to be OR need-be set-to-remain THAT WAY. I am firm on this. [Also, in addition, I usually believe "things" should allow continuing on to something better starting with THAT very vehicle (including (here) the vehicle provided by a philosophical essay) -- yet ironically, failing THIS last 'property' may be related to why, at least at times, my point (2) may well not be essential for all philosophy (e.g. like discovering individualized phenomenology). But, I must also add that sometimes SUCCEEDING on having this 'property' (allowing continuing progress) at times actually seems related

to point (2) not being essential, too (an example here is where there is a series of constructive individualized interpretations, all inspired by the same argued nature or principle of knowing "reality"). Point (1) is always necessary, I would argue.]

Related to the "understandability" issue: I DO believe: Philosophers MUST, in expressing themselves, at least include major examples: particularly and with an unquestionable empiricism or clearly directing one towards empiricism ** : showing, or leading one to: a "find-able" OR , at least, a personally find-able discrete directly observable foundation/type-of-referent -- otherwise both of the important-in-science criteria I look for will not exist (which is obviously NOT ok, in general).

[(I will admit that I was never really good at deciphering many philosophies -- at least ones not clearly relevant to my interests -- thus I must entertain the idea that I may be missing something here (still I decided to share my impressions and what I think I see, OR rather, don't see : since, if I am correct this would limit their utility for/in science).)]

After saying all this (above), I have found philosophy (esp. epistemology and philosophy of science) can be helpful (even if/when failing to meet some of the criteria I indicated): this is just like a hint can be helpful to find an "Easter egg". They (philosophies) may be a necessary "nudge" in a thought-space, while likely being little of continuing (or continuous) value; I am not sure I could do without having at least some of them -- one has to "go wide" to get a proper first perspective, at times. [One thing that seems sure: philosophy IS different from science -- and in no sense is what is called "philosophy" science, though I suppose a person could be a scientist and express some of the different-sort-of-"stuff" philosophers express too -- but these are 2 distinct things (otherwise, of course, it would clearly be seen AS science). Of course, one could continue to repeatedly give credit to some philosophy essay for some initial hint which "nudged" one -- but I see this as too generous; when you finally generate your own -- just useful for YOU -- "philosophy", then it is not philosophy (for example, I am not only an empiricist, but I know how to DO empiricism, with nothing making me feel like I should have to (or want to) announce "I am an empiricist" over and over, except in some special contexts).]

I must say that "philosophy" (at least, as referred to and represented) seems at times associated with ill-defined, overly-broad, and/or ridiculous questions -- how often this is really associated with professional philosophers, I do not know (but it is at least sometimes; I suppose that, when trying to be conceptually innovative, someone can be quite unwise; perhaps it would be good (for some people) to know more about characteristics of different SORTS of philosophers, just as a cautionary measure).

** FOOTNOTE: I am an empiricist and do require empiricism.

I would also say: that just as likely (actually, more likely) good science could be DEFYING existing philosophies -- and doing so may be integral to some advancements. For example:

https://www.researchgate.net/post/Major_central_question_of_AI_How_can_something_be_in_much_of_its_nature_bottom-up_AND_also_a_start_of_a_new_top-down_structure_ability

Where is the philosophy there? Doesn't this actually defy existing philosophies?

(The author says it is science, and it is because it is verifiable; thus, it is new science without clear support of philosophy -- plus, the author argues that philosophies and false 'assumptions' is what has held progress up !!)

While whole-heartedly agreeing with the last poster, Constantine Jeannacopoulos, I would yet like to submit that philosophy may well arise from science. I think I can provide something of an example. Under the Question, "_

https://www.researchgate.net/post/Have_things_having_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_may_be_used_for_investigation_of_important_observational_specifics

", I've just today given an Answer which seems to me a potential "philosophical view of phenomenology", which now then can be used as a ground for philosophers learned in developmental psychology ** to make some distinctions (needed) and to have some debate -- and, if that is the case, I guess it is philosophical.

Sorry, to cite myself, but I am not knowledgeable enough of other areas to provide an example that is independent of ME.

** FOOTNOTE: I do always have to insist that philosophers be fully learned in the science that they review and comment on.

Dear

What you say sounds like a very good thing and no doubt is sometimes true. BUT: philosophers, who are good, MUST have some solid grounding in phenomenology -- _AND_ they should be explicit about all their key assumptions and justify them in that context (or type-of context). Sadly, I think philosophers commonly (usually?) do not do the latter (and often they are clearly not explicit-enough about the "axes they have to grind").

Specifically, due to some noteworthy acceptance of major 'classic' philosophies over the history of "Western" thought (at least), there have been often-implicit views, basically playing the role of 'assumptions', that are not well-grounded or justified at all; they actually should have the status of crude beliefs or presumptions (sometimes at least a portion of these not-well-established beliefs ARE stated explicitly by philosophers). Several such beliefs -- and BELIEFS (in the usual, common rather-negative sense) is all they really are -- including major ones, I point out in several of my Questions and Answers here on researchgate.net (seek and ye shall find: it is often a "man-vs-'animal'" "thing" or very much corollaries to such).

I believe several of these poorly established beliefs are MAJOR influences and constraints on thought (including in science), and that they are by far more destructive than constructive -- actually resulting in unjustified (skewed) thought-systems and clearly and absolutely limiting even the considerations of conceptualizations in psychology which are consistent with biology.

Indeed, we should have evaluations outside the limited research (and theory) context of psychologists themselves. Unfortunately, I believe there are quite a number of tacit or implicit beliefs which are likely WRONG, and certainly unproven (and unjustified), yet are VERY present nonetheless in BOTH psychology and philosophy: THUS, they are some of the key bases of both being "messed-up".

I have previously tried to see, and characterize, SOME key positive effects some philosophy may have provided for me; but, on balance, there is more effect of the acceptance of key mere beliefs, THAT then are accepted

widely, that do more harm (skewing conceptualizations and limiting the range of possibilities considered) than what relatively small bit of good that views/thoughts "from the outside" could be hoped or imagined to do

Dear

I like your assertion "the question of this forum, (in my opinion) should rather be posed in its inverted/reverse form: "Can natural science help to innovate and develop philosophical (social) theory?" ". I like it because I can think of some useful philosophy, basically (TO ME) a synonym with useful thinking, that comes with obvious considerations a scientist should have BASED ON THE NATURE OF ALL THE RELEVANT PHENOMENOLOGY.

An example here is Carlos Montemayor and Harry Haroutioun Haladjian's paper making it clear that there are 2 kinds of perception and both are of always important. Many psychologists were getting "carried away" with how much perception can be influenced by beliefs or experience, and other things -- so much so they basically were seeming to describe all perception as that influence-able. IN FACT, other major psychology relies on there being some BASIC perception(s) that are NOT modifiable by things of learning and experience, but provide a needed core for the way the organism must be.

This is the only type of recent good I have got from philosophy.

Perhaps a question that relates to this perspective is: IS philosophy basically a synonym with useful thinking OR, is it itself (in a valid way) a necessary foundation in any clear way for any good science (for good science to go on at all -- any particular science(s))? CLEAR and VALID and NECESSARY are the issues -- and I would say that will be a "steep hill to climb". If this was the case, wouldn't some good thinkers, philosophers, gather up clear evidence and knowledge ON THESE INSTANCES and present them to us? (And if no such presentation exists, that would make the starting Question just about nuances of science, at most and at best.) Does the lack of showing THAT, in itself, show that philosophy is not necessary for developing good science?

BUT, WE STILL DO NEED GOOD INDEPENDENT THINKERS. I can imagine many cases where scientists might violate basic axioms of their own science and might well need good thinkers (perhaps outside their field) to "straighten them out".

Dear

As hard as I try to think about it, I believe that the advancement of science has to do mainly with better application of, or the proper elaboration of, OR the finding of, principles -- which amounts to finding core root behaviors (act. behavior PATTERNS) in psychology -- _AND_ properly defining them for, and applying the to, the full set of relevant phenomenology (at least a partial example: applying the knowledge that behavior patterns are biological functioning, just as waste removal processes of the kidney are, and should be construed as such -- fully applying all relevant biological principles and applying them correctly). So, in short, it still seems that even accepting the idea that philosophy needs science _AND_ science needs philosophy, it still seems like basically just a matter of outside assessment of the "stuff", described above, that which helps science AS SUCH, and knowing and thinking about science and related phenomenology would provide directly or indirectly all the worthwhile (true, actually useful) "material" for good philosophy; isn't THAT ALL _IFF_ we are staying in the arena of science-and-philosophy?

So, most basically, I imagine, science often helps philosophy by directing philosophers to phenomenology that relates OR should relate, as well as vice versa.) I do not understand the still notable concerns about science and meta-physics -- probably because I do not understand what "metaphysics" could be OTHER THAN part of OR in what I have already addressed (and outside of that is superstitious thinking, basically, because it would be groundless).

Perhaps just stating it again [(sorry, perhaps this is bad writing)]: IT is recognizing applicable principles and applying them correctly, properly recognizing all relevant phenomenology and how all that phenomenology really all relates (perhaps a science is misconstruing or misinterpreting some; perhaps a science is missing some) AND philosophy is looking at what science thinks its "got" and reviewing that SO _THAT_ [in the first part of this sentence] happens well in science.

In conclusion: in total there is a LOT of things philosophy could help science out with -- a lot of phenomenology that science needs to keep straight -- AND a lot of subject-area matter for philosophy to think about. But, basically, just that is all I can see or understand (though , I do admit, I have VERY little formal education in philosophy). Am correct and have characterized pretty much the full helpful relations between science and philosophy (both ways)? I would be happy to know that. Is all I just expressed, "in a nutshell", IT -- though THAT may need better definition (<-- let me know that too)? Am I correct as much as I would need to be (as a science person)? _OR_ Is there also some categorical big things I am missing?

[I admit I could have missed some of the answers bearing on the question indicated here, because I have not read the whole thread; but, based on what still is being discussed, I think it is fair to believe such a question(s) (as I just indicated), has/have not yet been clearly or definitively answered.]

Dear

True, I AM in a real and notable and important sense reductionist -- reductionist via discoveries -- and I like that. Yet, otherwise, despite how you see my thought (and how I imagine you view my thought-system), some things are likely not so: I am not a determinist in any sense I see (surely nothing about my perspective or developing perspectives DETERMINES anything -- that is to say: not "in nature"). In fact, I find the following statement by you (quoted, soon, below) very agreeable EXCEPT FOR I AM A STANCH NON-DUALIST (and it seems that plenty of dualism comes out of the perspective you stated) :

Otherwise, much of the following sounds fine: (quoting you): "Materialist dialectics on the contrary, takes "matter" and "thought" together - it is matter that thinks! As Marx said, materialist dialectics knows only one science, the science of history, with two components: man and Nature that are in a dynamical relation and interaction. It is however recognized that material condition of existence must be there before thought, consciousness, ideas etc. can take forms "

I would just say (add): "look for REAL dialectics without any dualisms whatsoever". (Think keeps ones "determinism" in check and keeps what you think VS reality balanced.)

I do also find the portion of the statement "materialist dialectics knows only one science the science of history "

VERY strange and a statement only one with a political agenda would make.

I would like to FOCUS the main question, by asking a couple of more detailed questions (this will help more clearly put philosophy into perspective). SEE:

https://www.researchgate.net/post/Do_Analytical_Philosophers_basically_just_fine-tune_concepts_AFTER_a_major_view_has_been_accepted_adapted_by_psychology_researchers_theorists

The attitude of a philosopher seems to be to readily go off into thoughts and the analyses of them per se. I would submit this is not science, nor particularly productive (I would submit that one would immediately have some tacit/covert pet-concept skews (or hidden "axes to grind") -- and maybe some of these not even known to the philosopher him/herself -- by "virtue" of the nature of THAT "reflective" ACTIVITY ITSELF). I say: Stick very close to substance (concrete, directly observable), as much as possible. This is my outlook and I believe that is demonstrably the outlook of science also.

A behavioral science perspective would have to be analyzed from the good of that outlook (and considering what is the known and/or the validly and reliably well-discovered nature of the Subject PLUS the recognition of necessarily applicable biological principles, when they are manifest in behavioral response patterns), with very little attention given to the relationship to any philosopher's ideas THAT generate (or to any thinker's ideas-based-response outlooks) in response. These 'things' (as they are apparently dealt with by most philosophers) are clearly NOT _of_ the Subject. BUT: Getting all understanding from the Subject is another foundation of science, widely agreed upon, and at least given "lip service" to, because it is recognized in science as THE focus (along with environmental factors).

It makes VERY little sense to me to "work on topics" (and then apparently go very broad). This seems to violate findings we have on memory and working memory, in particular, which is the basis of the opinion I gave in the second sentence of this 'Answer'-post. Doing what philosophers seem to mainly do may make sense to someone (and be of some good to someone), but is not of the nature of anything I understand as cores to science and is, in fact, lacking such foundations.

If one cannot achieve taking on exclusively the core foundational positions of science (and really nothing else), then trying to give any analysis of a good dedicated science approach to studying behavior (or anything else) will not be productive. In fact, if a philosopher cannot achieve this position, I would say there is very much something in analytic philosophy that would prohibit a practitioner (of that) from looking at a good science theory.

There may well be good science answers that cannot "break through" a philosopher's questions .

I can offer no more on "philosophy for science". But I do have questions (and some views) on SCIENCE for PHILOSOPHY. First off: Don't analytic philosophers need "grist for their mill"? ; don't they need to look basically at the content of OTHERS to analyze? : and, here, what better source than science.

I would contend my final Question would involve a philosophical perspective ITSELF which might benefit from analysis. I am wondering if this outline of a coherent viewpoint ITSELF might be considered philosophy; does it

"meet the definition" of philosophy in inherent characteristics?

All this may seem self-serving, but it is sincere. The final Question I refer to (for analysis, and wondering if it IS philosophy -- even though it is claimed it may be pure empirical fact) :_

[https://www.researchgate.net/post/Have Technologies in the role of a MICROSCOPE for psychology been developed which can now be used to investigate important observational specifics?](https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics?)

Once the analysis is done, isn't this then: philosophy contributing to science?? Isn't this the way it usually "goes"? If not, why are they not books outlining CLEARLY and SHOWING necessary: the-great-philosophy-integral-FOR-SCIENCE?

Has the "philosophy of science" contributed to the "advancement of science"?

Can robots become conscious?

I admit, as is not usually the case, I have not read all the previous responses (answers) to this question. I've abandoned a bit of discipline, simply because I wanted to respond to the question right away (I will, selectively, go back and read the answers of others). I hope I am not reiterating anything that has already been clearly said, but I would like to answer the question (as a psychologist and empiricist), with just a single question:

If we can observe, study and contemplate (the organism operating in its environment, i.e. our subject as psychologists), and proceed and investigate as good empiricists and thereby find a way for ourselves to both know and be able to convey to others "what all" is involved in consciousness (OR how to clearly be empirically moving in that direction), then how is it we would not simultaneously be informing AI people what capacities and perceptions, objects of attention and capabilities and memories-there-are resulting and conceptions that are necessary for consciousness in a machine?

P.S. It seems to me that if a computer had this consciousness yet better used and developed all its very much human-like capacities and abilities in useful ways, it could well inform us more about ourselves and some great possibilities. If it not only had our capacities and abilities, etc. and thus consciousness and yet was set up to think just "like us", with no better observation and judgment (which would not be the case), then it might very well commit suicide -- perhaps as a short-cut to save time.

Dear

I have now read most everything. I submit (as I have before) that consciousness is not difficult to define, IF ONE

REALIZES THAT WHAT IT IS IS USED IN JUST ONE VERY LIMITED SET OF KNOWN CIRCUMSTANCES AT A TIME. It is basically synonymous with being deliberate [or "self"-controlled -- though very likely NO often-hypothesized META CAPACITIES ARE NEEDED, with otherwise-possible good empirical understandings (with known OR moving-towards-being-known direct proximate causes) of the various capacities and abilities actually involved (as involved) <-- something I have already tried to clearly outline (and thus enable) for AI (see my Projects and some of my other Questions and Answers -- under Profile, under Contributions)].

If you try to define consciousness beyond this, you are going "beyond yourself", which is a way of saying you are being irrational. Empiricists must always know not to "bite off more than they can chew".

P.S. I would never "try to duplicate the human brain"; a psychologist tries to duplicate actual behavior as it actually occurs, in the actual world. (Brain science has just provided good -- and perhaps needed -- hints for poorer behavioral scientists (though any confirmations are nice for all of us).)

Dear

I hope this does not seem to speak too poorly of me but: I have no real knowledge of (or even a qualitative appreciation for) quantum theory. I do understand Newton well, though.

I have never suspected I was ready to bring physics into the behavioral science I know, especially since I am not even at the point of being able to bring mathematics (per se) into it. I thus never imagined I would need to know (or benefit by knowing) that physics.

I am a total non-dualist and also a no-souler. See my: <https://mynichecomp.com>.

What I would really like to encourage people to read (in addition to my brief overall outline of cognitive capacities) is:

[https://www.researchgate.net/publication/286920820 A Human Ethogram Its Scientific Acceptability and Importance now NEW because new technology allows investigation of the hypotheses](https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses)

Dear

[https://www.researchgate.net/post/How can good true empirical psychology alone make it more than plausible and very likely that FULL true artificial intelligence is possible](https://www.researchgate.net/post/How_can_good_true_empirical_psychology_alone_make_it_more_than_plausible_and_very_likely_that_FULL_true_artificial_intelligence_is_possible)

Is AN ANSWER, NOT A QUESTION -- sometimes one asks a question just to have the opportunity to [right away] present what one sees as a good answer. The psychology I propose is a new perspective; you will not see the dualism and limitations you likely see with the present prevalent approaches.

You should be able to see that I disagree with all of the following, you say (quoting):

"Psychology would play no role in engineering a strong AI. We can build parts of cognition that yield a unique psychology that is different to human psychology.

The essence of strong AI is consciousness and not cognition. Psychology is a manifestation of the latter and not the former." (end quote of your remarks)

----- My responses:

In fact, though psychology now is off the mark, I don't think what engineers build which will be good AI will not involve good psychology itself (that will be different from present prevalent psychology perspectives and "approaches") -- but as I outline it in many posts here on researchgate (and as described at : [https://www.researchgate.net/post/How can good true empirical psychology alone make it more than plausible and very likely that FULL true artificial intelligence is possible](https://www.researchgate.net/post/How_can_good_true_empirical_psychology_alone_make_it_more_than_plausible_and_very_likely_that_FULL_true_artificial_intelligence_is_possible)). The psychology perspective and approach I propose involves centrally (at the core -- at inception of qualitatively new behavior patterns) overt behavior patterns as observed and always in response to clear aspects of the environment (also observed) -- as you can see reading my ANSWER, referred to above: both the behavior patterns and the aspects of the environment may be very subtle in the organism in later stages of its ontogeny. [(In my view, there is no brain science, no physics ... and a need for NEITHER; psychology is to be the EMPIRICAL science of behavior in response to the environment or consequences therein. Other not observably related sciences are off-topic to me -- no matter what any "ultimate" analysis may seem to require; those things most certainly can wait.)]

Consciousness is basically deliberate ["self"-] controlled cognition [(but with no self or any meta or executive processes involved)].

Dear

You will have to be much more explicit. Although I have heard of Searle quite a lot, I have not read him. This is what you have to "spell out" among other things OR I "will not understand what Roman said". I will say though, that no philosophers' opinion(s) OR even past findings (not taking a thorough and completely strict empirical perspective as their bases) will have any bearing on my view (which is fully empirical and seems unlikely to be countered). Phenomenologically there is no clear reason (AT ALL) to try to define consciousness in general; it is rather easy to define in any given circumstances to which the organism responds -- and THIS MORE THAN SUFFICES **. You seem to seek definitions (understandings) "up front"; this is NOT the way it works (and I mean that literally):

I seek to discover and then understand; never the other way (i.e. I am against any big understandings BEFORE basic research -- which, in the beginning, is observational).

My big summary exposition at

https://www.researchgate.net/post/How_can_good_true_empirical_psychology_alone_make_it_more_than_plausible_and_very_likely_that_FULL_true_artificial_intelligence_is_possible

describes HOW robots WILL HAVE OUR PSYCHOLOGY (and I have provided about 500 pages of further explication -- see all that).

People must quit trying to use their thinking too much in advance (at all); our thinking is limited and will be incorrect UNTIL VERIFIABLE FINDINGS GROUND THEM; to do otherwise is to have certain errors.

** FOOTNOTE: I also have a clear conceptualization of how a robot could have a conscience too, but you simply will have to do a lot of reading and reflection to understand. I AM REALLY TIRED OF BEING TOLD WHAT-CAN-NOT-BE, when it never has been on good bases.

Dear

I believe EVERYTHING begins with good, reliable, replicable OBSERVATIONS -- no exceptions (though gaps in

theory may imply new phenomenon to be investigated). This, what I just said, (as I understand things) is simply the view of any good scientist or empiricist. It is a necessary empirical view -- IT IS * THE * EMPIRICAL VIEW. One does certainly take into account all the strong direct empirical findings and all the good direct observations of others (of different or historic theories) AND apply what necessary assumptions one must -- all this does provide some structure to thought and informs where to look at the start, but whenever necessary AND OVERALL, one "starts again" WITH OBSERVATION.

P.S. Language is tough; fortunately it is not necessarily nor the first things "behind" thinking (at any stage) -- thus problems in a study involving language would not interest me. Language is a capability good for division of labor; much of its development occurs starting in the same way and progressing in the same way: it has very significant "built-in" aspects (at the start AND in its development). (see Chomsky; see Piaget

You say: "the empirical view without theoretical concepts is indeed blind". Fine, GOOD. BUT those concepts must be completely related to (in fact, fully-grounded in) directly observable empirical evidence SHOWING proximate causes (or clearly as close as one can get), with good, agreed-upon, highly-reliable and replicable research findings (e.g. such as those about our memory capacities and capabilities). AND YET, quite possibly, one shall also need to clearly provide a way to find the additional directly observable empirical information, to complete any proper holistic (reasonably full) view of the subject matter and to cite more(other) proximate causes (what will be directly observable behavior-and-environmental-aspects clearly associated with behavior patterns and behavior change), which one expects to be able to find (or such that others can find). I clearly point to some such greatly needed additional information in my "A Human Ethogram ..." AND I have argued (very recently) elsewhere (in another Question, with an answer) that all other psychology perspectives come up short without this additional perspective on the likely innate guidance (innate action patterns) BEHIND significant NEW qualitative types of learning and thinking (and here is something you should care about: there is no hope in psychology for any direction for AI without these additions). This points to the need to use the new eye-tracking technology (and associated computer analysis software) -- something that will provide the clear, directly observable findings (hopefully reliable and which can be agreed on, replicable). This is the way to be a real empiricist and have then your well-based theoretical concepts -- you DO have to properly EMBRACE the Subject as a first consideration. You cannot just "run with what you have" if it is incomplete OR not meeting the high empirical standards. BAD (poorly based, poorly-founded) concepts are less than no good -- they are destructive. This is the view of an empiricist, and all good scientists are good empiricists.

An organized collection of good concepts is coherent and THAT is a theory -- you are not going to put 'concepts' together haphazardly (the coherence "tells the story", and the "story" IS THE THEORY).

Dear

[I may not know how 'they' all work, but I know how those developing good theory work correctly to do so.]

An organized collection of good concepts is coherent and THAT is a theory (see the last sentence added to my

last Answer, above, for a bit longer version of this statement). I cannot understand how you believe any THEORY which is reasonable can exist (AND PROVIDE FOR MATHEMATICS) without clear UNITS (and even clear relations between those units) -- finding these is ALL BETTER than anything OTHERWISE you might refer to as "concepts" or "theories" -- and finding real units and relations will provide for REAL concepts and theory.

About "quantum": Isn't this starting out with the most indefinite view (not to mention it is off-topic)? What makes you think psychology needs any such view, when even a good grounding and basis to psychology is YET to be provided? AND someone (me, myself) has pointed the way to providing that. I doubt that once that is achieved (and to any reasonable empiricist, it has not yet been achieved), THEN we can see if anything of a "quantum" nature seems necessary, good, ...

(See the Publication, cited in my last Answer, above, for more.)

P.S. If you want a clearer path to AI (than ontological), see all my postings on this and see the Project: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

Dear

This post will actually be ON new architecture (getting there) -- so it is on-topic; you cannot just sit down and cogitate and do it, though, no matter how clever you are or how big and complex a system YOU devise. An idiot could do better than that (with a good perspective).

Unfortunately, AI people can not seem to do better than the psychologists in understanding the real empirical, biological system of the human being (via a good perspective).

On the other hand, the issues are rather clear and the problems with getting a good overall understanding (at least an idea of the real nature of the "container(s)") is not hard; the hardest thing may be to break away from 'assumptions' (beliefs): and once these relatively VERY little things (but with a lot of ramifications and implications) are properly evaluated and alternatives (more biologically congruent) are examined and used for perspectives with clear DIRECT empirical hypotheses which can be tested, you are "off an running". That's ABOUT it. It is about as simple as that (but, a clue: there is an important basic thing yet to be mentioned -- in this briefest outline -- in the last paragraph below). Not only psychologists can do it. AND: Do not "forget" there are new technologies which greatly enhance observational capabilities (eye-tracking, etc.). I guess my

real message is that it is not very hard to become a better psychologists than the psychologist themselves (and sure as hell do not listen to most of them). Psychology from the perspective I take has barely started (FOR EXAMPLE: do you really think the simple types of learning and the vague "social learning" are really all the sorts of learning which should be identified and 'typed' (classified)??? -- of course not). Also, psychology needs to basically start over (starting over is not a bad thing: no notable findings get thrown out; you do not have to do everything over again); the new technologies alone are a good reason to start over. I believe many fields or at least sub-fields "start over" and it is a good and even a natural thing to do.

THIS IS THE OUTLOOK TO HAVE TO FIND THE _WAY_ FOR A DIFFERENT AND A WORKING ARCHITECTURE FOR YOUR TRUE AI robots ! (Don't my hints give you a notion that indeed YOU can do it?; BUT, don't invent anything, just learn all the ways to discover and what can be seen with a DEVELOPMENTAL perspective (in terms of ONTOGENY, if you like), congruent with good assumptions ON what you can _see_ (hear too, etc., if you like) directly in front of your face, as far as human behavior is concerned; then replicate that. That's it. (and my big "A Human Ethogram ... " paper can help). As far as I can see, AI people are provided with the full kit for a whole new perspective, that will allow one to build a whole new and different sort of architecture. Here's another snippet, I have shared with some AI people: "It is not 'developing' "learnable attention", but discovery of what makes for good 'attention-for-the-learnable"; this I believe is another piece of the new perspective.

I hope I have provided some encouragement. I am really trying to help AI; I put "more stock" in people concerned with (and doing) AI than in psychologists and I have been striving to actually help YOU -- both individually and as a group, for several (many?) months. SEE :

<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

Dear

I might be hard to understand because I am different, but not because I am "off" or wrong.

You seem to both think you HAVE defined (when it is questionable) and must define, either by yourself or "off the cuff", or based on existing thought systems, OR have things defined for you in such similar terms, before you can proceed. (To me that all "boxes in" the possible visions of architectures and damns them to be of the same inadequate nature as they have been.)

I am trying to say LARGELY: NO, don't do that to many of you inclinations (though some may even be over-learned (fixed)). Let's just look at some of your statements and see if any clear, definite conclusions about programming could ever reasonably come from them: (quoting you, and highlighting the more-than-questionable parts):

You say: "intelligence and consciousness are products of evolution so vestigial (ontogenetic) paths from earlier species track through other species and will be found in consciousness." I strongly submit (and it should not be hard to take my position) that "NO", we cannot do any such things: in particular: well-envision/imagine evolution; well-envision/imagine things as they were in earlier species (somehow), and going from there (somehow); and then finding that in the present human mind in consciousness. None of that is reasonably possible in reasonable, empirical terms. If you have trained yourself that this kind of artificial super-knowledge is something you can actually have, no matter how ingrained it is, THAT is a problem.

You say: "progress from primitive life to us requires interaction with a consistent (ie over long time intervals) environment". It should not be hard for you or others to see that it is very, very unlikely that you could track any such PAST consistent interactions (and THUS even more unlikely you could imagine them). [The last sentence of the paragraph above could be repeated here and could likely be added to most of the paragraphs, below.]

You say: "To sense that environment and remain viable needs what some form of feedback based control." Well, this sounds good and I do agree, but NOTHING you have said has anything to do with HOW to do that feedback and what it would look like. Two big indicators of big related problems people have (and perhaps, quite likely related to YOUR unnecessary--thinking-in-advance problems): (1) Do you think in terms of distinct separate behavior OR behavior sets which you define _OR_ do you/ can you see behaviors as in behavior patterns of the organism itself? (2) Do you see how the organism itself is presently impelled towards having certain new perceptions and objects of attention (interest) ITSELF OR do you define "the stimuli and the stimulus sets worth noting"?

Then you say: "Then comes the problem of consciousness itself - I suggest internal feedback can identify self and hence feelings about self" [somehow related to consciousness, which you otherwise have trouble defining]. I have learned as an ethologist of 35 years that consciousness is NOT A THING you can understand all at once -- it cannot be defined, in general AS something; it exists with responses as part of mind-moments in a given set of particular circumstances AND when you view this way it is then NOT HARD at all to relate it to deliberateness (including broad senses) and in a given circumstance/instance IS NOT EVEN HARD TO DEFINE. You are simply doing the wrong thing and attempting the impossible.

You say: "The computer architecture is remarkably deterministic and that is its value." No, that is how all the architectures SUCK (being "deterministic" as they presently are) and are inadequate even with the great power of Big Data you have.

You say (though part of this I am unclear about): "Data in the brain appears to be essentially state based (since we do not appear to store explicit representations (i.e. encoded form to be released on applying and address)" [It is the parenthetical I do not have a for-sure understanding of what you mean.] BUT: There is representation and it is solid and reliable enough to build upon, so we can think in terms of many object relations and in terms of systems (our memories bring forward such representation for us to integrate with new things) -- speaking this way is seemingly beyond question. That response is state-based is not alone objectionable, but it depends on how THE ORGANISM comes to and SHOWS what state it is in (in is not for you to try to define 'states' in-advance, though go ahead and have your guesses -- but research and discovery is what is necessary).

About " path to coordinated responses" ; given your likely frame of mind, I would have to stress that by-and-large the organism comes INTO any new situation ALREADY WITH most of the coordinated responses already existing. Think: BEHAVIOR PATTERNS. Also, to justify my view: if you know the nature of human memories you would know that in some sense it is a very paltry amount of "new data" the human can newly incorporate at any one time (heck, we can actively think about things, in the more sophisticated ways, ONLY using about 4 "chunks" at time (if you are not familiar with "chunks" and re-chunking, then think of a chunk as a set of represented circumstances which is already known and/or having known features)). One MUST think in these terms; these memory findings are the strongest and most reliable data in all psychology (outside of maybe the very simplest, most-basic types of learning).

Finally, you say: "So my real problem is getting people to see it my way. That may be because they know better." About the first sentence there: The problem rather is for getting people to see 'it' MY way (Ethogram Theory: based in direct observation of proximate causes, ultimately -- and always effectively pointing in that direction). About your second sentence, I agree and consider myself the best of behavioral scientists, i.e. an ethologist, AND the strict and most-complete and most appropriate empiricist : actually seeing a full empirical and testable (verifiable) science in behavior-and-environmental-aspects itself, though necessarily learning about and knowing and considering what has developed during ontogeny (obtained largely, again, through DISCOVERY) -- this IS decent psychology. This yields very good (moving towards complete) empiricism -- and THAT full, complete empiricism is exactly what AI need for new architectures. If you understand all the situations, response, and processes in (at least ultimately -- or moving towards that), then you have what can be replicated anywhere, including in a machine.

[There are some assumptions more-than-prevalent in our society, which must be over-come (understood to have no good foundation and as baseless) to have an outlook to actually discover behavior PATTERNS as they are and the key aspects of the environment. Let me just get to the "upshot": we have to (MUST) become aware of, and come to see, IN behavior patterns observable and in related clear aspects of the present environment: behavior SHIFTS (though quite likely subtle late in ontogeny); these ARE innate action patterns at work and are very important; they are vital and guide basic perception (not always the type people think of BUT this type HAS been quite well-defined (by Montemayor and Harry Haroutioun Haladjian)) and guides attention and guides learning (in effect being part of / IN any significant new learning from its inception (simultaneous to learning to such an extent that it is essentially "mixed in" with any new learning process -- learning has shifted,

right away, WITH new perceptual/attentional shifts).

Several of these views are not the standard views, but the standard views are wrong. See "A Human Ethogram .." for as much of a proof as words alone can provide -- then follow that with discovery and know for-sure.

[If you want to "enlighten" me: tell me what the heck, in direct observable (empirical) terms does quantum theory have to do with behavior: how can anyone see you as doing anything but "reaching".'/grasping'?]

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Article: A Human Ethogram: Its Scientific Acceptability and Importance (now NE

Dear

I am pretty well happy with how I addressed your thoughts before. I find your application of vague ideas to understanding (understanding of what have to be particulars) or your application of un-clearly-related (or unrelated) particulars to understanding, JUST PLAIN WRONG. My use for the word "tracking" is : in terms (always) clearly related to direct empirical observation of PROXIMATE cause(s) -- or at least clearly making a good attempt to "point" to these; this is not your sense of "tracking" and anything other that the sense I use the word I see as UN-empirical (and bound to accrue errors and confusion). It is important to be an empiricist, and you are not one.

P.S. Many say many higher mammals clearly act WITH consciousness (see: de Waal's "Are We Smart Enough to Know How Smart Animals Are?"-- as a way to have expert citations here, including clearly related excellent experiments).

Many seem to over-love "quantum mechanics" and want to over-apply it BY-ANALOGY. By-analogy is recognized as something you should NOT do in science; and if you do use analogy (e.g. "information-processing theories") in psychology or any science, you MUST always keep in mind that it MUST be temporary -- and you most certainly should not be tolerant of expansions of such thinking.

[I do thank you for likely putting a lot of time into responding to me.]

Dear

If you are getting billions into your venture, I guess I should ask you what quantum dynamics has to do with robot consciousness, in the sense of true AI (if anything) (please try to describe this richly and clearly in layman's terms HERE, if this is what you are talking about). (Consciousness as part of any behavior pattern, in any given situation and set of circumstances, never seems difficult to define; and since we move from one such behavior pattern and set of environmental aspects and/or clearly environmentally-related aspects* to another, where it again seems similarly easy to define consciousness, I do not understand the problem -- for regular true AI, anyway.) Perhaps you are seeking some improved consciousness (?) (perhaps this is what "From artificial consciousness to conscious robotics" indicates). If you want to improve on something very much like the nature of human consciousness, perhaps you could also well-describe and explain the improvements sought.

* FOOTNOTE: I write of "clearly environmentally-related aspects" because I want to include DEVELOPED and what has become quite reliably represented and SET behavior, being (then) and enabling, essentially-covert thought : where behavioral signs may not be measurably different or may well be very difficult to uniquely distinguish. This retains the clear connections to environmental aspects, as defined in connection with aspects of past overt behavior patterns and their environment (and behavioral change), even if the once directly observable behavior patterns-and-experience are subtle (these are distinguishable for what they are, with close observation, indeed perhaps involving eye-tracking technology). This is as an empiricist wants to do (retain the clear connections there are OR have been between clear environmental aspects and distinguishable behavior patterns -- and, of course, their changes -- and then having (retaining) some core basic knowledge of the nature of what IS that has become covert).

Dear

I think what we need is NOT "downward causation", BUT to _SEE_ forward causation -- seeing then the correct application of behavior patterns to, and behavior change with/by, clear environmental aspects; to wit: we are almost certainly significantly guided at each stage of ontogeny with innate action patterns [likely manifesting as perceptual/attentional shifts, to begin with, these basically (in effect) occurring as part of the behavior pattern ITSELF (new aspects) at that point]. Not having such things is biologically unlikely AND requires you making the direction of behavior pre-determined at least in some significant regard BY YOU (which should never be the case, because the organism/environment should show us EVERYTHING, at least at one point or other during ontogeny *; WE should OTHERWISE be defining nothing; we just recall the 'definition' of what we have seen and what we have seen over time as a whole functional system develops, each aspect always, at least in its inception, in clear responses TO environmental aspects (<-- some detectable and present, proximate causes)*).

We should not ever make our own hierarchies no matter how sophisticated or open or supposedly "tested".

Discover, learn how to discover, then discover some more (a hierarchy will no doubt be there, we will see the evidence (in behavior-patterns-in-response-to-clear-aspects-of-a-present-environment), THEN we will say so). Some covert behaviors (representation and thought) will develop with some of the more reliable behavior pattern changes, and then THAT may be a factor in further ontogenetic development and changes (and we will know of them and their involvement with the knowledge of the previous developments, observed *) . All this "forward motion" has hopefully very little to do with how we think things out in-advance; we ourselves will determine next to nothing.

* FOOTNOTE (* for this footnote, used three times, above): This may be subtle and involve the new eye-tracking technology, etc.

Dear

If the "Schroedunger wave function" does all you say (and that is a LOT), why have I never seen a single psychologist talk, speak, or write about it (it really should be "all the rage", if it is as you say)??? (Psychologists would take note of tremendously productive AI.)

Again, I am STILL having problems with YOUR need to determine and control to make artificial intelligence "bettter"(?) : here, in this last post of yours (above), you say: "using different kinds of memristors, we can create as many levels in the hierarchy as needed." (OR perhaps, I am a bit "off base" and RATHER you are meaning to indicate that the AI robot itself can make its own new memristors, as needed ?? -- though that is not indicated by the word "we".) (And what the heck is a memristor??? -- perhaps some special kind of resistor or transistor?)

With respect to "executive power": "executive processes" are always clearly a homunculus -- a "man-witin-the-man" (and thus a more obvious sort of needless wrongly posited process). So, just on that basis your "Schroedunger wave function" sounds "fishy".

The organism has its own guidance to develop and expand ways of learning. There is a way to see this empirically, if you take a developmental perspective and know how to look (some set of hypotheses of the nature I have described are NOW testable/verifiable -- though modern eye-tracking technology will likely be required).

What is consciousness? What is its nature and origin?

Dear

I will not be able to read the already 1200 Answers, but I thought I would share, just because it is a matter that gives me no trouble as I think about psychology and in psychological terms. You ask: What is consciousness? What is its nature and origin?

Well, I will address what it is for; that will indicate its nature and imply its origin. Consciousness exists for 2 reasons: (1) when you need to know something in a given circumstance, such material triggered from the types of memory I shall note in a second comes up (a lot of this people believe much of this is unconscious, and some may effectively be, but it is at least often better to consider this non-conscious material from episodic and personal, visual-spatial, declarative, and procedural memory, as PRE-conscious: you could likely be aware of at least much of it, if sufficiently and properly prompted and primed). (2) There is the consciousness of deliberation (this is often called working memory) and though it is contextualized by a great amount of the stuff already mentioned (the sorts of memory already listed -- as triggered by each aspect affecting others, and as it is also, of course, dependent on current actual context of what's in your environment) and the limited number of things on which you can expressly deliberate on (7 ± 2). It is also depending on what gets through the episodic buffer, and inhibition processes to allow proper focus on the proper things are also involved (and this uses some of that limited capacity). YET often the most important thing about this type of consciousness is indeed the 7 ± 2 "chunks" you can manipulate clearly to deliberately think about "however" -- and wherever it comes from. (Fortunately, There are also automatic rehearsal loops that get involved for stuff you need to know, including, for example, the phonological loop for language aspects but also for spatial and numerical stuff). And, ways of dealing with information you have over-learned and proceduralized also aids and expands the processing of which you are capable (but this is not so deliberate) and this and "old chunks" of declarative (conceptual) memory (much of this which is not deliberate) can be re-worked IN the deliberation process (including the new content there) to create somewhat different "chunks" and this allowing for the contents of this consciousness changing; activities you do in the present circumstances also 'help' this and make for change. This is basically my understanding.

Should humans develop machines more intelligent than them?

Dear

My answer is a big "yes"; if the focus is correct (and maintained) we could learn in rather general (generalizable) ways how to BE better. See:

https://www.researchgate.net/post/How_would_an_AI_robot_with_all_useful_human_abilities_and_human_capabilities_differ_from_a_real_human

How do you make learning interesting?

Here is how I made it interesting (I was a college instructor): By letting everyone know that learning is NEVER just the simple process they imagine (not in any significant circumstances anyway).

Paraphrasing Lorenz (from some text): "This means that to predict behavior in natural conditions it is necessary to know what the animal's innate perceptual and behavioral instructions are (as in Uexküll). In the same spirit, he claimed that without the notion of innate blueprint it would be impossible to study learning (Lorenz, 1965; Lorenz in Schaffner, 1955, p. 144). His argument is that stimulus association needs a releaser to which a conditional stimulus can be associated, and that random response variation alone is improbable because learning almost always results in adaptedness."

Dear

You say:

"the principle of associative shifting implies that we may 'get any response of which a learner is capable associated with any situation to which he is sensitive (p. 36)". Well, that may be what it says but I do not buy that at all (BECAUSE I can't translate it); it just puts the problem (of us 'knowing it all') "off by one step", but it is the same problem: SPECIFICALLY: HOW DO WE KNOW THE "[the] responses of which a learner is capable"? How do we empirically know what the learner's interest (or schemas) is/are (OR their 'core sense of self', which I think is actually a destructive concept)??

P.S. "A Human Ethogram ..." proves me to be an empiricist who would put any behaviorist to shame. Skinner was ridiculous. My paper is inclusive (holistic) and, though crudely, outlines the overall right way -- explaining major "containing" behavior first and EMPIRICALLY (there is no pure abstraction, just like there is no pure learning). (I will not re-attach "A Human Ethogram ...", because I attached in my post above. But: see that.)

Dear

I appreciate your further thoughts and understand. I hope (as such a skeptic) that I have NOT caused you to feel any disrespect. I am crabby and at "the end of my road" and sometimes reflect some frustrations. You may contact me, in any way you may like, but unfortunately, you will find I have little more to offer to direct observations than I have put in my 2 long papers. I had very little research experience, and that was very long ago. I most certainly do not have what it takes to better answer questions I know I pose in those papers and, given my retirement and other factors, there is no hope I ever will. Just to keep expectations low, as they should be w/r to myself. But, I welcome interaction.

Are programs of animal and human behavior innate or acquired?

WHY are there still constant questions on learned vs innate?? During very important developments (during/with/as ontogeny), behavior change is likely BOTH (in effect) AT THE SAME TIME (I mean literally, not just the effects of each at the same time: BOTH OF EACH operating AT THE SAME TIME).

See "Human Ethology and Development" Project. Read a lot of the short essays (from my updates, question-and-answers, and comments) and then read the 160 page paper attached below ("A Human Ethogram ..."). And, many might want to read the associated 40 page paper, "Information Processing Theories and ... ". NO one has contradicted the view of these 2 papers for months, now, and in the years before eye-tracking technology, no one questioned the view for DECADES.

(This Ethogram Theory should be considered NEW, because ONLY recently has there been the eye-tracking technology in existence to test the major hypotheses.)

We have all just been subjects of 2 great myths: (1) 'advanced' organisms have less innate and more learned (just really a presumption, based on nothing) and (2) all innate factors (including, in behavior!!!) are present at birth (VERY unlikely, and again NO REASON to believe this). I submit that both are FALSE (good evolutionary behavior theory, and ethology argue against those presumptions).

Dear

If you are asking me. Outside of periodic innate perceptual (perceptual/attentional) "shifts" (seeing basic "patterns" in the concrete world) and the several extremely important MEMORY capabilities/capacities involved in learning, the other mechanisms involved are simply the simple associative learnings, we all know so well. Basically, those 3 classes of things is all that is necessary for Learning (big L, if you like) and knowledge and cognitive development. BUT let me add: Emotions also do help and need to be "worked in there", BUT that is easy since the patterning and functioning of emotion, seen in any major context where they work, is easy to see and assess.

can science and religion unite?

I see "religion" and "spiritual needs" as just a continuous way for self-improvement without conventional limits. Any existing body of science does not do that job.

BUT, it is possible to have a continuous development way-of-life and have that be completely rational and realistic (fully grounded, or quite possibly so, in the real-world, i.e. all premises potentially, eventually testable scientifically).

What I see as in this role is rational/realistic Buddhism, which loses very little or nothing when just the rational/realistic CORE is found.

I have read all the historical words of the Buddha (the Pali Canon)(except for the work just for monks, i.e. rules for monks per se) and I have provided the comprehensive summary of all of that. (<https://mynichecomp.com>) (also see my "Core Buddhism" Project here on researchgate.net).

Perhaps, now, more directly to the question: "can science and religion unite? ": When I developed the Ethogram Theory of cognitive development ("A Human Ethogram ... "), I was already and completely a thorough-going Buddhist, and I every moment felt like this was a great help to my thinking process, yielding a new scientific theory (see "Human Ethology and Development" Project here on researchgate.net, and the aforementioned paper therein). Thus, as far as I was concerned science and a way-of-life ("religion") were uniting/united at all times (thus: united). [(Of course, "unite" does not mean: "be the same thing".)]

Einstein liked Buddhism; perhaps he would approve.

What makes us human?

My best guess about what is unique about humans, compared to other apes, is that we use abilities to conceptualize hierarchical relationships outside the social setting. Though apes may have most of the kinds of understandings: representations intelligently combined and basic conceptual abilities (including some notable understandings of hierarchical relationships), humans use these not only in the social circumstances (for understanding) that come up, but also in a much more generalized way "out in the world". It is likely humans have also developed perhaps one extra stage in cognitive ontogeny (my best assessment is that humans have 5 major stages of cognitive development during ontogeny -- this is consistent with the two major sorts of overall theories of behavior (aka "personality theories") that are stage theories).

What is the role of imagination in scientific advances?

Dear

I like Einstein's quote, but perhaps the issue quickly becomes: how to foster imagination. I personally believe the way to foster imagination is to ardently strive to "see things as they really are", as the Buddha would say (and progress to get there in the way he would mean it). I believe you progress towards this by developing the correct objects of concentration and contemplation (very often 'mental objects' too -- aka concepts) and you no doubt see that this happens, or it comes to happen, in a natural, appropriate progression (I suggest good observation, strict empiricism). You do THIS by using inductive processes a lot (and, as I have said many places: use hypothetico-deductive (h-d) processes ONLY when forced to). Though h-d processes may be a VERY good thing when really appropriate (necessary), they must certainly be applied at only the correct times and "places": this would be where the Buddha would say you should see causality (often called "dependent origination"): this is causality which is (1) non-personal (non-self, unbiased, but by the perception, thoughts (volitional formations) feelings, etc. which YOU KNOW, i.e. are aware of); and (2) this NOT the end you ultimately seek (thus it's impermanent, because you seek better and seek the ultimate end -- which is where you have nothing left to know and thus experience the great 'emptiness' which is nibbana); AND, (3) the causality you know "along the way" is seen or experienced as unsatisfactory ("suffering", dukka). [Perhaps this is an outline of 'the scientific method' as much as anything -- certainly much better than [just]: "you have hypotheses related to the view and findings of others, a good sample, an experimental group (with YOUR concept of what is 'really vital' being applied), a control group, and statistics".]

(I might note that Einstein rather liked Buddhism, but did not show any great understanding of it. Since researchgate.net -- in pop-up prompts -- urges one to state his "relevant expertise", I guess I can tell you I have been a Buddhist for 44 yrs ("feeling" it) and have read the entire Pali Canon which is all the words thought to be of the actual historical Buddha. My site: <https://mynichecomp.com> is my Buddhism site. But to see the real fruit of my efforts, see: " A Human Ethogram ..." in the "Human Ethology and Development" Project. The fruition is what counts.)

I believe that appreciation of human cognitive limitations is important (e.g. there are known limits to the number of "chunks" a human can 'work with' deliberately in working memory at once -- that is a big one). So, if you think about too much at once, your thinking will be skewed or not clear. You can never set up your theory or your attempts to find progress that are counter to this. // Also, a good but briefly-expressed, clear, rather simple (but appreciable) theoretical point of view -- appreciable for the potential of what might follow (and NOT expecting anything like 'everything' "there" from the start). Relatedly, for good science are some essential characteristics. The two big parts of this are real (well-founded) true, appropriate, necessary ASSUMPTIONS (which you always abide by), AND always having some clear links AT SOME TIMES of all constructs to direct observations -- specified times when there are directly relevant, expressly overt counterparts; AND you must

have indirect ways to assess the contexts and effects of all relevant, important behaviors that have become covert AT ALL TIMES; and there ALWAYS should be some identifiable proximate cause(s) of behavior or behavioral progress, which are directly observable in all your research at ANY and EVERY given point -- a sufficient set, as would be necessary (given all important phenomenon and necessary assumptions) (never: none): ALL this for actual EMPIRICISM. This tells you the way your concepts MUST be.

Thus, for me, imagination that allows one to see and realize the power of "the right stuff", rightly done, is the imagination I believe is most important -- no other "impressive" characteristics necessary. (Thus, I would say I see imagination as very important -- for proper assessment up front and with progress). I have tried to express the application of this simple thinking (and the related, essential principles) in my essays on psychology (general/developmental/personality) -- about 65 two-page essays, here on RG, at this point. AND: I will attach an BIG example of a clear, simple, theory of cognitive behavioral development (with appropriate assumptions and real empiricism) -- also, it begins with putting classic and major "mistaken" theories in perspective first (or at the same time) as outlining the new view.

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Article: A Human Etho

Dear

I think perhaps a more important (related) question is: when should experiments be done? I am big on inductive work and actually believe hypothetico-deductive system(s) should be formulated ONLY as absolutely needed. <-- And, it would be after that, experiments would be done (given the inductive work, done first, one can expect good necessary assumptions to still be being applied at this point).

[Before experiments, there is inter-rater reliability -- and there is nothing wrong with that (in fact, usually the standards are much higher for this than $p < .05$) .]

After (1) immersion in great descriptive works AND (2) direct systematic observational works (studies) on the subject ('systematic' in the sense of "system-seeking-and-seeing" [(since you are studying a biological creature you should expect to find reliable behavioral patterns in good worth-reading, involved studies)] -- AND all this is at least very largely NOT hypothetico-deductive-system-related); next (or during (1) and (2): (3) after all this

study of what has been written and done, it will be well-related (or clearly somehow related) to good, real (or what would be real) observations (in some noteworthy part BY YOU): THEN: (4) I believe some intuition, actually insight (in the sense of very educated, and thus motivated, "gap-filling" 'guesses', based on your best established personal* (<- see footnote) knowledge, ordered in your mind with its relevance to direct empirical observation (or clear implication thereof) always in mind, along with keeping all else that is empirically relevant to any given key circumstance of the organism, by-importance, in mind) is likely essential for good progress ('important' as well-determined -- in the context of all the instructions here). This is a highly INDUCTIVE PROCESS (and should be seen as consistent with my first of three posts on this Question):

Again, this sort of seeking-to-fill-"gaps" has little or nothing to do with any old or new hypothetico-deductive system -- UNLESS there is some such system that is well-established and fully related to observational phenomenology (at present in general (developmental/personality) psychology, there is VERY LITTLE OF THIS NATURE -- just a most sketchy outline of such a system (though usable) <-- I have described this in other posts, along with adding-in true necessary biological assumptions). As the knowledge of observation and clearly observation-relevant knowledge is ordered together consistently in your mind, your conceptualizations always and at each step being done with a constant reference to all potential direct empirical phenomenology (around which your understanding is, in effect, ordered). No philosophical system whatsoever or any presumptions should be involved. Assumptions which end up necessary to understand (or progress) must be made should be agreed upon and apparent to all who are reasonable and always expressly stated, even if over and over.

****ALSO**:** (5) At each step in progressing with actual hands-on research there should be some extremely relevant directly observable empirical phenomenon (objective, reliably SEEN). This is also known as identifying a proximate cause. There must be some thing(s) like this present at each step of progress in your "hands-on" study and in real-time progress of your understanding -- which truly (organismically) is equally important to YOU and to what you are 'seeing'.

**** THIS SURELY CONSTITUTES THE GREATEST APPLICATION OF IMAGINATION ****, as I think you can see. It is in this way (above) I further address the question beginning this thread.

As soon as one presents a whole system to be used all at once, this is the opposite of what I have described and wrong -- unless that system comes from being worked-out, built , and established through the processes, described above. But, of course, (6) There is a place for hypothetico-deductive systems: as they emerge naturally, as NEEDED (as necessary: as you are forced to adopt one), and this for the ability to have continued hypotheses and furthering quality empirical investigations yet, of course, all while continuing to abide by the principles of observation and conceptualization described above.

* FOOTNOTE: "Personal" because you took responsibility for incorporating and ordering each and every bit of

the knowledge of empirical phenomenology, and after, in which you may find gaps -- taking responsibility for establishing clear findings supporting those.

To the best of my ability, I attempted all this (after 15 years of intense study of general psychology) in the attached paper (in Project: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>):

Dear

By "reliably seen", I meant it in the sense of inter-rater reliabilities (such as used in ethology): many different unrelated professionals seeing it as the same thing in the same defined circumstances (by the way, the circumstances should be as much defined by the organism as the behaviors (act. behavior patterns) themselves -- rightfully seeing behavior PATTERNS also is ethology: behaviors defined in the context of THEIR environment AND other surrounding behaviors of the same organism).

The inter-rater reliability concept also fully logically implies reliability in the sense of replicability.

I never meant just a person or some bunch of people. Maybe it was the "hands-on" that confused you: by that I meant professional people doing studies.

We cannot particularly doubt the human on agreement on clearly defined direct empirical observation (in particular and especially defined as I indicated ABOVE, i.e. BY the organism itself): in fact, less so than on anything else, for an empiricist. That is the foundation of all science.

Thank you for giving me the chance, though, of indicating the major role of the organism itself in defining behavior and circumstances seen -- that is a major contribution of classical ethology. [Recall that correspondingly ethologists think in terms not of particular behaviors alone, but in terms of behavior patterns - -- ALL VERY GOOD. This is a big part of how we can make the science of behavior, basically a biological science, really VERY objective, approaching that of physical sciences. There is a way of relying ON THE ORGANISM (the subject), and thus, in a BIG sense not on the human -- that would be the researchers.]

I suppose I would like to say what I have thought for decades: Good psychology would be ethology (and read my other posts to learn that ethology IN NO WAY de-emphasizes learning (<-- a lousy ignorant myth); in fact it is VERY arguable that ethology and ethologists would likely better see learning -- a lot of it, more or it, and more than those of other approaches see !!).

P.S. [rant]

Professors so often let us down: the way we educate professors, we end up with quite a lot of "Trumps" or highly paid parrots. Professors never appreciated all ethology provided (major things, indicated above).

(I have known Ph.D. psychology instructors that basically just memorized what they were "taught": they lacked self-satisfaction in their work as much as these cynical people lacked spirit for their students; you could have easily programmed a robot to get most of their responses to questions and 'issues'.)

A similar example (of gross ignorance), in another field: NONE of my professors teaching existentialism mentioned Buddhism as existentialism -- and yet Theravada Buddhism is a thorough-going existentialism (the best and earliest).

Is consciousness scientifically ineffable or instead specified by content?

Dear

You say: "... By linking consciousness to content, and refusing to view consciousness as something that may exist independent of content, this view may also allow"

Isn't it ridiculous to even consider consciousness as independent of content? OR, of the environment, either, for that matter? How could it possibly be any different?: It couldn't be EITHER to an empiricist; MOREOVER: for an empiricist (and scientist) there must also be proximate causes (in the present environment (well-discovered and then well-conceived by the scientist)), i.e. directly observable and concrete, though these may be as subtle as a "perceptual shift" or availability of free "thought-space" ** (and related somewhat indirectly to the present environment EXCEPT it being of a nature so that you are not all "tied-up" with it).

Moreover (and relatedly): ALL the same positions hold for "abstraction" (aka "abstract thought").

Give that some good thought. PLUS, I must add: each new qualitative type of 'abstraction' (for an empiricist and scientist) MUST directly have a concrete referent (basic proximate cause) IN the environment IN ITS INCEPTION (otherwise you have lost the empirical foundation).

Until all this is recognized as at least very possible and as likely (and very good, empirically speaking and definitely "worth a try"), we do not have and will not have a science of psychology. (But, worry not, I have outlined such a science, see attached Publication and Project. If I have written well, this should all be clear; it would not hurt to also read my 150 pages of essays -- as Questions or Answers ("Contributions" under the Profile) -- which I have posted here on researchgate.net.)

See my "Human Ethology and Development (Ethogram Theory)" Project (<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>)

[**FOOTNOTE: Such free "thought-space" is what SOMETIMES can be ineffable. For when, you might see my other Project.]

Dear

Did you perhaps miss my post on this matter? I argue that consciousness is never not related to context and content and to the environment. It is reductionistic enough to be the definition in a science of psychology OR do you believe there is no reductionism in science?

Are homeostatis and cybernetics a control or control & optimization concept?

Dear

Let's NOT say "homeostatis and, behind it, cybernetics"; that makes no sense to me.

Homeostasis is control in intricate biological contexts, including that OF BEHAVIOR PATTERNS ** (behavior is

biological functioning). If we understand this (homeostasis), as in works in behavior systems (including IN conceptual systems -- including IN abstract thought systems), then you will have a better form of control to model. [There is much more gain to be had from this -- and more readily -- than from language modelling. (Language is very helpful but is, in a way, an add-on to basic yet very sophisticated abilities. Language is involved in the fruition of some cognitive abilities, but not with the basic understandings)] Homeostasis IS about control and optimization (adaptation is a form of optimization -- just ask Darwin).

Understanding behavior in a way you can see homeostasis involves a close understanding of behavior. This includes finding the perceptual/attentional SHIFTS which occur at the inception of new cognitive abilities (new behaviors and qualitatively new types of learning). A psychological theory which allows for this is ETHOGRAM THEORY (see "A Human Ethogram ... " in the "Human Ethology and Development" Project, here on researchgate). [This theory is in a sense NEW, since only recently can its hypotheses be tested, with eye-tracking technology, etc. This theory is thus not well-known (to say the least); one might say this theory has not yet been understood enough to even be recognized. So, be happy with this perspective provided because "new" is good when it would provide useful findings when/if the hypotheses are investigated and verified; the hypotheses are testable and can be shown true or not -- how difficult thorough testing would be is an open question.]

**** FOOTNOTE:** Display of real empirical observable behavior PATTERNS FOUND through research is TOO rare nowadays. But, such can be seen in the work of classical ethology (summarized in Eibl-Eibesfeldt's Ethology: the Biology of Behavior (second edition in English, 1975)). Also note, though: unfortunately Eibl-Eibesfeldt's latter book on Human Ethology book is off-track because he did not define or recognize the second form of Piaget's equilibration, the "balance" between making a 'stage shift' and not-yet "making it". This is key to the real and larger qualitative changes in human behavior (conceptual behavior).

What are the main topics that should be included in an AI introductory course program?

Dear

I would say cover the real (actual) "open" capacities of the human -- the memories. AND: Cover abilities using a very open structure ****** -- very much a challenge, since we do not know the ultimate environmental/behavior-pattern-responses involved in the inception of the higher level cognitive abilities [(these could well be discovered with the new eye-tracking technology, etc.)]. Emphasize using definitions of these capacities and abilities INDEPENDENTLY DEFINED and based on good research with strong results. Minimize anything encouraging the "making up" of capacities or behaviors, rather learn to use what is there in the human FOR AI. Don't get goals ahead of foundations for any first-good-start.

**** FOOTNOTE:** Abandon any ideas of embodiment (somehow trying for some version of an analogue of all understanding in-the-body, in those terms or in similar terms -- that will NEVER be an "open" system, as AI requires). Largely ignore phenomenon supposed and described by "embodiment theories" OR anything simply analogous -- this area of 'theory', study and research shows NO good results and is tenable ONLY if one uses their much-less-likely assumptions about human behavior (and it seems weirdly-founded and to have no promise: see "The poverty of embodied cognition", Jun 2016, Psychonomic Bulletin & Review). (Allow no homunculus -- any "man-within-the-man": THUS abandon all notions of "meta" processes OR "executive control".)

RATHER: Emphasize what nature no doubt emphasized: embedded-ness WITH *** the environment -- and CONCRETE and AVAILABLE ENVIRONMENTAL ASPECTS FOR ANY NEW behavioral/response DEVELOPMENTS (and have it workable that the major results are used to very much guide learningS (note the plural) -- making aspects of major types of learningS both universal and reliable). (Would you really want to MAKE INFERENCES from anything other than behavior-and-environment, in its specifics?)

You can see my posts (Questions and Answers) on AI Questions to get any more of an idea -- ESPECIALLY CAUTIONING ABOUT ASSUMPTIONS (ethology has an entirely different set of more-likely assumptions, than common Psychology). KNOW what assumptions about humans YOU are making -- because NO MATTER how much you do other things correctly, these will have an impact. See my Project: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

***** FOOTNOTE:** Note the word "WITH" not "IN" to avoid nature/nurture issues completely.

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Article: A Human Ethogram: Its Scientific Acceptability and Importance (now NEW, because new technology allows investigation of the hypotheses)

Dear

I am not familiar with "Cultural Historical Theory and Activity Theory". Is that one thing or two? In any case, regarding "cultural factors": I have never been able to see anything as direct, empirical proximate causes (and effects) of these. In my perspective the individual organism is THE unit and I think only in those terms.

As far as details for AI (and for a good psychology) from my theoretical perspective: it is the 'open' (though at the same time limited) CAPACITIES of the memories which is one grand set of things to consider; then also there is the development of ABILITIES, major ones greatly guided by innate action patterns (expressing themselves likely very subtly in the later stages of ontogeny in "perceptual/attentional shifts").

You might like to see my Project, <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

Also, in particular, the last "letter" (as in 'letter you send'), at the bottom of <https://mynichecomp.com/Almemory.txt> . THAT is my overall view: the needed investigation and needed integration of the open capacities (memories) with abilities that develop. To have a full overview of the development of major cognitive abilities (and the hypotheses that need to be detailed, then tested) see "A Human Ethogram ..." a Resource under my Ethogram Theory Project: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

[The statements in the last letter (last few paragraphs) of <https://mynichecomp.com/Almemory.txt> give you an idea of what just IS (that is: NOW), phenomenologically, based on given human nature and past developments and learnings _AND_ the new aspects of the environment yet to be discovered, which provide the major direction for behavioral development and new learnings -- these are what I believe must be (in effect) simultaneously related to the innate action patterns (referred to above) and are the bases of major cognitive-developmental changes.]

My entire perspective involves a different (better) set of assumptions about the way humans are. SEE: https://www.researchgate.net/post/Would_Skinner_support_my_view_He_would_if_he_wanted_to_be_the_ultimate_empiricist_OK

(especially my recent follow-up Answer under that question).

[Emotions and language may be worked into the system later; they are not necessarily present, or primary (respectively) determinants of behavior. I do not consider "interest" an emotion -- rather that "just IS" , since it is very ubiquitous.]

P.S. I have not found myself to have a good "interface" with present modern cognitive-developmental

psychology theories; it is the do-ability and practicality (concrete nature) of my perspective which I think might be attractive to AI engineers and, like in the 1980s (the information-processing hayday) , computer models may LEAD psychology. I believe my system, for AI engineers, is as simple as it gets and is the least subjective. (In a real sense, I define nothing; as should be the case the subject (organism-and-environment) DOES ALL THE DEFINING -- but we do have to do a quite a bit of finding (discovery); yet, at the same time, it makes for doable proof-of-concept robots rather readily.)

What are (or going to be) the main differences between AI and Human Intelligence?

Dear

You would like me to indicate "what is the difference between AI & its creator man"; this is something I do not know and cannot fully imagine. BUT the AI robot would be programmed not to BE exactly like a human (with errors, mistakes, and irrationality) but to HAVE all the capacities and abilities OF a human; it should be quite instructive for us to see and learn from that.

It is really simple: if a full account of behaviors (including behavioral development, learnings, changes in learnings, processes, changes in processes -- all the words about behavior/behavior change you like) is obtained through a completely empirical process, finding the clear, concrete aspects of the environment corresponding to each behavior and finding directly observable proximate causes of all behavior (response)/process change, THEN wouldn't this be exactly the same complete information needed to do full true AI? See https://www.researchgate.net/post/Can_someone_summarize_the_ethological_view_on_human_behavior

for a glimpse*. OF COURSE IT WOULD BE, just be logical and rational. You either believe or you don't, then you either believe true full AI is possible (or NOT) -- at the same time ! This is necessarily true for an empiricist (and don't forget: everything need not be "done" at once, when reproducing all human behavior/behavior change; and, for some relief, think: proof-of-concept).

* FOOTNOTE: Try to recall that we have new eye-tracking technology, etc. and can "see" more -- even, perhaps (LIKELY), the subtlest behaviors, aspects of the environment, and responses (though we have not yet even really tried, obviously).

Can we mathematically model consciousness?

Is it not fair to say that something which is necessary BEFORE mathematical modeling is: clear, replicable

[and related] results. I cannot imagine anyone having any response to this but: "Of course."

My heavy suspicion is that "quantum" notions are just desperation hopes. See, for one, my Question (and answer),_

[https://www.researchgate.net/post/Is it true Innate Guidance IS Involved in the Development of more Abstract Thought OR THERE CAN BE NO TRUE Artificial Intelligence](https://www.researchgate.net/post/Is_it_true_Innate_Guidance_IS_Involved_in_the_Development_of_more_Abstract_Thought_OR_THERE_CAN_BE_NO_TRUE_Artificial_Intelligence) for some more hopeful (and concrete -- and thus understandable) guidance.

Dear

To a real empiricist NOTHING at least IN ITS CONCEPTION is abstract. This is a strict (and reasonable) empirical view. The beginning bases for all "abstract capabilities" is in concrete, directly observable proximate causes (at least having good findings of clearly what is the closest you can come to these -- but I believe you can get the actual behaviors-and-related-aspects-of the-environment, at this present point in the development of psychology). AND you have to believe THAT in absence of anything to the contrary. Finding these bases is necessary for tracking any covert phenomenon that may (and likely does) develop. <-- For me that is obvious (I describe HOW in my paper, "A Human Ethogram ..." (cited, below).

My "A Human Ethogram ..." paper (though roughly) points the way and it will be some good use of eye-tracking technology that allows the findings. See:

[https://www.researchgate.net/publication/286920820 A Human Ethogram Its Scientific Acceptability and Importance now NEW because new technology allows investigation of the hypotheses](https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses)

Also see the associated project: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

My latest answer to the Question, [https://www.researchgate.net/post/Can robots become conscious](https://www.researchgate.net/post/Can_robots_become_conscious) is also quite relevant to understanding what I am saying.

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Article: A Human Ethogram: Its Scientific Acceptability and Importance (now NEW, because new technology allows investigation of the hypotheses)

Dear

Back in 2014, when you first stated this question, you said (at the end): "One possibility that comes to mind is if probability is actually such a model, as it does incorporate randomness. "

I will tell you that use of randomness to look for possible responses must be bounded and thus restricted to only what responses (actually: response patterns, behavior patterns) are available (and possible, given the [empirically] understood environment aspects and circumstances). Exploring just random possibilities otherwise (or in some other sense) may hit on what seems to "fit" with a possible response, but would not be a human response. I always try to support true (real) AI.

I am also averse to probabilistic approaches, since that implies pre-assessment of probabilities/predetermination of probabilities/or programming the robot to assess probabilities [all these choices require some irrelevant determination and likely the lack of proper consideration of some other existing systems/system factors (lacking those would not be the case for a biological organism, which exhibits related behavior PATTERNS at all times -- and those develop as well as change with simpler learning processes to some significant extent in ways that can not be pre-determined, or are not yet known : yet this is what you must make your robot do !). Never (or very close to never) does a human do this (fully calculate probabilities) and never to a great extent (unless it is his profession -- and this is not FOR his own behavior), so true AI would not use it. Again, I would encourage exploring a bounded set of possible responses [from coming to know what aspects of the environment are important (some cumulative with ontogeny) and what sets/types of possible responses (behavior patterns) are available (all that develop with ontogeny and with different sorts of learning at qualitatively different stages) and both will require DISCOVERY, based on research].

See: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology> : Therein I do try to define all major types of factors and I do address the issue of consciousness -- and this is really no big deal to understand in particular situation/circumstance to particular situation/circumstance. One specially important thing is the "A Human Ethgram ... " paper: With this I try to provide some boundaries (or at least 'type' them) and outline some of the basic processes (and at least some types of 'limits' -- others in the papers associated with the Project, link above). Some important types of developmental/environmental factors (perceptual/attentional shifts) are indicated in the paper, and these need to be explored and discovered, likely using eye-tracking technology.

Perhaps I should apologize for not having read all the other responses, but I simply wanted to address these 2 issues (658 other answers are a lot to read).

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Source

Article: A Human Ethogram: Its Scientific

The situation with consciousness, is that it has little (to meaningfully NOTHING) in common with "itself" across situations and then even less in common with itself when considering (which you must) : across developmental stages/levels, across experience levels and across histories -- overall, across-persons/situations. (At least: Until and unless we get common major learnings and corresponding common, important environmental aspects during ontogeny well-investigated and well-defined -- and we are VERY far from that -- we have got about "nothing" about consciousness IN GENERAL. [AND, with that incredibly greater knowledge, it may well be more meaningful to say we have definitions of CONSCIOUSNESSES (plural).]) AND, most all of the varying factors (all having a big impact on "consciousness") across-persons are also the case when considering just one person (and looking for a definition there). Thus, then: "Consciousness" in general (i.e. so we always know what it is -- across ALL ontogeny and/OR across all persons), even with the good and ideal knowledge I just indicated, is minimally (and not usefully) definable IN GENERAL. Perhaps to try for a point of comparison: consider a grunt (the sound) -- and yet THAT may have meaning in particular circumstances with certain environmental aspects, for the particular person, given the learning/problem-solving needed. (Go ahead, define for me what a grunt in general means -- and this has WAY lesser scope than consciousness, so a grunt is a weak comparison; for a more useful analogy, the question "what is reality?" is perhaps a better comparison -- but PLEASE let's not "do" that one again!)

On the other hand, regarding particular learnings (behavior patterns changes) with ontogeny, in certain kinds of rather-particular-type situations with a rather-particular type of environmental aspects, there MAY BE a [similar], usefully-definable "consciousness" (all this NOT YET KNOWN, to say the least): THERE, consciousness can be defined as those aspects of a "problem space", basically, the part you have to be deliberate with (using "deliberate" in a broad sense), with particular "problem-types", involving rather particular (and similar) environmental aspects and circumstances, AND also depending on previous developments and one's present developmental stage [(and still individual experience, not being a small matter)].

As much as major environmental aspects, circumstances more overall , and your past developments and your current point of development CAN DIFFER, to that extent "consciousness" can differ GREATLY (and it can differ greatly within one person). Clearly only some aspects of what-is-conscious (aka consciousness) can be to any useful extent even be roughly definable EVER: that is: in some major types of environmental circumstances, with some particular-type of environmental aspects involved, with known behavior patterns and involving known types of behavior change -- and occurring at certain points during ontogeny. Still it occurs rather particularly in any more particular (specific, actual) environmental circumstance.

That sort of rough, partial definition is the best you can get, unless you are just studying one individual and studying him/her longitudinally, over ontogeny -- and have gained all the kind of knowledge of persons-in-

general, I indicated and have sufficient appreciation of special differences in experience of the given person. IT SHOULD BE OBVIOUS THAT YOU STILL HAVE A USEFUL DEFINITION OF CONSCIOUSNESS ONLY FOR certain environmental situations, and certain environmental problems, at a certain point in time (in ontogeny and individual development).

Now, imagine how you cannot imagine what consciousness is in whoever, wherever, and whenever "it" is occurs? THERE REALLY IS SIMPLY NO DEFINITION AVAILABLE, or, as far as what is what really important, NO USEFUL definition. If you really must define "consciousness" in-general, let me go ahead and do that for you completely, and right now: it is deliberateness (in a broad sense) at any point in time. [(But, wait: perhaps this simple definition is useful, at least for those who have not realized this much, yet.)] In any case, HERE, I believe (one way or another), you are DONE.

If you wish to disagree with me, how about you start with this question (question-within-the-question): How could ANY definition of "consciousness" for use in general NOT be both rough and partial? Answer this and I submit that all you can rightfully do is provide YOUR rough and partial definition. Then (realizing that point), if you can, and you think it is better than mine, go ahead and provide your both rough and partial definition.

[This does NOT mean that what I have said about memory is of no good use and cannot lead to better definitions; it indicates what factors must be involved in defining consciousness (or rather, any given state of consciousness -- and moving on to a different state of consciousness). If you do that, any partial and rough definitions (I'll go with the plural) will no doubt be MUCH better. Same processes for real, true AI -- so I am on-topic.]

P.S. I wish people would stop trying to think of everything and have much more appreciation for the FACT: YOU CAN'T. But, you can PERHAPS think of the best piece(s) ("chunk", if you like) at a time, after much definition OF REALITY (via discovery), and after much research with more DISCOVERY -- many studies (and learn to move on, as appropriate). I wish all good luck.

[I apologies that some editing and additions to this essay went on for about 4 hours; I usually make all needed changes/additions within one hour.]

To get a good idea of the CORE of human cognitive development, see "A Human Ethogram ... ", 'attached': (this will certainly outline the main view behind my thinking; it has not been refuted in 35 years and NOW, with NEW eye-tracking technology, etc, the related hypotheses could clearly be tested and may well be verified -- I am

wishing others GOOD LUCK with this as well, see <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>):

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Source

Article: A Human Ethogram: Its Scientific Acceptability and Importance (now NEW, because new technology allows investigation of the hypotheses)

Though I do not explicitly address consciousness in it, the following essay would obviously have a lot to do with consciousness, and its development:
https://www.researchgate.net/post/What_is_really_central_in_real_thinking_its_points_of_inception--but_lets_say_more2 It expands on my perhaps more poorly written essay, above, (but totally relates to it) and may make my essay above make more sense. (There still are unknowns and there is nothing I can do about that -- but there is research proposed (in the essay, linked to above) that should bring crucial answers.)

In response to a post which came-and-went (which triggered a reaction from me):

Dear ...

HEY: modern psychology is not even FINDING causality !!

Mainstream modern cognitive psychology "theory" (models) is taking us even further "backwards in time" -- downplaying representation and offering perverse and completely poorly-grounded and poorly-founded models that are a BAD 'trip' 'backwards in time': See: The "embodied theories" and enactment 'theory', both basically ridiculous, BY-ANALOGY-ONLY, ideas that sensori-motor stuff allows for our adaptive responses AFTER INFANCY AND THROUGH ONTOGENY !?!! -- of course, with absurd "heavy leaning" on supposed but much-more-than-unlikely "social-learning" -- much worse than Bandura. There is no direct evidence and no good evidence; Skinner was not worse than this. I cannot believe what "tools" the 'students' must be who believe such BUNK.

Many 100s of essays under my "Questions" and under my Answers address many aspects of the many problems; (go to my Profile, then "Contributions," THEN click "Questions" and then also "Answers") to orient yourself to the problems and a good part of the solutions .

"Perceptual Control 'Theory'" is another not fully well-founded and not-a-good-theory, as is -- though they may have had a piece of their hearts in the right place.

(I surely have answers for them.)

On other new developmental "psychology": the new hodgepodge Relational Developmental Systems Theories (including the 'Bioecological Approach' and sociocultural theory) -- which have no clear system and represent subjective researcher intuition (the 'researchers' are the "relaters") do not help. They may be newly bad or more bad, but they really are not new: see the hack (just putting things together "as he saw it"), Urie Bronfenbrenner .

Psychology is simply a disgrace; that is probably why in General Psychology textbooks nothing newer than the information-processing models of the 80s (REALLY) are even mentioned (no newer theories or models). Unlike my approach and view, modern psychology has NOTHING TO OFFER to AI, but bad guidance and misdirection.

AND: Modern psychological "theorists" ('modelers') do NOT EVEN HAVE THE TIME TO READ AND RESPOND TO WELL-FOUNDED FEEDBACK. They write (A LOT) but do not read. These are those who the college and university students (in the main) are FOLLOWING. What an absolute mess -- but the world does seem to be coming to an end (about 2050), so perhaps that is a bit distracting (and so few do more than needed for their salaries).

Look to me for the major ways to help psychology (and to help AI , for that matter):

My Profile: https://www.researchgate.net/profile/Brad_Jesness2 and see the major paper 'attached':

Article: A Human Ethogram: Its Scientific Acceptability and Importance (now NEW, because new technology allows investigation of the hypotheses)

Dear

I do not believe I am the only one who sees "executive functions" (and all the meta-"stuff") as highly questionable, and in fact undesirable, and to be avoided if at all possible; they have all the appearance of being aspects of a homunculus (a man-within-the-man concept), which is NOT considered good -- and considered not good for VERY good reasons. Moreover, it seems clearly possible to explain planning, executive attention, and decision making as simply consequences of better representation, better comparisons, and better understanding of causality -- and THAT making working memory better contextualized to then better use its "chunks" (which are or will become better "chunks", than previously in development (ontogeny)). Really, simple as that. *** (Also, with my view: robots could "handle the future.")

[This view, though, has nothing to do with the/an assessment of Bayesian probability; I do not know enough about that yet to give any opinion or assessment (but I am working on learning about that). Bayesian

probability was another aspect of your remarks.]

*** FOOTNOTE: For AI, which seeks seeing those things which are elemental (though related of course), my view is better. Trying to integrate a clearly needless plurality of considerations into a model just makes things much, much harder -- especially when the added just-possible (not proven) elements are VAGUE, as the meta stuff and executive processes always are (lacking relatedness or connectedness with other apparent and better understood systems). Good important things seem clearly integrable with other capacities, processes and abilities (everything else which is going on, as we best understand it) -- "executive processes" and all the "meta-"s have not achieved such a status (and, if what I say is correct, they never will).

What does the phrase "causal evidence" as used in the sciences mean?

Dear

Your standard of causality (and, in particular, your requirement for considering something a "cause") is too strong, unless one takes a very peculiar and unorthodox way of allowing the "specifications of things" (i.e. definitions), with wildly complex definitions (for real behavior -- or the environmental aspects --to be considered "one thing"), and this would be much, much more confusing than useful, in good part because there are other problems -- more things that come up that violate your understanding of 'cause' (outlined, below). The 'circumstance' you describe: such as for "A" in your quoted statement (below) does not meaningfully occur without a contortion and complex of words to make up the description of the "variables", which would not be done by humans as they actually use their language: (quoting you):

"For a causal evidence or relation to be the case, we have to show, prove, test or demonstrate that the occurrence of a given phenomenon, B, for example, depends only upon the occurrence of A, for instance In other words, when a causal relation is the case, A and only A causes or brings about B. So, there exits a necessary relation between A and B." [end quote (Bold added by me -- the parts of your statement (in bold) outline 2 EXTREME requirements.)]

You go on to say: "If B can be also explained as a function of C, for example, then there is no causal or necessary relation or evidence between A and B, but only a contingent relation or evidence between A and B. In this case, A and C condition or influence, but do not cause, the occurrence of B". [end quote (Bold added by me; here your statement almost denies behavior patterns or those with key similarities.)]

Conditional causes such as THAT (in your last quote) (which you do not call causes) is precisely what an ethologist, a behavioral researcher, can expect to find and all together such is the "cause". First off, it is impossible not to recognize that BEHAVIORS OCCUR IN BEHAVIOR PATTERNS. And, a "given behavior", e.g. "A", MAY be part of more than one behavior PATTERN -- and as such part of a response to more than one SET of environmental aspects: YET that behavior may be a necessary part in both behavior patterns, but with other and different parts involved. And often there are earlier behavior patterns (previous behaviors) setting up the

contingent circumstances for the main behaviors, with the main behavior pattern never occurring except under those dynamically-created contingencies (so ALL THAT is the "cause").

Also, a reason your definition of cause (in causation) is too strong is because indeed the best predictor (and an extremely reliable predictor) of particular behaviors (occurring in behavior patterns) can involve and DO involve conditional factors: That is because behavior PATTERNS (already a "complex") are contingent with/on aspects of the "environment" ("environment" in the broadest possible sense, including preceding "set-up" behaviors as part of the "environment"). Thus to say any one thing "causes another" in your sense would have to involve EACH "one thing" being a conglomerate of factors (true with each: behavior patterns and of environmental factors and/or resultant other behavior patterns); but is this the way we speak with our language? No.

Not only is it almost never true that a particular singly specifiable "A" causes a clear single one-word-specifiable result "B" for the reasons already indicated, but behavior (in behavior PATTERNS (in patterns even from their inception)) ARE conditional AND involve environmental aspects (conditions) (plural), and those too are already more than one thing (aspect) to speak of -- and so that also, in normal parlance, is not "one thing". Same for the results of behavior patterns on the environment.

If you find any clear definite relationship between "environmental" (broad sense, as above) aspects and behavioral CHANGES, I submit, the "things" you see will (at least VERY likely, if not always) be multiple "on each side of the equation" (behavior patterns and external environmental aspectS): this is the nature of an adapted/adaptive organism. The patterning is what gives us meaning AND adaptation. You may find some "A"s that are invariably always followed by "B"s, but this will not likely be something you are looking for to explain in the actual behavior change/environmental result of interest -- though it may well be good to find SUCH as PART of what one is coming to understand. [Yet, I do believe there could be exceptions, where always-finding-certain-"A"s-and-certain-"B"s in a behavior pattern could in itself be important.] (If one views behavior as an aspect of biological functioning, and looks to understand the "biology of behavior" as it is, what I have described is what one will see.)

AND: You will find sequences where some "things" are followed by certain effects which involve other behaviors (PATTERNS) and environmental aspects -- but. again, both "A" and "B" will be multiple in nature: behavior patterning showing (as we "step back" and take a look at all) behavior-pattern-sequences and each of those themselves having a sequence of effects. [Here, again, both the 'internal' (behavioral) factors and external factors (environmental), showing the multiplicity-of-things-together which cannot be described as one single factor "A" and one clearly single result "B"]

We could use Orlando M Lourenço's notion of what an experiment can be and what it does SOMEWHERE IN SOME SUCH STRONG SENSE "down the road". But, now it is poppycock and "findings" will never really (or much) come together and never significantly improve our understanding. SO:

For me, until psychology clearly "speaks" in terms of BEHAVIOR PATTERNS, there IS NO PSYCHOLOGY -- no science of behavior. And, psychologists should not simply speak of "behavior patterns" just in "passing", but as integral units for understanding behavior -- all the time. [(Is ethology dead?; nope, there is at least some (one or more) left.)] So, in answer to the question that began this thread ("What does the phrase "causal evidence" as used in the sciences mean?"): my answer is that, in the social sciences and psychology, there is now very close to no clear meaning to the phrase (though I do very much like some of the research on memory capacities - and DO see usable information from those findings). If you pressed me and I had to make what I thought was a good definition of "causal evidence" or having/coming to a good understanding of causality, I would say: excellent inter-rater agreement, showing understanding of behavior patterns _AND_ (at the same time) similar observational agreements, showing you understand them in context.

There is a place for "A"s and for "B"s (as indicated) and there is, at some points (points well-considered, and defined for you by the organism), a place to do experiments, meaningful ones (even with my outlook) -- but don't use models that come "out of your head" or be in any rush to develop big or comprehensive hypothetico-deductive systems OR to do experiments; there are other kinds of studies too. (THE "BOTTOM LINE" IS: Generally (I might be able to admit some exceptions, e.g. re: memory research), it is too early to associate any good understanding of causality with experiments, WAY too early.)

'Attached' is something to help you "put your head" where mine is (if you dare):

[View full-text](#)

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Article: A Human Ethogram: Its Scientific Acceptability and Importance (now NEW, because new technology allows investigation of the hypotheses)

How does cognitive psychologists view behavior analysis?

P.S.

You say: "In terms of psychology, behavior analysts are not interested in cognitive phenomena. This is not because they reject the existence of private events, but because they argue that cognitive events cannot be observed; only its behavioral outcomes." In a MAJOR WAY I say this is not likely true. I believe they reject wrongfully and shortsightedly and, really, their objection is not on objective (empirical) grounds.

While you cannot see all aspects of cognition you CAN see each new major aspect as it develops with ontogeny (this is a VERY reasonable argument). These may well "show" in only subtle perceptual (perceptual/attentional) shifts, but with modern eye-tracking technology, they can be discovered. If longitudinal studies are done, after finding all the "bits" of conceptual representation related to clear perceptual shifts (and taking the very reasonable assumptions in my longer paper), then you can basically know all of the nature of the covert cognition (even of an adult).

Are all universals necessarily abstract objects?

Ultimately, many are not. Also, some things are hard to find or 'see' (perhaps have no salience) until other developments have occurred: these potentially may be very concrete -- some of this may be related to what I describe, below. THIS IS THE BIG THING:

I am sure aspects of abstract thought are considered universal. AND: All cognitive behaviors (including abstract thought), somewhere in its development/inception, I believe (on good, arguable grounds) have concrete environment bases (direct empirical proximate causes). In short, abstract thought itself is at times NOT fully "abstract", in the way often meant. Hypotheses related to this are now testable with new eye-tracking technology and computer assisted analysis (you still will have to know how/when/where to look). See attached (and see associated Project; and, for that matter, to best understand my perspective: read my essays under Questions and under Answers (both under Contributions, under Profile)):

Does artificial general intelligence implies consciousness?

P.S.

You say: "An alternative approach could be to define it on the basis of its functioning principles in terms of information processing, for example." To me that is an excellent example of bad definition (by very false analogy).

Psychologists have done plenty of just that for 30 years. This is wrong-headed. Here's the quick explanation: the core science assumptions for cognitive behavior, as for all behavior, MUST (a) be BIOLOGICAL principles (behavior is biological, at its very roots) and (b) one must discover definitions and better definitions by inducing (inductive reasoning) from raw complete-enough naturalist observations of the organisms itself. No unfounded analogies and no presumptions based on pre-conclusions of one's ad hoc hypothetical-deductive lines of thinking (and over- quick concluding, which especially goes on with deductive systems, by their definition -- and, in these cases, their premature definition). See my responses under the "question: How does cognitive psychologists view behavior analysis?"

Dear

I will admit I have not the faintest idea of what you are talking about (really) -- and for that I feel glad. It most certainly sounds beyond conceptualization (please read about working/active memory -- we do have conceptual limits and must take them into account as we formulate definitions). What possible purpose would the type of definition you indicate have, anyway, even if we pretend it is not beyond our conceptual capabilities? I see your notion as a fiction:

Definitions are discovered (yes, discovered) for a purpose. Tell me the purpose you see for the definition of "consciousness" you seek and then we may have some better chance of satisfying you. But, many times philosophy people just seek a definition consistent with "the axe they have to grind" -- and that is why I am rarely a fan of philosophy (i.e. because of a lot of non-explicit tacit assumption). (I cannot guess at your purpose.)

Actually, for behavioral science purposes, I think I already well-defined "consciousness" (in my earlier answer). My definition does NOT restrict, but is open to all cases, just not addressing all particulars of every case (something which is a complete analogue of definitions in other sciences); yet it is clear enough for one to have "direction" and not be confused. (Perhaps you should explain to me your confusion? -- that's another way for me to understand you.) My definition is not "restricted" to [just some] 'clear instances' in any limiting sense and no instances are not covered. Quoting my earlier response to this question (hereon):

Active consciousness is using deliberation and deliberateness on that of which one is aware, all ultimately grounded -- for its activation or responding -- in the environment (and related to environment, past and/or present). Consciousness otherwise is just awareness (with what one is aware of having the same nature); the processing or response here may not be clear; perhaps it is just rehearsal for memory (strengthening what they call declarative or procedural memory or episodic or personal memory or sequences or automatically rehearsing sound patterns or spacial information). Yet, again, all this awareness (that of which one is aware) is related to the environment (like consciousness, acted upon).

If it is impossible to rationally/realistically describe consciousness as any "more" than this, then AI will be able to show consciousness. Of course, many would say: what of emotions? These are just patterns of reaction to qualitative types of things in the environment (or to the the representation (and awareness) thereof), the basic ones: quick and often automatic (for adaptation). Basic emotions are not very complex; the more interesting emotions develop following (or with) [other] cognitive developments (and may be much less quick or

automatic). Thus, these too would not inherently limit AI.

"Consciousness" , at least any particular instance of it, need not be ill-defined. I do hear how consciousness is "poorly defined", but I think this is another instance of people "biting off more than they can chew".

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As far as "general intelligence" per se: I don't think that way.

Since I have been interacting with AI people lately, the temptation to response to this question became great enough that I did.

Dear

I really, truly hate to sound like an old-time behaviorist, but I am an empiricist. We are self-aware necessarily in our interactions with others (for cooperation, functional reasons). Otherwise we are just aware of what we need to consider to take better action (including review of our own representations of things, which not infrequently also includes comparisons of our representations to that imagined of others). But this is all functional (hopefully), though many people inordinately mix the first type of instance with the second type of self-awareness I described (and this is sometimes helpful and sometimes likely not). In any case: Like any other sentient organism we are self-aware (in either type of instance) because it is an adaptive response to the environment (or the best we can do). No other sort of "self-awareness" need be posited.

One thing I have been tempted to say often is that there is, in reality, no difference between 'conceptualization' (using all the various aspects of our memory facilities (spacial, episodic, sequential, declarative, procedural, ... which we do use)) AND 'abstraction' -- except the latter seems loaded with artificial (and even fictional, imaginary) pretense.

Dear

I wish people would stop saying: "define consciousness" . It can be well-defined in any circumstance it occurs; and, when you do not talk about at least a clear type of circumstance, it can only be defined by its qualities (though I think even defined this way, it is defined quite well -- see my previous answer(s) to this question). Here's an analogy:

What if someone told you to describe (kinda like 'define') "the whole world" so you could understand it. I do not think anyone could give you a meaningful enough description to be of much help. On the other hand, one could well-describe and define "Joe's Cafe" in their neighborhood or lot of other places (one situation at a time -- and there would be TYPES of situation or circumstances).

Some people will never be satisfied with even the best definitions possible. And, this is not because the definitions are bad, but only that some people seemingly want all the information about something at once (it is a kind of mixing up of 'levels').

While it may not be useful or possible to define the necessary characteristics of consciousness cross-circumstances/situations, it may be possible to indicate WHY IT IS NEEDED -- and in a actively functioning and functional organism or machine which self-develops, that may (if you accept my basic position) be all you need. Here is why a developing thing needs consciousness, in my view:

I think consciousness is the necessary sense and realization that things not present are still (as appropriate, adaptively) PRESENT in your thought, as well as aspects of the true present environment -- still, you must be able to sense and at least largely know what parts are what (what's "there" VS what's "from YOU" -- or, rather, FROM your past experience); you would process things incorrectly otherwise, confusing past and present, perhaps giving too much 'credence' to the-present, for example, which may have to be more regularly and reliably seen in order to properly join your Memories.

How Consciousness and Artificial Intelligence influence advanced technology ?

Dear

I believe consciousness is simply a behavioral aspect of an intelligent being (any); it would, in effect, have to be an aspect of any true AI robot (see the description, upcoming).

Consciousness (which some philosophers view as : attention, "wide" and/or "narrow"), I believe is perhaps better conceptualized as deliberateness -- in the broadest possible sense. You will have AS PART OF this what you "bring forward" from the Memories and that gives the contextualization needed TO THEN SEE MORE. We cannot deliberately process all at once, but we can process things-of-our-world at one cognitive level/stage, solidify that, and have processes -- with/in the rich contextualization of our long-term Memories, results of the previous developments -- to come to 'see'-things-to-process at the next stage/level.

I believe the processes to come to 'see'-things-to-process at the next stage/level are initially only perceptual shifts (occurring periodically during ontogeny, aka child development), GUIDING attention, though soon we will have these 'objects' (actually, likely just key portions of objects/situations) as the foci of attention and deliberately relate our current-experience of the environment and the Memories: using both to further see properties of things, further/better represent and classify things, and further understand causation (at least at times) -- all this happening VERY CONSCIOUSLY before becoming (themselves) part of long-term memories. Consciousness involves having more than the aspects of the present environment, per se, but also the good representations/visualizations of well-developed past learning/representation/thought -- ALSO having THAT present in the present. I think consciousness is the necessary sense and realization that things not present are still (as appropriate, adaptively) PRESENT in your thought, as well as aspects of the true present environment -- still, you must be able to sense and at least largely know what parts are what (what's "there" VS what's "from YOU" -- or, rather, FROM your past experience); you would process things incorrectly otherwise, confusing past and present, perhaps giving too much 'credence' to the-present, for example, which may have to be more regularly and reliably seen in order to properly join your Memories..

Perhaps, I expressed all this better in another post (though this may be a bit redundant): (This better represents the view of a behavioral scientist, and not-so-much the view/experience of the subjects undergoing development):

I do believe that the unfolding of that which develops into higher thinking abilities ** have at their inception

PERCEPTUAL SHIFTS occurring periodically during ontogeny (child development) -- IN PARTICULAR, with each qualitatively new stage/level of functioning beginning 'simply' with changes in that which is "seen" (i.e. perceived -- but may well not be part of what is actually LITERALLY [(consciously)] seen immediately, though each shift still DOES GUIDE ATTENTION (and with the results of the new 'objects' of attention becoming very expressly conscious (and the foci of attention) fairly soon)).

THESE periodic perceptual shifts ARE related to needed "storage" to contextualize each of the NEXT emerging stages/levels; understanding the great deal of contextualization done by long-term memories is the ONLY way to properly understand "what is already known" (and "brought forward" from LTM) and to understand that which remains to be 'seen' and processed into further understandings (the latter, WHICH CAN BEGIN MERELY WITH PERCEPTUAL SHIFTS -- so development can both appropriately broad and appropriately open, for adaptation).

Start with my profile and see some of my main writings. It may be good for you to start here: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

** FOOTNOTE: It is first new learning, then new representation, and then new thinking (at higher levels of abstraction) to be more specific.

Is there a correlation between a species' immediate perceptual reach and its capacity/lack of long-term memory?

Dear

I consider this a very good question (though I do not deal with evolution). Indeed, though, if I am understanding what you mean by "perceptual reach" then indeed I see it very much related to the development of long term memories AND of all the memory systems (episodic buffer, working memory, visual-spatial memory and the TYPES of LTM).

I do believe that the unfolding of that which develops into higher thinking abilities ** have at their inception PERCEPTUAL SHIFTS occurring periodically during ontogeny (child development) -- IN PARTICULAR, with each qualitatively new stage/level of functioning beginning 'simply' with changes in that which is "seen" (i.e. perceived -- but may well not be part of what is actually LITERALLY [(consciously)] seen immediately, though each shift still DOES GUIDE ATTENTION (and with the results of the new 'objects' of attention becoming very expressly conscious (and the foci of attention) fairly soon)).

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[This may also indicate an answer to your evolutionary question (you know what they say about ontogeny and phylogeny (parallels).)]

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**** FOOTNOTE:** It is first new learning, then new representation, and then new thinking (at higher levels of abstraction) to be more specific.

What are some examples of non-Gibsonian approaches to the perception of affordances?

I believe it is biologically likely that periodically innate guidance of learning from perceptual (perceptual/attentional) "shifts" OCCURS; this is after infancy or toddler-hood AND UP TO adolescence; these are major affordances -- in a very real sense. The perceptual shifts provide new guidance to learning that are key to the development of new 'levels' of concepts (like Piaget's and neo-Piagetian's). Not only is this biologically likely, but the hypotheses are NOW empirically testable using new eye-tracking technology and computer-assisted analysis. If it is so, they will be found: just depends on WHO has the equipment to use and does a thorough job of looking -- not me I am retired (sorry). [Admittedly, because the actual perceptual/attentional shifts have not been discovered my papers have to address the universal and dramatic EFFECTS of these, and cannot address in any detail the "shifts" themselves -- this leaves some other work (including use of imagination-of-possibilities) for YOU.]

See my Project: "Human Ethology and Development (Ethogram Theory)" (<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>) and the 'attached' paper, below:

Theory should be use in the research?

I certainly agree with Professor Orlando M Lourenço (and this is in-line with what Nuno Fernandes said): No theory is no good.

But I would like to provide some qualifications to the idea of using some full-blown existing theory. Many existing theories have some rather poor assumptions or presumptions, in actuality, even though they are 'established' theories that have been around for many decades -- and at some point have some basically untestable, not provable or disprovable, 'dynamics'; this seems to bias a tremendous number of 'explanations'. I believe that a theory that predicts rather little and relates essentially to only some key behaviors may be

appropriate IFF you can empirically directly assess the hypotheses with proven reliability (including inter-rater reliability) (and otherwise -- validly -- properly prove or disprove them) AND progress systematically to other similarly testable hypotheses which ALL understand in the same way (and so the theory must address all those matters as well, at least in a preliminary way). (This may be basically what Nuno Fernandes said. I.E.: This could be some particularly good sub-part of a theory. I can, for example, think of some parts of memory theory and research I would be happy to build upon.)

(I do believe that something which might be viewed as pure empiricism could BE WHAT proves or disproves some initial hypotheses of some theory (or theories) -- and this is best, if possible.)

Science and Spirituality – Could they go hand in hand or are they bound to contradiction?

There is no conflict at all between the rational, realistic Buddhism I know and any science. See: <https://mynichecomp.com> (and this is based on ALL the words of the historical Buddha, i.e. the Pali Canon -- as of 2012, all available in English). AND, in fact, this Buddhism and science go hand-in-hand, though that is both hard to understand and even harder to explain well to others -- it is possible for an individual to see this for himself, at least a glimpse of it *.

* FOOTNOTE: Basically, as you see a real set of things "[more] as they really are" (<-- continuously a goal in Buddhism), you 'see' other aspects more clearly AND you 'see' more (which allows "re-chunking" and further/better processing in working memory) **. This is characteristic of good points during personal development (<-- which is a good near-operational definition of 'spirituality') AND of good science. If you are involved personally with your science (as you should be to be fully involved and existentially responsible), then these two things, the personal and the science, can occur at the same time (and I would argue are, in some cases at least, the same thing). [Though I very much doubt it will help "my case", I will share with you that from my perspective "A Human Ethogram ... (Ethogram Theory)" is some Buddhism -- it is both science and a dharma talk.]

['Seeing' an important and significant "amount" 'as it really is' is/provides the experience and achievement of stream-entry. One consequence of stream-entry is that you thereon/therefrom do not irrationally personalize phenomenon -- so this is a set point you move on from, to further better oneself and one's relations with others (including good communication, which in one major essence is what science is (clear, replicable communication)).]

** To see better working memory develop on [typically] a smaller "scale", you can see my paper on meditation under my "Core Buddhism" Project.

Dear

I will explain to you how all these 'things' are commensurate : they all "pass through" US for their being. In particular, each and every one of these 'things' passes through human working memory, being "chunked", then perhaps retained in some way, then remembered, and then possibly "re-chunked", ETC., Etc. ...; though the "chunking" may well differ to a notable extent between subject areas, there is the common capacity and types of processing 'they' all must go through. (AND, when we realize the better we do this, the better we are, with respect to each and every one of these subject matters (and the better understood the various subject matters are.) AND then: Relating things that are relateable -- in whatever possible phenomenologically valid way -- is often helpful: it's involved in integrity. [Also: we are biological; cognitive processes are biological functioning; one could "carry on" in my sort of vein from this perspective as well.]

P.S. It is not useful to declare absolutes, it leads to needless and sometimes certain maladaptive DUALISMS -- ALL your philosopher friends (the old-time has-beens) , NOT WITHSTANDING. To me, there are DIFFERENT THINGS, but I eschew dualisms -- which are possibly useful for a time, out of a sort of desperation, for a purpose, for some crude initial understanding, but I see dualisms as devious. JUST settle with: THERE ARE DIFFERENT THINGS: Dualisms obscure causation (causation basically simply being things reliably and sensibly preceding, or occurring with, other things -- any exact process(es) involved, very often unknown to us, though there, too, would be other THINGS).

Do not over-identify in/with things (or overly link yourself to things OR "see yourself" in things) -- and I mean this in the strongest possible sense (though that may seem ironic in this present essay). <-- THIS MOST CERTAINLY IS NOT MY PROBLEM. If I seem to be contradicting myself, I suggest you think again. I'm not. I am completely an empiricist.

When you say " All attempts to create scientific religious practices have miserably failed ", that depends. If you consider any system for continuous personal ('spiritual') development as a "religion", then: Buddhism (with the supernatural parts omitted -- these being NOT crucial NOR integral OR even compatible with core Buddhism from the perspective of better understandings) can be seen in the fullest way as not only fully compatible with science, but also as a set of completely testable hypotheses itself (even though some MAY seem "far fetched"). (See: <https://mynichecomp.com>)

Dear

The characteristics of working memory/short term memory are about the most established facts in all psychology. Much is also known about memory storage capacities and their natures. This is not just what a psychologist sees, any more than the principles of physics are "just what physicists see" -- others frequently see physics laws/principles too, as is good FOR THEIR PURPOSES. BUT: the memory capabilities and capacities are OF THE HUMAN ARE FOR understanding CONCEPTS and CONCEPTUALIZATION in general (as related to behavior) and are thus not like the particles of physics, cited by you as a sort of supposed equivalent unit one can use to look at things with respect to their general conceptual (and human and biological) nature. You should immediately recognize your statement as poppycock.

No one could ever convince me that most classic philosophers are not totally expendable. If you study nothing in particular which is empirical and surely recognized as such (e.g. by showing inter-rater reliabilities), you study nothing and can do nothing AND offer essentially nothing -- and this assessment, a sensible person could PROVE in many cases, if so many were not so lazy and prone to simply accept what they are told. I have nothing but contempt for most of the famous philosophers, who (really) just did a LOT to "establish" (ingrain in us) unproven presumptions to use as "assumptions" (which may very well be FALSE, but thanks to their harping, alternatives are never considered -- it is never even considered that these beliefs need further consideration, though they have no evidence to support them and are unfounded) . I have cited about a half dozen of these beliefs/presumptions in my other essays (under Questions or Answers), here on researchgate, AND I have OFFERED THE EQUALLY OR MORE LIKELY ALTERNATIVES. Anyway, thanks to our cultural-philosophy history, in many important types of instances of behavior, we use just-beliefs as a foundation for our thinking and this is not justified and is highly limiting (in fact, it leads to tremendous skewing of perspectives going forward, to such an extent that we cannot go forward at all (and this is where some opposite real possibilities would not cause such problems)). To not question and doubt ALL the "results" and perspectives of philosophers is scientific misconduct. There are some epistemologists and philosophers of SCIENCE, WHO KNOW SCIENCE, I find useful and respectable.

When you cite my supposed dualisms, you are just noting where I distinguish between things, and NOT where "belief" in one thing results in clear implications about directly related things (and limits alternatives). Thus when you say what you have said of me, you see a pattern and you are just by-analogy trying to have people look at it as if it were the same thing -- CERTAINLY NOT A SUFFICIENT BASIS TO ARGUE FROM.

P.S.

You say: "Identifying with things is part of human nature and is part of our empathetic mind. SO you tell us not being ourself as if a human can voluntarily stop breathing if it decides too. In fact you yourself identify yourself with things. You cannot avoid it in spite your best efforts to be a total empiricist."

The fact that identifying is part of human nature ... and you cannot avoid it in spite of your best efforts to be an

empiricist does not mean you couldn't do much less of the irrational first-mentioned and be much better in being empirical (and these things are likely at least somewhat related).

Why label and think then that's the way it is? Some people are so good at not-identifying inappropriately that you cannot catch them at it. Some also clearly and successfully strive for the best imaginable empiricism (unfortunately, this later is very rarely psychologists).

Getting back to the topic at hand. Rational, realistic Buddhism (arguably the very core of Buddhism) advises exercises in thought that reduce false-identification AND also promote "'seeing' things as they really are" (empiricism). They also try to show by-example that you can do much more and better (at least bit-by-bit, BUT nearly continuously) in these good ways mentioned voluntarily (and beyond what you or most of us can possibly imagine). You cannot imagine the limits on what you can voluntarily do. If you think you can, think out the consequences ...

Dear

In a real sense, everything clearly processed is simple; otherwise you are confused (though you may be filled with "wonder" or even 'wonderful' "wonder" -- such emotional states may be "misfires"). The way people grab, at will, several-diverse-topics/several-diverse-concepts and pretend to put them together and/or compare and contrast them is not only arrogant, but wrong mindfulness. It has a clear element of irrationality and neither that "thinker" nor others know well-enough what he/she is "taking about". It supports a false 'contentment' with [(more like submission-to and/or an allegiance-with)] ignorance and/or delusion. It is not only confusion, but a trap for all, since "all this" is clung to. It is a major basis of suffering (dukkha).

Doing like that (i.e. wrongfully), is associated with YOU trying to "define everything involved" or define 'things' "generally". This is slop (true, there is shared slop, even cultural and philosophical slop, but it is still slop).

[One big example is the 'concept' of LEARNING, as if saying THAT _itself_ is clear, and as if that is all ONE THING (or at least largely one kind of thing). THIS IS FALSE. Coming to see the development of different types (qualitatively different levels) of learning (and knowing this needs to be done) is a BIG part of getting psychology out of its "morass".]

In developmental psychology, I have tried to outline a perspective where one "bites off and chews" only that which can be both grounded and appropriately processed.

[There seem to be a number of different terms and issues ("definitions") involved with my perspective, but the sort-of-ways they are to be related is itself defined _and_ grounded (empirically, in DIRECT observation); the concepts THUS all ARE related, and we know HOW to relate them (as they relate truly) -- and that is better than "simply 'defining'" things, and indeed this is REAL definition. This is properly relating things.]

I am both a true classical ethologist and strict empiricist, likely (I hate to say), the only one in the world. In being so, one readily comes to see there are behavior PATTERNS, not just "behaviors" (after all, behavioral response is biological functioning ITSELF) ; the concept of main particular, separate "behaviors" is another way one can see

psychology is off-track, confused, and largely useless (especially true when the researcher/theorist is the one 'defining' behavior(s) when, rather and always, it is the SUBJECT of study which is to define ALL).

Also regarding psychology: There are more-likely-true assumptions (more biologically-congruent) THAN the unjustified assumptions which are prevalent, and have no foundation. (You will have to see my writing to know more here. The likely possibilities that "open up" with this have huge implications for the research-ability of good psychology -- you could easily establish a whole career doing good research.)

[For 'spirituality', you can see <https://mynichecomp.com> for a complete rational and realistic summary of ALL the good stuff in ALL the words of the historical Buddha (the complete Pali Canon) -- which is BY FAR most of it. You can find that good 'therapy' for some of the conditions described above. AND: On that site you will see I claim that my empirical research perspective IS an instance of the application of Buddhism -- and, though I have many times clearly seen and sensed this, it is not always clear to me ("lining" such things up is not always easy -- nor would one expect it to be). But, in any case, on that site I submit science and 'spirituality' can be ONE, i.e. 'seeing' things properly and truly, leading to good, realistic and well-founded perspective, very much including a scientific behavioral science perspective.]

P.S. In the essays in all my Questions (asked) and Answers (given), here on researchgate, there is (in effect) a LONG book of related concepts and issues dealt with. You are welcome to read my "book"; there are also some related major papers (Research Items), provided through researchgate. (All totaled there is over 500-pages 'worth'. If I communicate well, you can really get to know me -- and the perspective -- pretty much guaranteed ; if the perspective is indeed continuously useful for science, as I submit, you too may rather easily have that of/for yourself.)

What distinguishes a human from an animal?

Dear

In answer to your question: "NO". In fact the human may be a poorly adapted creature and in the final analysis bound for extinction: Such a lack of adaptation itself shows a LACK OF REAL INTELLIGENCE overall; otherwise [other] criteria, however seemingly glorious, do not matter at all -- we seem just to be bit-by-bit on this path to THE END, with so many flaws (aspects, behaviors) contributing to it that they are innumerable, and each is a lack of good adaptation and a lack of real (well-defined) intelligence. [Let us all hope for minimal suffering among all other sentient beings, and do what we can about THAT.]

There may be answers to our plight, but I see no noteworthy signs (or evidence) that we can "handle" them (use them in any sufficient way and act accordingly).

Dear

I can assure all that: combination of ideas and abstract thought (by any reasonable definitions) DO NOT DISTINGUISH HUMANS FROM OTHER ANIMALS. See: Are We Smart Enough to Know How Smart Animals Are? (2016) by Frans de Waal , to finally actually see some relevant data. (Do not engage in the vain-glorious imaginings, as was characteristics of writers and philosophers of "days of old", with no scientific grounding; in short, I don't CARE WHO wrote what !!).

[AND: If you do not have any idea that abstract thought all, at its inception, has direct proximate empirical CONCRETE groundings, you have not started to empirically study or understand the behavior you now seek to address -- i.e. the HUMAN BEHAVIOR (see Jesness, 1985). Few have any decent understanding of either "side" of the question, "animal" or human.]

P.S. Language development and language use is much built-in and NEVER simply an "instance of 'learning'" <-- and, for that matter: [pure] "learning" (as its often understood [-- NOT]) is a meaningless useless crude "generic" FALSE idea in any case, unfit for anyone who calls himself a scientist. (Nature/nurture dualistic thought has been understood as a less-than-usless (destructive) debate for decades, now (see A. Anasasi, Psychological Review , 65, 197-208).)

It is more accurate to think of language as an innately-driven ability and facility than as an accomplishment (we process phonemes, the basic sounds, 20 times faster than other sounds, to give just one example; we ALL produce all the phonemes in infancy -- NOTHING LEARNED THERE, for a second example) (see Chomsky). The stupidest people you can find may have excellent language abilities .

[If Hauser et al have nothing better to write, then they should write nothing; but I guess then they would not get paid their professorial wage]

Dear

You can say "animals" do not use 'symbols' LIKE we do, but this does not mean they cannot express themselves in impressive subtle ways (e.g. very subtle signs of dominance often work and other subtle signals of desires or intent). (I am not so much more impressed by symbols than by signs or signals -- try to explain why I should be more so much more impressed by symbols.) In any case, it surely does not follow that they cannot have abstract thoughts (and perhaps even express them to others -- they obviously pre-plan hunting and cooperatively enact what is needed to SET UP cooperative hunting and then do it (prey may or may not end up being present)). They can surely think about things not in the here or now: There is a lot of visual-spatial

memory and knowledge and they clearly do planning in-advance based on that knowledge: for example: preparing for things they will do at the appropriate future and different time and place (FOR EXAMPLE: making tools in-advance, in circumstances where they are not relevant FOR USE presently, but where they will be used in other circumstances which will or MAY arise in an upcoming place and time in the future -- true, in the example I have in mind, the ape makes the tool enroute, but this does not negate the basic FACT of abstraction). I am also sure impressive planning can be demonstrated even for unique (i.e. new) circumstances which MAY present themselves (i.e. they may make new, unique predictions -- this showing the kind of "generativity" you spoke about with respect to humans (AS UNIQUE)). They can show this in a meaningful way at least at times -- and we humans only do it only sometimes, too. You will find related examples, again, in the book by de Waal; IN FACT, de Waal has done EXPERIMENTS setting up unique circumstances, and shown apes can do unique predictions of what to do, for the new, unique circumstances. An example: a peanut is in a "trap" (a tube-trap with several holes) and the peanut can be gotten out only one way (again: there are several holes to put the stick-tool in and even then a correct technique is required) BUT apes "have a cause-effect understanding and recognize the correct solution right away" i.e. they use the correct hole in the tube-trap and correct technique to get the peanut out right away (no trial and error on this NEW task); there are also many examples of apes assembling sets of different, formerly not-used items to build make-shift ladders to reach things. Primates are also aware of social situations and will do certain problem-solving to get a treat only when others are not around, so only they will get a given treat; their behavior also varies in some such cases of problem solving when a dominant "animal" is around; they generally will share if offered food repeatedly, but sometimes share selectively (based on the history of other animals having shared with them and/or whether or not they have recently seen the other primate eat).

You need to present firm consistent counter-facts, to reflect true knowledge of, and evidence for, the radical claims you make or share. THAT PUTS MUCH ON YOU, AND YOU SHOULD SIMPLY AVOID IT. Some failings are not evidence "against" the "animals", while certain successes suffice to show my claims (and de Waal's). You can only get around it by altering definitions and contorting them and making them "very special" and obtuse: Frans de Waal, cites many examples of re-definitions needed and at least a few rather absurd ones that have been proposed, so it can be said: "Only the human can do ...". (What is the good use in saying "only humans can do ..." anyway? PLEASE EXPLAIN. It requires a great deal of knowledge and understanding of "animals" and humans, and almost all psychologists and others have neither.)

Problem-solving can be discussed in great detail, without having to resort to using or having language . Language does nonetheless aid in dividing up duties for elaborate divisions of labor (so we can each do just one thing in some major complex task); we are lucky to have this largely built-in ability. Otherwise, and usually, we are not qualitatively different and I cannot see how it aids anything good to say that we are.

P.S. Some birds are even distinctly better at visual-spatial things and hide their food selectively based on many factors AND they remember all the many, many different places they hid the different foods. Isn't knowing and remembering all this abstract abilities or are you going to insist that "abstraction" requires being in some way divorced from things in the real world -- something you could NEVER show, and for one who can see the

promise of real empiricism and of finding concrete direct proximate causes at least at the inception of ANY ability, it simply cannot be considered true (or possible, for that matter).

Your turn.

Dear

What a mishmash you present. I will address just a few of your statements. You say: "Animals are mostly driven on instincts." I DO NOT know how you assess THAT; is there not an equally important vast amount of behavior change by associative/dis-associative (discriminative) learning in combination with innate guidance (literally)? Couldn't each be VERY IMPORTANT, one at least just as important as the other?

Now let's look at the human "side": I contend that all significant and advanced abilities of the human (each and every qualitatively different one) HAS A very LARGE MEASURE OF INNATE GUIDANCE BEHIND IT. (There really is no other credible way for an empirically-oriented behavioral scientist to account for the reliability and universality of qualitative cognitive shifts.) While Piaget never explained the maturation factors behind his stage shifts *, they have been more recently hypothesized to be major perceptual/attentional shifts which VERY MUCH guide new learnings and thinking; these hypotheses are NOW TESTABLE with eye-tracking technology and computer analysis software (and it may will be just a matter of time until these hypotheses are shown true) (Jesness, 1985).

AT THIS POINT:

The correct statement would be: all major learnings and developments of ALL ANIMALS (including humans) involves extremely important innate guidance AND associative/dis-associative (discriminative) learnings AT LITERALLY (IN REAL EFFECT) SIMULTANEOUSLY, i.e. at the same time -- for many, the unfounded and unjustified assumptions they have made it IMPOSSIBLE TO CONCEIVE of (but that is not the problem of responsible behavioral scientists).

The "we learn more" statement is more like a religious chant, than anything backed by clear facts and evidence. It has the status of belief, at least the way it is presently conceived, and that is all. (What I see is people "happily 'singing the songs;' of the party line" with little or no real analysis or thought AND MOST DEFINITELY NOT ENOUGH EVIDENCE. What are you all doing? Is this supposed to honor those who taught you? What motivates you? It provides no honor.)

[The major use of asking questions about human unique capabilities seems to me to be: to display the

presumptuous and abject ignorance of beliefs, commonly found in even the highest ranks of our society.]

Animals know right and wrong to an extremely notable extent. They also: put ideas together IN THOUGHT to spontaneously do new unique problem-solving in new circumstances (see another one of my answers under: https://www.researchgate.net/post/What_distinguishes_a_human_from_an_animal/1 -- an earlier page of answers to this present question). Animals have been shown, in a meaningful sense to have a sense of self-concept (I will cite the mirror experiments, for one thing -- though with large animals, the RIGHT SIZE OF MIRROR MUST BE USED).

AGAIN, what is the good of the question about how humans are better? Why do we continue to ask it is of little or no good -- AND in the face of clearly inadequate facts and evidence? (We should instead appreciate the lack of empirical evidence (evidence of direct, observable proximate causes for EVERYTHING).)

* FOOTNOTE: Do not think just one type of equilibration, involving assimilation and accommodation, accounts for the stages. THEY DO NOT. Piaget most definitely cited a SECOND EQUILIBRATION involved in stage shifts, especially related to maturation -- but never clearly specified the maturation. Piaget's last book on Equilibration makes this extremely clear, so I give that to you as a citation.

What are (or going to be) the main differences between AI and Human Intelligence?

Dear

Very notable or extreme creativity (part of intelligence) seem to involve "consciousness" because we choose (and take time) to try to put new combinations of things together using some established high-quality representations. This is what working memory is for, perhaps at its best. Since the creativity may well involve something new to a circumstance or something completely new, putting together things that have not been put together before requires deliberateness, if anything does (including when we DO know working memory exists). In a given situation (set of environmental aspects) with deliberateness -- where deliberateness, both in a broad sense and (possibly, but not always) in the narrower sense is involved -- this IS consciousness. Consciousness is IN THE GIVEN SITUATION, BEING DISCUSSED (and also THIS is the only way to sensibly discuss consciousness, real-situation-to-real-situation, without a great likelihood of inevitable confusion -- BECAUSE in trying for other definitions we may well be mixing situations/responses which are not really found together in real life TO wrongfully ATTEMPT OUR 'definition' of consciousness; I.E. : yes, we can in such a way misuse our representations of things in some attempts to put things together.

We do need to take time to do what we do and compare ideas and to test ideas (all obviously very important times of deliberateness). [YET: There is NO reason NOT to believe that ALL this, still, is related to some observable innately guided responses, at least at the inception even of a new higher-level or highest level "way" ("stage") of thought. Each of the many good, high-quality representations we have developed are from some

reliable behaviors in response to some current environment aspects (sometime) and, after well-formed and solidified (consolidated/integrated), are available as part of the "units" for for the next hierarchical cognitive advance during ontogeny, at some point -- which may allow for and be the basis of the creative, as I just described. Again, even this new level (way) of thinking and the highest level of thinking we find humans using (thinking about multiple related factors in a system) is related to some way of seeing current environments, AT THEIR INCEPTION (if you are trying to be an empiricist).

[(As many may know, I see the responses to current environments which are the first basis of stage changes and of new cognitive abilities as likely very subtle responses, being perceptual shifts or perceptual/attentional shifts, and observable only NOW with the NEW eye-tracking technology -- at key points and likely assisted by computer analysis software.)]

On the other hand, I cannot get away from viewing some of intelligence as extremely adaptive/adapted species-typical behavior PATTERNS (and thus, being species-typical, would not be seen as the special kind of thing we call 'creativity'). STILL, these are patterned-responses or even multiple patterned-responses (followed by good behavior change) in response to multiple aspects of a current environments -- thus, so noteworthy for adaptation that they must be included as part of "intelligence" (there is more to this argument, coming up). But, with this side of intelligence, I continue to see a clear similarity with (at times near-identity-with) simply behaviors-for-good-adaptation (which we obviously share with many sentient beings). It is conceivable that there is some "intelligence" (at least in a broad sense), perhaps not any sophisticated intelligence BUT some that is still part and parcel among what is needed to progress on to HAVE the more sophisticated intelligence; if such is vital "along the path", I believe such must be considered part of intelligence. (Some such intelligence factors conceivably may not be clearly deliberate in any sense and thus MAY not involve consciousness.)

Dear

It is hard to address the best of human thought and intelligence without addressing consciousness (at least in passing) (certainly you have heard of the idea that good learning and wisdom is connected with developing consciousness); OTHERWISE (and I see this as the only reasonable choice): one would have to address things in terms of the types of memory (and representation) and what changes and best-develops with them (and how) to make a person intelligent -- seemingly not a bad idea (maybe seems a much better idea), but harder, and perhaps not-so-possible or advisable . While I see consciousnesses and intelligences (and types of learnings) as open topics, I do not see any problem in addressing them together as they may be phenomenologically, in real time, for the purpose of some explication (that is not nearly as hard as guessing in-advance about the changes in and development of the Memories and representation).

Let me know what other real empirical specific terms (related to proximate causes) that you can address INTELLIGENCE in.

If we can discover what the human is doing at all significant points in development (ontogeny), even if those behavioral responses begin as very subtle, we have the concrete bases to have true artificial intelligence. It is really, simply: If one can understand the human in real time, you can build such a real-time robot. SEE: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

If we know all the capacities and developed abilities (with in-real-time associated memories (the types of Memory)) then we will know how the human does things correctly and how the human may not do things correctly. The AI robot would be programmed with the full range of capacities and abilities, but set up to only use them correctly. I don't know if this will make an AI robot "smarter" all the time than a human, but to be smart and make no significant errors IS a big deal. (I, myself, think the AI robot will be better, but not absolutely smarter -- at least not at all times; in general, the robot will seem smarter and behave better. BUT: It all does depend on the quality of behavior research on the human and the quality of the engineering and programming -- which one could imagine as obviously flawed or not significantly flawed. Also, seeming smarter and behaving better does not mean it will likely be better than the most creative human (but the robot could be IF you see all humans, even the best, as seriously hampered by THEIR flaws (mistakes, incorrect behavior); without those flaws, it may become apparent to behavioral scientists, engineers, and programmers HOW TO DO BETTER at even the most advanced-type imagining. [(Probably the most important memory is visual-spatial memory; one must have something like that BIG TIME in the robot (in part: LOTS of pictures) and do something (at times) like facial recognition BUT usually doing much more sophisticated things, and not limited to just recognizing -- but seeing much differently and selectively (selective with reason or foresight and in the context of already-developed representational abilities) than the frames taken by a movie camera; this might be hard.)]

For a starting approach to coming to see the development of cognitive abilities (representation, ETC.), a good new starting point might be the attached long paper (I would note that I am biased, and no doubt I am, BUT there is nothing else like it -- nothing as concrete, directly observational and empirical -- so I have no qualms recommending it): (attached):

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

Dear

I basically like your outlook and especially your Point 6 (quoting):

"6- Does Intelligence lies in Mind of the programmer?

No. For many reasons, just two:

- The programmer is implementing a scientific Theory of Cognition
- The System(software+Hardware) can still solve problem requiring

cognition without the presence or help of the programmer. AI is not just the Hardware but also the software."
(END QUOTE)

BUT: What AI people must realize is that there is no prevalent "scientific Theory of Cognition" that is good.

They lack comprehensiveness (i.e. they do not cover all cognitive behaviors, at least in any integrated way, with realistic processes) AND they have no mechanism for the ORGANISM ITSELF to progress and develop sequential hierarchical qualitatively different ways of thinking. I outline a system to do all of that:

Part of the system I outline describes the rather open various Memory CAPACITIES (that are based on the strongest findings in psychology) -- the working memory "aspect", ultimately always active with new input and the real-time effective "conduit", which must be through and which developing representation and thinking occurs. Links to the outlines of the memories and their relationships to each other can be found in a recent Update in <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>.

The other aspect of development which must be addressed is how the organism ITSELF has ways to progressively develop the major sequential, qualitatively different (but related and hierarchical) LEVELS/"stages" of cognitive ABILITIES. This part of this 2-part comprehensive system is found in the large paper, "A Human Ethogram ..." It provides clear direction on what concrete observable behaviors (though subtle) are key at the beginning (i.e. INCEPTION) FOR each new level of learnings, representations, and eventually thinking. The nature of these "shifts" which need to be hypothesized is fairly clear and WITH THE NEW EYE-TRACKING AND COMPUTER-ASSISTED ANALYSIS SOFTWARE these hypotheses are testable/verifiable ! This overall outlook on human cognitive development is ultimately empirical, with the key elements that start a new level of learnings and thinking beginning with perceptual/attentional shifts -- THESE are the subtle things BUT that are NOW OBSERVABLE at key shift points in development. And, the associated theory in the large paper is totally congruent with necessarily applicable biological principles and otherwise has ONLY the minimal assumptions that a strict empiricist has to have. What we seek and hope indeed to find are concrete, directly- observable PROXIMATE CAUSES -- which must be "caught" in subtle observations at key points during ontogeny (child development (1- 18 + years old)), using new technology.

Thus, my system, while a rough outline IS comprehensive and provides directly observable behavior changes that, while subtle, may be found and shown AND indeed be the real impetus for new ways of learning, new ways of representation, and eventually each new sequential new level of thinking. These working together with new sorts of representation setting up thought in working memory and allowing for new "chunks" is how an ABILITY-development system works together with the more open memory CAPACITIES, things that fortunately have some constant nature, specifically w/r to capacity (and otherwise are quite "open"). (AGAIN: These types of memory are also among the best and strongest research findings in ALL psychology).

Dear

You cannot choose to talk about just one of two topics/matters, if the two are integral to each other, and especially if few other choices (and no really good choices) of alternate terms to understand 'intelligence' in are presently possible. About one promising future alternative: to talk of intelligence in terms of the Memory capacities and their typical and best specific types of content at points in ontogeny; the species-typical content of the Memory capacities (AS USED at some point, i.e. as used by the the acting and perceiving and attending organism) may eventually be understood well-enough to talk about intelligence (and consciousness) in terms of

the various related types of Memory; that would be a great alternative option BUT is currently not available, because we just do not know enough; this is one major new way of talking about intelligence we should hope for and try to establish, as a decent cognitive-developmental science has some notable progress (findings here).

Also: Just because you have one word, 'intelligence', and another word, 'consciousness', does not mean the two do not have a lot of overlap and a lot of important overlap AS EITHER IS CONSIDERED. Words very, very often do not represent and define specific, or operationally and/or actually clearly separate, real-world entities (usually they don't). (Here's an Eastern wise saying: "When all the world recognizes beauty as beauty, that in itself is ugliness." -- here you see how "beauty" is not "a settled matter" or even close to a clearly defined matter as to its necessary nature -- in general; such is the nature of many, many things.) AND:

One could almost just as well say : "I choose to talk about intelligence, and not expertise"; perhaps one could see the relevant relationships between expertise and intelligence as LESSER than the relationships between consciousness and intelligence (certainly expertise is more narrow and does not embrace the well-generalize-able aspects of intelligence, or at least does not do so well). So, in conclusion: It is often not appropriate for one individual to declare that two obviously-related things are separate topics and people should talk about one and not the other.

Right now you appear to be declaring and asserting a number of things as "separate topics": often it seems this is YOU and not something agreed upon, for good reasons. You just want what you want.

You just want to talk about "intelligence" and what else????

FIRST: You say: "Whether or not the two topics are integral to each other is a matter of definitions, and so far I did not see much intelligence definitions (from a scientist perspective) for which consciousness appears as a fundamental matter. " (end quote)

[One quick response I would have is: the presence or absence of such a connection in modern psychology writings is basically irrelevant.]

The real question is: WHO PROVIDES THE DEFINITIONS? The only legitimate source is FROM CONSISTENT OBSERVATIONS of one's subject matter - and that which can be done with demonstrable precision (and replicability). YOU DO NOT MAKE DEFINITIONS AND NO ONE ELSE DOES EITHER, the SUBJECT defines ALL.

In psychology: the organism's active behavior patterns AND the current relevant observable environmental factors (aspects) as proximate causes -- all THAT is the most definite subject matter at any given time, in any given research. From THAT and such as that [(<-- hopefully, 'you' have been studying developmentally (longitudinally) and started such study at about age ONE, of the Subject)] : you get and have your definitions of WHATEVER (NO a priori should determine anything).

Second: Behavior is of an individual organism; behavior of any collective about any mental factor could never be precise enough for good science and is nonsensical.

If there were such a thing as collective mental anything, there could be found something clearly corresponding in the individual organism, or it does not meaningfully exist.

I do not strongly support many specific speculations about tie-ins between "consciousness" and "intelligence". As I have said, I believe consciousness is reasonably (scientifically) definable ONLY at particular points in development: This more precisely depends on our coming to understand the developing nature of what contextualizes and what is in working memory as "chunks" (and what can or likely can happen with these "chunks"). Thus, I do not particularly support the idea of discussing "intelligence" in terms of "consciousness" at the present time. BUT, except in broad generalities (non-specific qualitative terms), I am not sure what could tie-in well otherwise.

The case for talking about intelligence in terms of "consciousness" (from what I said and what I have said in this thread) is based on consciousness being defined as actual aspects of some present working memory (clearly, real understandable aspects at points of ontogeny): some consciousness contextualizing working memory AND other factors (aspects) of working memory affecting "chunking" that are more deliberate (more "conscious"). We are too ignorant to do this yet. BUT, to define "intelligence" otherwise will be limited to just generalities (non-specific qualitative terms); after that you might as well STOP.

In short, consciousness has some good relationships with intelligence, but we are way too ignorant to have any idea what. (Again, as I have said: going from one major stage of ontogeny to another, it is unlikely ANY will retain any precise definition of what "consciousness" IS, compared to what it was like earlier in ontogeny (at least regarding intelligence) -- having relatively few key specifics necessarily remaining, and operating in the same way and context (and thus seen remaining "the same") .)

I have very little expectation that talking about "intelligence" in terms of "consciousness" will be fruitful as of yet. But, I will ask you: what else will be better?

What other terms do you propose to speak of "intelligence" that has any relationship to any precise-enough science that can show continuous growth? My guess is : NONE.

Tell me the terms in which to advance any specifics in a definition of intelligence that would be demonstrable and thus meaningful, will you please? (As you can see I have little to no vested interest in present understandings of "consciousness" (or consciousness-es) being able to do that now. _BUT_, what are you after?)

[I must also note that: if one believes that very good evidence on the nature of productive and creative working memory (a big and perhaps most notable part BEING "consciousness") (AND ALL OF THAT BEING "intelligence") can be gained through tracking overt species-typical response patterns AND a sequence of developing such patterned responsiveness-es to clear environmental aspects -- with EACH of these MAJOR hierarchical developments coming to be seen (at least IN THEIR INCEPTION) as concrete, directly-observable

behavior pattern responses to clear observable environmental-aspects, and these interactions are clearly important PROXIMATE CAUSES associated with major behavior [pattern] change: THEN, because of the clear, concrete nature of such findings, THAT could be most of what would be of interest and concern to AI -- and such concrete "things" could be "mechanically" reproduced in AI design and programming.

THUS, the question of the nature of human intelligence (INCLUDING consciousness) is not just HALF of the answer posed by the initial questioner, BUT (RATHER) IS MOST of the ANSWER -- if you take this view.]

In any case (despite my own views), I cannot understand how HALF a question (originating the thread) could be about HUMAN INTELLIGENCE and you want to prohibit discussion of consciousness !!! Please give us a list of appropriate issues/factors which can be legitimately "brought up" here in this thread, in your view. If people feel like following your lead, this will give them guidance.

P.S. The way psychologists have defined almost anything (except aspects of memory) is basically worthless. Thus that psychologists (nowadays) do not speak of intelligence and consciousness IS MEANINGLESS. "one way or another".

Human and AI robot. If the following is how it IS (with the human), then this would give some clear idea of what a true AI robot would be like AND BE WORKABLE for engineers and programmers (though quite a lot of psychology research might be necessary). It is fully workable BECAUSE THIS IS a 100% empirically-based development (developmental) system, based on behavior patterns (and developing behavior patterns) "interacting" with specific environmental aspects, and those things being the proximate causes of behavioral change. (The ONLY other things always used and always taken into consideration in this system are the empirically well-established and well-defined natures of the memory capacities -- which most certainly seemed necessary; these are "open" CAPACITIES that provide only limits and perhaps, then, some influence on structure BUT are not ever of themselves sources of content.)

Here is likely the briefest outline of the system (pure behavioral psychology) :

https://www.researchgate.net/post/Could_some_behavior_change_have_overt_aspects_so_subtle_as_change_in_time_environmental_aspects_are_gazed_at_or_significant_decreases_in_gaze_time

This (above) is the "containing system"; there is no problem adding in the more non-universal (in behavior) stereotyped, specific-function-type behavior patterns: here I am thinking of the emotions. (NOTE, though: Some secondary emotions, like shame and guilt, rely on first having cognitive developments, such as covered in the outline of the "containing" system (see "A Human Ethogram ... " to learn about some more specific (more specified) particular cognitive developments associated with some emotions). "Interest" is NOT an emotion -- I don't care if it seems like it (it does NOT have enough stereotyped patterning.)

(This "containing" system is a cognitive-developmental system and works autonomously and develops with the proper things (objects and/or happenings) perceived and attended to, and given the memory capacities:

working memory (as it "goes") and the other memories also being active.)

What are (or going to be) the main differences between AI and Human Intelligence?

Dear All

Perhaps I should address the human/robot differences in the main Question of the thread and as related to my last post. Let me first say a bit more about the aspects of the SYSTEM described in the last post:

FEATURES:

- 1) IT is fully behavioral/experiential which a system for use in AI would have to be. THIS IS ALL GOOD, because behavior patterns are behavior patterns and environmental aspects are environmental aspects.

[Now, the following is most speculative (and just to provide a possible view of the amount and nature of the effects of learnings and developmental changes on the different Memory capacities -- and the challenges you may have there)]:

- 2) Any further limits-on/parameters-of the nature of the system and how it autonomously develops are mainly: the limits of the capacity of working memory (basically in some respect quantitatively constant (constant number or number-range of "chunks" involved)) and otherwise design, alterations (changes in "chunk"-nature) and additions to it being rather-simple-rule based (a lot related to observable behavioral change) . AND then: the general nature of declarative and procedural memory (each of a fairly constant qualitative nature): EACH of them having/using a specifiable design and non-complicated rules for additions -- the question mainly being: when have changes consolidated/integrated enough and become reliable enough and thus then actually used by the organism/robot. NOW:

The nature of visual spacial memory and the episodic buffer -- these may be the main memory aspects that would have most to be attended to (these are quite likely IN EFFECT the most variable factors BUT still not hugely qualitatively variable, as viewed in-context). (ALSO: it could be there are clear relationships between v-s memory and episodic memory: so there may exist SOME FACTOR(S) shared and that/those may be the most VARIABLE that may need to be attended to more frequently than any others (i.e. more than the ones following simpler rules). ALSO, the 2 may each need to be adjusted in different (though perhaps related) ways in these 2 different memory (contexts) . And perhaps, most variable is episodic memory -- more in need of frequent adjustments that are not clearly-[yet]-rule-based (and may need to be inferred).

(NOTE, though: Even what is inferred should/must become rule-based eventually, maybe soon.)

Based on the quality of the design and programming of these AND ON USING KNOWLEDGE ACCRUED FROM SYSTEMATIC OBSERVATION from psychological/ethological longitudinal, developmental observations and studies AND patterns found there, there will be differences. And what-you-get will also depend on what other sub-systems (e.g. emotions) are added on and how well that is done. Ideally your work will still result in AI - robot differences, humans differing from the AI , the ideal AI, that being being a generic (but non-error making human) -- clearly the "generic" and [progressively] non-error-making human simulation itself is destined to be different in performance from a human just by being THAT (along with those other reasons for difference cited).

[I hope all notice that the entire system I describe may come close to involving just one variable left to be sufficiently "pinned down" (that is, one left to be "pinned down" enough to seem possibly meaningful and distinct -- and perhaps enough to be model-able; the other variables should be seen as close to understandable/model-able -- which I believe you might see if you look into the knowledge on these variables and the nature of fairly successful models, such as ACT). One variable at a time is good. Sometimes it may be essential; at least one needs enough knowledge to know how to reasonably develop "some order to work on", given mutually related aspects of a system.]

Finally, the answer to the question (now that things are put in some perspective):

Qualitative conclusion: The differences will likely be less astonishing or terrifying than USEFUL -- I am hoping this is apparent from the description of the aspects and some description of an AI/human comparison (above).

Hackers may "screw it up", but you provide the environment and experience; I would think that only if they could make a credible (thus operational) version of the resultant system from such as THAT, could they get something evil done. (Aren't hackers, in a sense a bit lazy -- just exploiting the things of others? Your system is a whole system that likely would have to be understood quite completely before someone could add something that would actually be "accepted" and used -- in a way beyond arbitrary, little, and apparent "screwing things up". This, of course, is just a guess; I have known a lot of programmers and techies, but no hackers.)

Dear

I can for-sure see an AI robot as an OPEN system and I have (look and you will see); it most certainly is NOT a CLOSED system. (If a movie camera, that TAKES movies, seems like an OPEN system, so will my system ** .)

I am much closer to agree with the "thrust" of what Franklin Kenghagho Kenfack says.

** FOOTNOTE: I do not find it unbelievable that EVERY system, at some points/level(s) it is NOT an open system. In ways we surely do not understand, the HUMAN is not an open system; BUT, the major point I would (and do) have is that IT IS NOT ANYTHING ABOUT OUR MODELS or our approach THAT should ever CLOSE THE SYSTEM; the Subject will "close as it will". [All definitions, including those about closures, will be defined/shown by the SUBJECT -- and just "induced" by US). This will occur as the Subject lives, and NOTHING ABOUT the theorist or researcher (or any damned model) should ever have anything to do with it (just the Subject and aspects of the environment). If you can't see how there is an open "model", then that is YOUR problem; don't make it a problem with the Subject.]

Dear

No, it is not "just this" or "just that". I SHOW AN OPEN-TO-THE-SUBJECT-AND-ENVIRONMENTAL-ASPECTS (-and-

that-is-all) system: read enough, and you will see:

<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

Your point of view is just the embodiment of confusion. Whether one is willing to find things that work (as they work) and shows the openness to do so, is the issue -- not taking ONE POSITION or THE OTHER.

Dear Franklin Kenghagho Kenfack

Understanding real elements and their relations comes before any math. I worry when one talks of math at the outset. We will likely get there (and there is some in memory research), but wait for the pieces and the relations [(in other areas)].

P.S. to all

Just because there are infinite possibilities DOES NOT MEAN the HUMAN _DOES_ these things (or things to that extent)(there are other galaxies, that does not mean we can go there). Otherwise, perhaps the computer, Deep Blue, would not have won Jeopardy and that most complex of all games (more complex than chess) -- this would not make you want to say that the computer, Deep Blue, could actually DO anything in an a truly infinite number of [reasonable] ways, or at least not without continuing exposures to new environments -- and, can YOU find and provide all these??? (Nope, nope, nope; and not even in real life).

If one is going to RESPOND TO something that is among an infinite number of possibilities, one still needs to know, in particular, the ONE thing or set of things he/she is responding to.

Dear

You request: "...please do not point to a large document or just paste a huge text in a post. Just express a point into a short post that can be understood ..."

I have already done both of those things. For a coherent (most-often-related) set of briefer essays, go to my Profile page (https://www.researchgate.net/profile/Brad_Jesness2), click "Contributions", then click Questions and click Answers. OR read the relevant among the brief (though numerous) "blurbs" via:

<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

For one big, but essential, part I believe it will take ONE large one , see:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

That is all I can imagine I can do. I otherwise have responded as I see appropriate, and with my view/views.

What I have characterized as your "this" or "that" post seems TOO brief, to in and of itself present a clear view. It is difficult to guess your view, though I did see that you were juxtaposing some incompatible views, surely implying a lack of reasonability, in particular with the AI people, and THAT I did feel I could respond to.

Article A Human Ethogram: Its Scientific Acceptability and Importance

Dear

While I surely recognize what you say is the case at present, I see no compelling reasons/reasoning/arguments (at all) that it HAS to be the case. My AI Project (and related KEY "Human Ethology and Development (Ethogram Theory)" Project, along with my outline of the memory capacities, with their natures) allows the dynamic, progressive changes of a "high-level", via our/a perception-to-attention-to-thought/representation nature, that would indeed allow all of the same BIG things as a human IN artificial intelligence. I believe if you find the true empirical bases of all that is important that is human, then all the types of "learnings" ("learning" actually being of several different natures with cognitive-developmental stage changes in ontogeny) can be reproduced by a robot. (Perhaps you can show me where AI people have tried to emulate ontogeny in a robot and, IF NOWHERE, you should listen to me **; it is really as black-and-white as that, when seen correctly.) See: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology> AND

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

[Between the 2 Projects you have a very open system, yet one which is appropriately (minimally, adaptively, empirically, as-necessary) "self"-guiding in moving forward in stages of cognitive development (likely simply based in perceptual or perceptual/attentional "shifts") -- with NO apparent necessary limitations ON THIS seemingly more parameter-ized ASPECT, OR the limits are yet-to-be-discovered and certainly there will be none that you would not also find for a [real] human -- because THAT is where your information is coming from. [We really are "OK" because the actual parameters ARE TO BE DISCOVERED, they are found in the COURSE of using the approach (which is purely strict empiricism -- asserting that there is a clear, observable, direct behavior-basis (with environmental ASPECTS) TO/for EVERYTHING (as proximate causes) -- at least in its inception) ! No nature "inherited" by any a priori models. Models, like analogies, are to be avoided or always reduced as the real organism is discovered. Think: Behavior patterns, behavior patterns, behavior patterns.] Note: seeing the "clear, observable, direct behavior-basis (with environmental ASPECTS)" may be subtle because the behavior changes may be subtle (and likely are); eye-tracking technology, and perhaps computer-assisted analysis, may well be necessary (welcome to the NEW technological world, AI ! -- isn't that ironic!)]

** FOOTNOTE: Please do let me know when y'all you do start "listening". Hell, psychology is so warped and limited they likely won't do it: don't try to wait for them (or "team up" with a few wiser ones, and make them

discover -- and find what you need -- and then "DO IT" yourselves!)

Dear

If humans aren't adapting well (and may well be headed for extinction), THEN (by any reasonable definition) they are NOT very intelligent (I would be curious to see any substantial counter-argument to that view, and I think that rules out the assertion that "we are God-blessed"). [A related perspective: If you can't "beat" human nonsense -- and there is SO MUCH NONSENSE -- one must ask: how low are you setting your "sights"?;

I understand (or try to understand) persons' 'love of the human', but don't get carried away. I, myself, prefer several other mammals to humans, and cannot consider them "less intelligent" -- at least they don't defecate in their own space. The fact that we have division of labor and specialization due to language (<-- THAT clearly MUCH related to evolved innate "abilities" (with relatively little significant AND impressive 'learning') and involving innate action patterns), AND THUS (AS A GROUP) can do big things, one should not find overly impressive -- and this certainly does not imply any such greatness in individuals (neither typically or at all, ever (sorry, Einstein)). We can cooperate at times, not to a degree greater than several other apes, primates, and several other types of species -- thus, this is NOT impressive. (We do "amazing" things (together) because we have language, but this most certainly -- at least equally -- includes 'amazing', incredible "screw ups" ; ask yourself: "would there be such 'screw-ups' if we HAD good and reliable understanding?").]

Perhaps a question indicating a counter-argument to your view is: if you can't "beat" human behavior with a robot, can one improve on the human performance in any real RELIABLE and LASTING way? (NOTE: "Reliable" and "lasting".) (You don't really want to say "no" to that, do you? Isn't that simply equivalent to giving up?? If this is the case: what "business" are we in then?) ON the other hand: If you CAN do actually and reliably better, then (with such _understanding_), why not in a robot? (If you have knowledge, you can share knowledge; knowledge can be formalized and used in different ways -- including in a robot, unless you consider them for-sure, and for clear established reasons, inherently incapable of "this" or "that" (and, if you haven't even made a reasonable attempt to emulate ontogeny, you have NOT even scratched the surface of imagining possibilities [or limitations, of humans or robots])).)

Let's face the simple, clear situation (of our near-obvious deficiencies): If we could just start to see all the major related behavior PATTERNS in response to present and/or past concrete environments, considering our various memory capacities and SOME [(likely WAY less than people usually 'qualitatively' imagine)] reliable internal "manipulations" in understanding combinations, relationships and causality, but ALWAYS including -- in our real understanding of behavior patterns/behavioral development -- some [past, ultimate, essential] grounding, in clear behavior patterns, with clear environmental aspects involved AS PROXIMATE CAUSES (at least clear during development), _THEN_ perhaps there could be some reasonability in addressing this issues of what we (humans) are doing and what robots could do. (In short, we need empiricism, and we have not yet reasonably tried.)

Look at see how poorly, rarely, and arbitrarily (and even meaninglessly) the words "behavior patterns" occur in psychology; that is a big clue of the primitive state of psychology (I have thoroughly shown how psychology IS most certainly an "infant science" in other essays (Q and A, here on researchgate)). There is much hope for psychology, because the good science there has barely begun (I guess it is nobody's 'fault ' if it turns out eye-tracking technology is needed to do psychology well -- please consider this, especially as you read my larger

papers and see how central BASIC perceptual and perceptual/attentional "shifts" LIKELY are).

Historically psychology has been around for over 100 years, but look at THAT history -- it is a nonsensical history of nonsense, for the most part. Examples: 'Learning' without innate guidance (essentially, the notion of "pure learning", as a magically-complete-explanatory "process"); then there is: using pure analogies to information-processing theory, establishing NOTHING otherwise (exception: some decent research on the memories did come out of that (this likely worked because a few things may be, at least at times, congruent with the types of settings and time-scales we must use in "allowed types" of 'research')); AND recently, other analogies to 'explain' thinking -- simply and crudely using ONLY analogies, based ONLY on the behaviors of the baby (Piaget's sensori-motor Period behaviors, to cite the basis with clarity) and a great deal of imagination and belief in [unfounded and untestable] hypotheticals, WITH absolute limitations of thought, due to continuing FALSE, BASELESS pseudo-'assumptions' (here, specifically: look at the miserable "embodiment" 'theories' that never ever can or could have any direct behavioral evidence to support them). (That is pretty much Behaviorism through the present 'cognitive' "science" -- much of psychology over the last 60 years.)

Dear

There are seemingly big (and seemingly fatal) problems with the possibility of AI implementation _WHEN_ A HUMAN 'THINKS ABOUT' AND TRIES TO "ASSESS" TOO MUCH AT ONCE.

This is what I see in your last post: "... community- and population-associated concepts such as human 'values', 'norms', 'objectiveness', 'subjectivity', 'liberty', 'engagement' and so forth. ..." These are neither clearly communicable NOR may any of those topics likely be considered as-a-whole in one's mind (the issues addressed MUST be much lesser (at least for communication purposes if for no other reason)) -- perhaps accumulating bigger good empirical "chunks" and growing toward the BIG TOPICS (as it would also happen in many, many empirically-based steps IN YOUR OWN MIND, if you have done all the great thinking correctly). But, in any case: it is of no use to "express an opinion" on such things that are basically meaningless pronouncements (and certainly that way for others). HERE IS WHY THIS IS SO (based on some of the very little actually-good science in psychology):

If you learn about and come to understand the natures of our Memory capacities (and, including "working memory", which is basically our consciousness) and appreciate those findings, one becomes MUCH MORE CAREFUL. We are always a few-"bits" ("chunks") and then some altered few-"bits" AT A TIME. AND: If you cannot empirically and with certainty (and in a verifiable manner) move from one set of "bits" (thoughts) to another WITH CERTAIN EMPIRICISM, then your view is extremely questionable (and very likely incorrect). It really is as simple as that.

If you don't keep a "slough" of such big words OUT of a response then, in one or more senses, what you say will be meaningless. Neither you (or so many other big thinkers) should do this. (I do understand that the problem is, in good part, related to long-standing philosophy; unfortunately, that is filled with unfounded, basically baseless, presumptions and "assumptions" (pseudo) and related poor procedures-- which are the BANE of Western "man.")

Dear

If humans aren't adapting well (and may well be headed for extinction), THEN (by any reasonable definition) they are NOT very intelligent (I would be curious to see any substantial counter-argument to that view, and I think that rules out the assertion that "we are God-blessed"). [A related perspective: If you can't "beat" human nonsense -- and there is SO MUCH NONSENSE -- one must ask: how low are you setting your "sights"?;

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Dear

Here is something you don't hear much, but it may not take long to realize it is true (and it may change the limitations of your perspective):

You speak about " how AI learns " and everyone speaks about "learning" as if we know what it is AND as just one sort of process. I DISAGREE with both these prevalent views and it will not be hard for you to disagree too:

- 1) SIGNIFICANT (e.g. new, basic, foundational) learning is ALWAYS innately guided -- and modern psychologists really do not have the faintest appreciation for this or knowledge or understanding of this. (Thus, we do not REALLY know what major "learning" is.)
- 2) "Learning" is NOT ONE THING and is QUALITATIVELY DIFFERENT from one stage of cognitive development (ontogeny) to the next and the next stages -- AT LEAST this is true of THE MOST IMPORTANT LEARNINGS behind the development of new abilities to "abstract", that is: classify, combine and relate, and to understand causality. It is my view that ALL major changes in behavior (AT LEAST AT THEIR INCEPTION) have BOTH only clear environmental aspects (involved) AND also have OVERT DIRECTLY OBSERVABLE BEHAVIOR PATTERNS INVOLVED as proximate causes ** -- the behaviors patterns may be subtle, such as BASIC perceptual shifts or perceptual/attentional shifts, BUT THEY ARE VERY, VERY, VERY LIKELY THERE (and now these would be detectable with the new eye-tracking technology, and perhaps some computer-assisted analysis, along with some decent learned 'intuition'). [To make any assumption, in-ignorance (as it would be), that there are NOT direct, overt manifestations to ALL major behavior [pattern] changes is to 'ASSUME' AGAINST EMPIRICISM (i.e. without trying, and for no reason), and THAT would, in and of itself, make you NOT an empiricist. Scientists have no choice but to look into this -- the fact that recognition of this is taking so long shows university departments are more political (and perhaps other bad/worse things) rather than of-science.]

Theses views (my views) are based on (or related to) an alternative set of assumptions about human behavior, assumptions more congruent with biological principles and MORE LIKELY TRUE -- as opposed to "opposite" 'assumptions' (which are actually: baseless beliefs or presumptions) that have always been present in psychology (and, relatedly, in philosophy). I HAVE OUTLINED THE 'OLD' BAD 'ASSUMPTIONS' AND THEIR MORE

LIKELY ALTERNATIVES ELSEWHERE IN DETAIL -- see several of my Questions and Answers here on researchgate (under my Profile, then Under "Contributions" and then under Questions and under Answers) and See my Human Ethology ... Project (<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>). I have fully justified the new assumptions while showing the lack of any evidence or foundation for the 'old' pseudo-assumptions, still prevalent in psychology. AND: The case I present for my position, AND MY APPROACH TO RESEARCH etc., is utterly empirical, much, much more empirically-based than any prevalent psychology perspective or theory. (Empiricism not only provides verifiability, but also provides a LOT of hope.)

Also see: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

Also be sure to see "A Human Ethogram ...),

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

**** FOOTNOTE :** That, AS an INTEGRAL PART OF development and new learnings, there are always "OVERT DIRECTLY OBSERVABLE BEHAVIOR PATTERNS INVOLVED as a proximate causes" becomes much more believable and understandable IF you understand the memory capacities AND WHAT THEY "bring forward".

Doesn't AI need TO WORK-IN developmental processes (ontogeny) IN THE ROBOT to understand & emulate the changing & hierarchical nature of "LEARNINGS"?

Doesn't the Artificial Intelligence field need TO WORK-IN developmental processes (ontogeny) IN THE true-intelligence emulators to understand and track the changing and hierarchical nature of "LEARNINGS"? (These are also cumulative processes: where older behaviors, "lower in the hierarchy" are still functional, as needed.)

Seems like a huge oversight. (Of course, to do this understanding the corresponding processes in the human is needed; STILL, IT IS AN OVERSIGHT !)

My guidance (and potential contribution) HERE comes from: "A Human Ethogram ..." which, because it outlines a completely empirical approach to discovering the aspects of human cognitive development, is amenable to AI. PLUS (and this is a big plus): all the hypotheses that stem from this view are NOW (thanks to eye-tracking technology, etc.) testable and verifiable. AS FOUND, they may be emulated -- nothing of their nature would prohibit that (this is what you get with being entirely empirical and empirically based).

See:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

P.S. The Ethogram perspective (noted, above) is truly autonomous-ness (autonomy) INCARNATE -- and unique in this way. The perspective also FIXES Perceptual Control Theory (another approach OFTEN offered expressly to AI people -- but PCT is self-contradictory UNTIL FIXED): SEE my Comment UNDER Rupert Young's Update, under <https://www.researchgate.net/project/Perceptual-Control-Theory-PCT>

And then, I offer a lot of the rest of the understanding of human behavior (the open systems, but "gate-keepers" : the memory capacities/systems) under my Project: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

I do believe this is the basic "kit" for true artificial intelligence and also for a good and progressive understanding of human behavior patterns.

I might say (with regard/respect to the above citations): "It is good to have the '2 ends' and to have one with fixed aspects and the other in a significant sense "open" and then to allow good research to 'fill in' 'the middle'."

What are (or going to be) the main differences between AI and Human Intelligence?

Part of the answer to the original Question, heading this thread, involves knowing what the nature of human cognitive development is. I contend that WE DON'T. In particular: we do not know the ultimate bases of qualitative changes, in representation, learning, or thinking/understanding with ontogeny; in fact, any cognitive-developmental psychology TODAY completely LACKS ANY EMPIRICAL FOUNDATION to any conceptualizations of the BASES FOR qualitative cognitive changes in levels or stages of operational abilities (even Piaget, told us nothing here, except that they were "due to maturation"; specifically, this involves Piaget's EQUILIBRATION type 2 -- which many do not know of, but involves some "balance" between continuing to operate with the kind of learning/conceptions/understanding OF YOUR CURRENT STAGE or PROGRESSING TO THE NEXT, all in some distinct way separate from assimilation and accommodation). I do provide a way TO FIND THE EMPIRICAL BASES FOR LEVELS (AKA STAGES), and describe some possible nature-of-things we may see and find. Then, going from that, perhaps we can MUCH better answer:

What are (or going to be) the main differences between AI and Human Intelligence?

SEE my final Question:

https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics

Dear

No truly good or useful definition of "intelligence" is at all divorced from ADAPTED-NESS (how adaptive behaviors (PATTERNS of them) are with the environment and for action IN the environment. Thus, you should always clearly be thinking that way (in such terms). (If humans go extinct -- which is not at all unlikely -- then they are not intelligent at all, overall.)

P.S. Your question seems much related to some of mine:

https://www.researchgate.net/post/How_would_an_AI_robot_with_all_useful_human_abilities_and_human_capabilities_differ_from_a_real_human_and_how_need_it_not_differ

and

https://www.researchgate.net/post/Since_I_have_had_to_add_a_lot_of_behavioral_specifications_I_am_compelled_to_ask_How_bad_is_true_full_artificial_intelligence_today_how_is_it_bad

Also see:

https://www.researchgate.net/post/Will_AI_people_successfully_simulate_a_continuously-learning_developing_human_before_psychologists

and

https://www.researchgate.net/post/What_could_be_the_identifiable-and-definable_components_of_Operational_AI

Dear

I would like for you to specify some particular ways "culture" impacts an individual, each cultural 'cause' as an extremely well-defined, directly-observed, particularly-observed proximate cause AND then is clearly invariably followed by definite extremely well-defined, directly-observed aspect(s) of the behavior of each and all humans (as actually occurs -- and the ONLY way it can actually occur -- ONE HUMAN AT A TIME). EMPIRICISM ITSELF relies on the ability to at least be able to specify some KEY proximate cause(s) and effects for everything and using the proper unit of analysis, the individual. All the rest to me is sloppy thinking, and a lot of the sloppy thinking seems needless -- at any stage in the development of our thought ****.

It seems to me when "cultural influences" are roughly observed or posited, then the individual human vanishes as a clear unit. BUT THE INDIVIDUAL ** IS ** THE BIOLOGICAL UNIT, i.e. ** THE ** UNIT (PERIOD) (and behavior is completely of the biological unit, completely consistent with its biology and its environment, particularly and specifically and totally to some understandable degree -- or the "game" is over, and "the game" is lost). THE INDIVIDUAL IS THE UNIT FOR ALL BEHAVIOR SPECIFICATION AND ALL OF PSYCHOLOGY -- if psychology be well-defined (which it is NOT in several areas).

**** FOOTNOTE: While I say "the rest is sloppy thinking" and a lot of it is "needless" , I am indicating not all 'sloppy thinking' is needless: I do understand that at some points in our understandings the best we can do is point to a sort of proximate factors (and responses) we have not yet specifically discovered. There, "pointing to them" may be the best one can do -- but it still should be clear we are INDEED crucially looking for proximate causes and their direct effects, BOTH involving the individual human.

I guess I would want to ask: what theory allows THE DATA and context (and helpful concepts) to guide an AI person to _DO_ FULL ACTUAL ARTIFICIAL INTELLIGENCE? (Obviously this would address the issue of intelligence.)

Here (LINKED TO BELOW) is an answer (a thorough, complete answer, with high utility -- because it addresses the question of human development and learning from A STRICTLY EMPIRICAL PERSPECTIVE, with everything (thanks to modern technology) TESTABLE (verifiable)). IT IS JUST THIS KIND OF EMPIRICAL UNDERSTANDING OF BEHAVIOR THAT WOULD BE THE KIND THAT COULD BE TRANSLATED INTO PROGRAMMING:

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How can good true empirical psychology, alone, make it more than plausible (and very likely) that FULL, true artificial intelligence is possible? :

https://www.researchgate.net/post/How_can_good_true_empirical_psychology_alone_make_it_more_than_plausible_and_very_likely_that_FULL_true_artificial_intelligence_is_possible

Dear

You can build emotions into AI. They are relatively simple (though some emerge only with development, for example: shame and guilt -- you also have to build the progressive hierarchical types of learning into AI too and these developments yield the "secondary emotions", along with new ways of thinking); emotions are also rather highly patterned; they are variable in people (somewhat in nature and in amount). BUT: they do have a typical TYPE of adaptive function, aiding in proper response (e.g. surprise, joy, anger, fear, even guilt) so they should be there in the AI robot, and I do not see why they couldn't be.

Conscience and repentance involve reflectivity (thinking about your thinking or thinking about what you have done) ; an AI robot would have to have reflectivity to properly learn and develop. Conscience and repentance also typically involve emotion, again no big deal.

See: <http://atlasofemotions.org/#states:anger> ETC.

Dear

You would like me to indicate "what is the difference between AI & its creator man"; this is something I do not know and cannot fully imagine. BUT the AI robot would be programmed not to BE exactly like a human (with errors, mistakes, and irrationality) but to HAVE all the capacities and abilities OF a human; it should be quite instructive for us to see and learn from that.

Dear

I assume you were not addressing me, because nothing I imagine "comes from movies" (it was not expressly clear that anyone's view came from movies -- unless I missed something).

I take your statement, "one should first start from a basis, especially how do you define intelligence", as a positive (optimistic) reference to my views.

One should "define" only based on clear observations and after much research (most observational); little but basic assumptions and general orientation is needed BEFORE -- unfortunately, "Western man" loves definitions in advance, but in MANY, if not MOST, ways this is improper. I like to say the subject matter (observed behaviors and corresponding clear environmental aspects) should DO ALL THE DEFINING FOR US (certainly for the most part). In good classical ethology, it is very, very clear how this is true.

It is really simple: if a full account of behaviors (including behavioral development, learnings, changes in learnings, processes, changes in processes -- all the words about behavior/behavior change you like) is obtained through a completely empirical process, finding the clear, concrete aspects of the environment corresponding to each behavior and finding directly observable proximate causes of all behavior (response)/process change, THEN wouldn't this be exactly the same complete information needed to do full true AI? See_ [https://www.researchgate.net/post/Can someone summarize the ethological view on human behavior](https://www.researchgate.net/post/Can_someone_summarize_the_ethological_view_on_human_behavior)

for a glimpse*. OF COURSE IT WOULD BE, just be logical and rational. You either believe or you don't, then you either believe true full AI is possible (or NOT) -- at the same time ! This is necessarily true for an empiricist (and don't forget: everything need not be "done" at once, when reproducing all human behavior/behavior change; and, for some relief, think: proof-of-concept).

* FOOTNOTE: Try to recall that we have new eye-tracking technology, etc. and can "see" more -- even, perhaps (LIKELY), the subtlest behaviors, aspects of the environment, and responses (though we have not yet even really tried, obviously).

-
- 1) One big question: How it is essentially we are "capable to learn from data and experience"? I submit that we (today's researchers/theorists) do not understand most learnings, and this is the situation because ultimately we do not understand the relevant key proximate observables in 'experience' -- BUT UNDERSTANDING THE LATTER DIRECTLY EMPIRICALLY-BEHAVIORALLY will help us or allow us to understand all the sorts of learnings (and then also to truly understand more about 'experience'). (We are long past that point where we should talk about 'learning' and 'reinforcement', as if the essential definitions of these are always obvious at any point in human development, WHEN THEY MOST CERTAINLY ARE _NOT_.)

- 2) True, both humans and robots must [develop so as to] "abstract patterns, align them, and re-encode them whenever needed to learn a new concept". BUT I submit that we should not cogitate and cogitate and cogitate and thus "divine" what models are used -- yet this is precisely always what we do. What we are doing now is this cogitation, using our definitions, our notions of systems, and divining models -- which we then try to use in robots, and they work very poorly. (We are doing nothing with the comparable "sense" of what is done in other biological (biology) investigations!) The answer is to find the beginnings (a key set of behavior-pattern(s)-and-corresponding-concrete-environmental-aspects for each stage/level) from which we can trace/"track" the paths in the behavior patterns (and from clear aspects of the environment) that the actual organism takes in coming to be "capable to learn from data and experience" _AND_ to "abstract patterns, align them, and re-encode them whenever needed to learn a new concept" [(though, I believe the sequence (experience-abstraction) is somewhat the other way around, in some real sense)].

Let me present my view and refer you to a main paper ('attached' at the bottom), and to related Projects: First my overall statement:

What is really central in real thinking (its development)? I say: special and especially important PROXIMATE causes that are, at necessary times (points in development (ontogeny)), observable. ("Observable" both to the Subject and to the scientist.)

I submit that the real CORE (beginnings and THE BASES) of THINKING (itself) are certain (or a certain type of) PROXIMATE CAUSES and that, now with new eye-tracking technology, etc., these major directly observable proximate causes can be found with real-time study. THOSE THAT ARE ESPECIALLY IMPORTANT, during key points ("stages") in development (ages 1-18 y.o. +) (ontogeny): in rather "quick order" being obviously KEY in resulting (and realizing) new ways of categorizing and new ways to understand causation -- much of the point of THINKING. These would not only be proximate causes in the sense of something (here: environmental-aspects-and-associated-behavior-patterns) preceding something, that is, behavior[-pattern] change, BUT also in playing a distinct role in changing the nature of learning (actually: representation, memory, and learning). Thus, the great importance of likely then-OBSERVABLE (at that point in ontogeny) (via eye-tracking): perceptual/attentional shifts (indicated as much as possible in the major paper, "A Human Ethogram...") that usher in each new stage/level of representation (with memory changes) and new learnings, and soon shown through and/or with problem-solving <-- yes, THAT TOO: all done by the individual organism, to a most notable extent BY ITSELF.

These seen-to-be-pivotal environmental-aspects-and-associated-behavior-patterns would only NECESSARILY be observable BEFORE the major new representational abilities and problem-solving abilities WELL-FORM (through 'behavior' and 'experience') (AND, then of course, WITH CONTINUING DEVELOPMENT, there can be this sort of significant thought which is covert -- presumably (hopefully) still bearing some "resemblance" to when last

overt).

Doesn't this sound important? Better discover these if they exists (which is likely, if you are an empiricist, with an appreciation for biology, anyway) AND reap the benefits. Will it be artificial intelligence or psychology first? (I don't care but my bet is with artificial intelligence.) [These would be the concrete empirical real-world bases of fundamental types of 'abstraction' (or abstract thought) ITSELF.] Let us take advantage of the FIELD OF OBSERVABLES AVAILABLE TO US (right before our eyes), now so many more, with the new eye-tracking technology (and associated computer-assisted analysis). REALLY!

See the Project associated with the main paper, below (the Project: "Human Ethology and Development (Ethogram Theory)" , <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>), AND also see, the other associated Project: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology> (the way to view the memories, these capacities, in addition to considering major abilities developing into thinking are in the papers of that latter Project -- this giving more of an overall outline of the "elements" of behavior and behavioral development). OF COURSE, SEE THE MAJOR PAPER:

View full-text

Source

Article: A Human Ethogram: Its Scientific Acceptability and Importance (now NEW

Dear Andreas Demetriou

Professor, I agree with you. But, a big problem is how to come to rightly understand (as related capabilities unfold with ontogeny):

- 1) One big question: How it is essentially we are "capable to learn from data and experience"? I submit that we (today's researchers/theorists) do not understand most learnings, and this is the situation because ultimately we do not understand the relevant key proximate observables in 'experience' -- BUT UNDERSTANDING THE LATTER DIRECTLY EMPIRICALLY-BEHAVIORALLY will help us or allow us to understand all the sorts of learnings (and then also to truly understand more about 'experience'). (We are long past that point where we should talk about 'learning' and 'reinforcement', as if the essential definitions of these are always obvious at any point in human development, WHEN THEY MOST CERTAINLY ARE _NOT_.)
- 2) True, both humans and robots must [develop so as to] "abstract patterns, align them, and re-encode them whenever needed to learn a new concept". BUT I submit that we should not cogitate and cogitate and cogitate and thus "divine" what models are used -- yet this is precisely always what we do. What we are doing now is this cogitation, using our definitions, our notions of systems, and divining models -- which we then try to use in

robots, and they work very poorly. (We are doing nothing with the comparable "sense" of what is done in other biological (biology) investigations!) The answer is to find the beginnings (a key set of behavior-pattern(s)-and-corresponding-concrete-environmental-aspects for each stage/level) from which we can trace/"track" the paths in the behavior patterns (and from clear aspects of the environment) that the actual organism takes in coming to be "capable to learn from data and experience" _AND_ to "abstract patterns, align them, and re-encode them whenever needed to learn a new concept" [(though, I believe the sequence (experience-abstraction) is somewhat the other way around, in some real sense)].

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These seen-to-be-pivotal environmental-aspects-and-associated-behavior-patterns would only NECESSARILY be observable BEFORE the major new representational abilities and problem-solving abilities WELL-FORM (through 'behavior' and 'experience') (AND, then of course, WITH CONTINUING DEVELOPMENT, there can be this sort of significant thought which is covert -- presumably (hopefully) still bearing some "resemblance" to when last overt).

Doesn't this sound important? Better discover these if they exists (which is likely, if you are an empiricist, with an appreciation for biology, anyway) AND reap the benefits. Will it be artificial intelligence or psychology first? (I don't care but my bet is with artificial intelligence.) [These would be the concrete empirical real-world bases of fundamental types of 'abstraction' (or abstract thought) ITSELF.] Let us take advantage of the FIELD OF OBSERVABLES AVAILABLE TO US (right before our eyes), now so many more, with the new eye-tracking technology (and associated computer-assisted analysis). REALLY!

See the Project associated with the main paper, below (the Project: "Human Ethology and Development (Ethogram Theory)" , <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>), AND also see, the other associated Project: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology> (the

way to view the memories, these capacities, in addition to considering major abilities developing into thinking are in the papers of that latter Project -- this giving more of an overall outline of the "elements" of behavior and behavioral development).

P.S. Much of this same statement (about half) is in a Question of its own (https://www.researchgate.net/post/What_is_really_central_in_real_thinking_its_points_of_inception--but_lets_say_more2) but the Question also has a big elaboration as a new Answer, which you might like to see.

OF COURSE, SEE THE MAJOR PAPER:

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

Dear

Very notable or extreme creativity (part of intelligence) seem to involve "consciousness" because we choose (and take time) to try to put new combinations of things together using some established high-quality representations. This is what working memory is for, perhaps at its best. Since the creativity may well involve something new to a circumstance or something completely new, putting together things that have not been put together before requires deliberateness, if anything does (including when we DO know working memory exists). In a given situation (set of environmental aspects) with deliberateness -- where deliberateness, both in a broad sense and (possibly, but not always) in the narrower sense is involved -- this IS consciousness. Consciousness is IN THE GIVEN SITUATION, BEING DISCUSSED (and also THIS is the only way to sensibly discuss consciousness, real-situation-to-real-situation, without a great likelihood of inevitable confusion -- BECAUSE in trying for other definitions we may well be mixing situations/responses which are not really found together in real life TO wrongfully ATTEMPT OUR 'definition' of consciousness; I.E. : yes, we can in such a way misuse our representations of things in some attempts to put things together.

We do need to take time to do what we do and compare ideas and to test ideas (all obviously very important times of deliberateness). [YET: There is NO reason NOT to believe that ALL this, still, is related to some observable innately guided responses, at least at the inception even of a new higher-level or highest level "way" ("stage") of thought. Each of the many good, high-quality representations we have developed are from some reliable behaviors in response to some current environment aspects (sometime) and, after well-formed and solidified (consolidated/integrated), are available as part of the "units" for for the next hierarchical cognitive advance during ontogeny, at some point -- which may allow for and be the basis of the creative, as I just described. Again, even this new level (way) of thinking and the highest level of thinking we find humans using (thinking about multiple related factors in a system) is related to some way of seeing current environments, AT THEIR INCEPTION (if you are trying to be an empiricist).

[(As many may know, I see the responses to current environments which are the first basis of stage changes and of new cognitive abilities as likely very subtle responses, being perceptual shifts or perceptual/attentional shifts, and observable only NOW with the NEW eye-tracking technology -- at key points and likely assisted by computer analysis software.)]

On the other hand, I cannot get away from viewing some of intelligence as extremely adaptive/adapted species-typical behavior PATTERNS (and thus, being species-typical, would not be seen as the special kind of thing we call 'creativity'). STILL, these are patterned-responses or even multiple patterned-responses (followed by good

behavior change) in response to multiple aspects of a current environments -- thus, so noteworthy for adaptation that they must be included as part of "intelligence" (there is more to this argument, coming up). But, with this side of intelligence, I continue to see a clear similarity with (at times near-identity-with) simply behaviors-for-good-adaptation (which we obviously share with many sentient beings). It is conceivable that there is some "intelligence" (at least in a broad sense), perhaps not any sophisticated intelligence BUT some that is still part and parcel among what is needed to progress on to HAVE the more sophisticated intelligence; if such is vital "along the path", I believe such must be considered part of intelligence. (Some such intelligence factors conceivably may not be clearly deliberate in any sense and thus MAY not involve consciousness.)

If we can discover what the human is doing at all significant points in development (ontogeny), even if those behavioral responses begin as very subtle, we have the concrete bases to have true artificial intelligence. It is really, simply: If one can understand the human in real time, you can build such a real-time robot. SEE: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

If we know all the capacities and developed abilities (with in-real-time associated memories (the types of Memory)) then we will know how the human does things correctly and how the human may not do things correctly. The AI robot would be programmed with the full range of capacities and abilities, but set up to only use them correctly. I don't know if this will make an AI robot "smarter" all the time than a human, but to be smart and make no significant errors IS a big deal. (I, myself, think the AI robot will be better, but not absolutely smarter -- at least not at all times; in general, the robot will seem smarter and behave better. BUT: It all does depend on the quality of behavior research on the human and the quality of the engineering and programming -- which one could imagine as obviously flawed or not significantly flawed. Also, seeming smarter and behaving better does not mean it will likely be better than the most creative human (but the robot could be IF you see all humans, even the best, as seriously hampered by THEIR flaws (mistakes, incorrect behavior); without those flaws, it may become apparent to behavioral scientists, engineers, and programmers HOW TO DO BETTER at even the most advanced-type imagining. [(Probably the most important memory is visual-spatial memory; one must have something like that BIG TIME in the robot (in part: LOTS of pictures) and do something (at times) like facial recognition BUT usually doing much more sophisticated things, and not limited to just recognizing -- but seeing much differently and selectively (selective with reason or foresight and in the context of already-developed representational abilities) than the frames taken by a movie camera; this might be hard.)]

For a starting approach to coming to see the development of cognitive abilities (representation, ETC.), a good new starting point might be the attached long paper (I would note that I am biased, and no doubt I am, BUT there is nothing else like it -- nothing as concrete, directly observational and empirical -- so I have no qualms recommending it): (attached):

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

Has the "philosophy of science" contributed to the "advancement of science"?

To me, a substantive answer to the Question beginning this thread, might be to answer related, more-specific, questions, such as I ask in my Question,

https://www.researchgate.net/post/Do_Analytical_Philosophers_basically_just_fine-tune_concepts_AFTER_a_major_view_has_been_accepted_adapted_by_psychology_researchers_theorists?

History of science. Do you know cases in which scientific community agreements on correctness of a research result did prove to be wrong ?

The paper "A Human Ethogram ..." in the "Human Ethology and Development" Project, shows the common-type mis-attribution of 'fundamental' conclusions AS assumptions of all the major theories of behavior. These are the same theories still considered THE big theories: behavioral, social behavioral, Freudian and neo-Freudian, Piagetian and neo-Piagetian, and Information-Processing Theories **. They demonstrably all contain the 'foundational' pseudo-assumptionism (of pretending CONCLUSIONS are valid ASSUMPTIONS). This is a miserable, long-standing bias of Western civilization, and result of most everyone's always quick-love of hypothetico-deductive thinking (which is actually something you should do ONLY when you have to, otherwise inductive investigations are more appropriate).

PLUS, the paper "A Human Ethogram ..." paper provides an alternative view AND good, important and doable research approach. So, both the problem(s) are identified and the solution given for overall behavioral ["personality"] theory, the solution being of an ultimately empirical cognitive-developmental nature. The new eye-tracking technology is needed for testing the very clear, concrete hypotheses of this Ethogram Theory, because fundamental biologically-congruent perceptual (perceptual/attentional) shifts are seen as THE observable CONCRETE manifestations of starting EACH major new stage of representation/"abstraction" (i.e. beginning each stage of cognitive development) -- AND this is thought true whether development is considered continuous or involving qualitative shifts (just depends on how abrupt you feel a "stage" should be to exist for NO DOUBT major qualitative changes occur minimally several times from birth to age 18). [The nature/nurture problem is solved because both types of factors, in a major way, are seen (in effect) operationing SIMULTANEOUSLY -- consistent with an widely-praised assessment of the "way things really are" from as early as the early 1980's. ALSO, as indicated, the continuous vs. qualitative change debate is OVER.]

** FOOTNOTE: To get the critique of information-processing theory you actually need to see the special additional paper (additional, but highly congruent with "A Human Ethogram"); this add-on paper which provides a critique of information-processing theories is: "Information-Processing Theory and Perspectives on Development ...".

What would you look for in a new cognitive-developmental theory?

Here's some things I think would be good:

- 1) finds some kind of clear crucial/central fault(s) with all current theories (and, if the fault(s) with all major

theories turn out to be of the same type, that would be interesting)

- 2) solves the problems with other current theories in a way that shows its general utility
- 3) has a way of looking to see biological principles operating in behavior (since behavior is an aspect of biology)
- 4) uses established terms of science, generally, so the theory is cogent and understandable (and reasonably follows existing ways of understanding)
- 5) is fully consistent with established psychological science (all that is applicable)
- 6) puts forward hypotheses that are clear and clearly testable/verifiable (or falsifiable)
- 7) solves new problems &/or creates clarity by being more empirical in nature (with all it addresses being clearly empirically grounded)
- 8) eliminates some age-old problems, that need to be resolved (e.g. the nature/nurture controversy)
- 9) is conducive to study by methods of comparative psychology and with well-founded evolutionary psychology understanding and ecology

I have a nomination for just such a theory: the one that is outlined in the 3 major papers I have on this site.

AND: This theory's major HYPOTHESES HAVE JUST VERY RECENTLY BECOME SUBJECT TO INVESTIGATION, given new technological capabilities now available. So, this theory is in a sense is NEW, and that explains why it is presented again THIRTY years after it was formulated and written

P.S. It is clear there is frustration with established, existing theories and a need for new theory. So much so that several developmental science people (psychologists) have banded together to support

"Relational Developmental Systems 'Theories'" -- unfortunately of quite a dubious nature (since the

'researchers' are the ones doing the "relating").

I have contacted many who use this framework and by far most of those who replied acknowledge that it is NOT a theory, but a "framework". It is a rebellion against what they see as an entire 'class' of existing theories (Cartesian-mechanistic), which includes all prominent cognitive-developmental theories! (See Willis F. Overton.) I can see this 'class' of theory, which they believe has run its course, still has one or more extremely viable formulations; yet Overton is correct we do need process understanding -- very, very much so, it's integral. My theoretical view, contained in my large papers, "A Human Ethogram" and "Information Processing Theory and Perspectives on Development (ethology)" (and the third paper -- a brief overview/summary) present something NEW (and an alternative to solutions like Overton et al); it is NEW because the technology needed (eye-tracking) to test the major hypotheses only NOW EXISTS.

This Overton et al 'framework' is notable especially because an entire developmental science SERIES is devoted largely to RDS authors: Handbook of Child Psychology and Developmental Science, Theory and Method (several volumes).

Why do colleges and universities do ALMOST NOTHING to teach people about theory development? Obviously such a topic and in-depth coverage and discussion is needed. (My first answer to the main question can give some hints about some major things that need to be covered.)

Dear

I am sorry I took so long to respond to you. I am at least often fully in agreement with your first paragraph . Let me quote it:

"Cognitive structures so far developed target at a continuous changing process between man and the environment without acknowledging the nature of learning and the learner and types of knowledge. When cognitive developmental theories are aligned with the types of knowledge perhaps we can form a framework to understand what processes addresses cognitive development."

(end quote)

This is exactly what the ethogram theory addresses -- all of that.

Beyond that, the questions in your other paragraphs are too specialized and my perspective (at least starting out) does not address them.

What would you look for in a new cognitive-developmental theory?

I am totally in agreement with "Conscious Human Being that perceives, thinks, creates and acts accordingly in its immediate environment" -- even if a person is sitting, doing nothing, and yet doing a lot of thinking. Once we better understand conceptual development (representation) and the results, we can have some idea of the possibility of his thoughts, knowing the type of concepts possible/likely. We will also find that though the immediate environment is a trigger, that past experiences, especially past experiences very close in time are involved (because of the humans very good conceptual and memory capabilities).

Also your more explicit emphasis on emotions and social things is good. Emotions is a matter that can be put into my view: they are also innate action patterns or products of those with conceptual development. They are relatively simple and already understood to some reasonable extent.

Social cognition, to me, is just an instance(s) of the use of the same sort of conceptual system that develops stage-wise in understanding the physical world -- ultimately related to the 'perceptual shifts' (perceptual/attentional shifts) in stages of development. Speaking of the cognitive stages and how they manifest themselves, unlike emotions, these are not well understood. Presently there is a misconception that thoughts can be "purely abstract" and that stages of abstraction (conceptual) abilities cannot be grounded in simply new particulars in the present environment. There is absolutely no reason to believe this and it is counter to being an empiricist. We can imagine literally seeing new particular aspects of our environment and thus begin the development of a new level of conceptualization.

(The alternative is that we impose our presumptions on "the grist for the conceptual mill".) It is hard to see how particulars could be in themselves the bases of conceptual development, but we must recall much representation/memory comes into the environment with the perceiver. A couple of totally unproven and very likely false assumptions get in the way of imagining the situation: (1) that complex organisms have less innate action patterns (and more is 'pure' learning). There is absolutely no reason to believe this; in fact, the more complex the organism, the more significant innate guidance may exist [(partly just because the capacity of our working memory is just too small for us not to have substantial guidance)]. (2) There is still this notion that all behavior that is hereditary is present OR in effect at birth. This is another belief with no foundation except in speculative philosophy; I believe that very, very false: whether we have things that look like stages or they develop smoothly from one to another -- either way we have STAGES of development. I might as well address a THIRD related thing here: the idea (any idea) of "'pure' learning" is preposterous. We can totally eliminate the nature/nurture debates by realistically accepting that in great likelihood any significant learning involves innate guidance, whether new or whether well internalized as patterns in our responding (and likely usually both). This is the only empirical stance.

Another comment on social cognition. It appears there is no good theory for an evolutionary precursor to our having progressively developing patterns in perception/attention and then thought leading to conceptualization OTHER than such being very much evolutionarily founded in patterns our fore-runners SAW in their hierarchical social structure. I see other conceptual ("abstraction") abilities as almost literally the same thing -- but very "free floating", i.e. flexibly applied to the physical world (resulting in great thinking and cooperative advantages).

VERY MISCELLANEOUS (found who knows where):

Dear

What you start with can be as little as good assumptions (homeostasis and a couple others) and knowledge of certain well-established facts (e.g. about types memory and the fact that associative learnings occur). True, this would not be seen as a full-blown theory, but is sufficient to go from, if you start with all raw behavior observations -- and let them build (or force you to build) further aspects of a full theory as necessary. Thus, as such, this is a useful system: workable, and empirically and biologically grounded. Thus, no nonsense. It is more important that observations and summaries and distillations of what we say occurs stays empirically true (based in direct observables) and that all abides by necessarily applicable assumptions (real actual assumptions) THAN that one have a big idea of a big all-knowing, theory, with big predictions.

In short, we should begin again, starting with utmost empiricism, and with as little else as needed to proceed from raw observations (with inter-rater reliabilities always, along the way). I believe you WAY over-estimate the type of thought-system you need to "feed into" to make proper, good and orderly (and clear) progress. Try to use your imagination here. I propose it is best to have largely the view that the most-excellent WAY of psychological (behavioral) study has not yet begun: then it is possible to appreciate a very sparse theory as adequate (I DO NOT PROPOSE NO THEORY). Goal: (1) for everything to have SOME clear direct or indirect basis in agreed-upon direct observation (this is for empiricism: great inter-rater reliability shows this) and (2) let behavior PATTERNS come to expose themselves as you move forward from this good basic stance. In classical ethology, behavior patterns were so clearly organismic that behaviors basically contextualized AND defined each other (and themselves) THEREBY. <-- This also yields the result you want in science, which is a basically self-correcting theory: you stay so well grounded that any interpretations that are not true, are seen as not true. This is how to get psychology like other sciences.

It may be only now, with the new eye-tracking and computer-assisted analysis, that good psychology IS FINALLY POSSIBLE. [Perception is not a small matter (either sort, as described by C. Montemayor) and perception is damned-well not simply similar to sensation or that and 'knowing' there are sensations coming-together: we may well have to find some clear indications about HOW. In any case, more importantly, we very likely have to come to see how basic (not-in-our-control) PERCEPTIONS DIRECT US (and this may well be indicated in new sorts of direct behavioral observation). We must also examine unproven pseudo-assumptions which are thought to BE reasonable assumptions in the present 'modern' psychology outlook BUT WHICH MAY VERY WELL BE THE OPPOSITE OF WHAT IS TRUE. (I outline these, and thus AGAIN indicate clearly that psychology is an infant 'science' -- see my other essays, Qs and As, here on RG).]

The fact that psychology shows no good body of discovered and clear and agreed upon behavior PATTERNS, flowing and going one to another (and all BASED in empirical, direct observations), basically indicates the unacceptable nature of the field today -- and why it is not unreasonable to think we simply have to "start again" and that the most-excellent WAY of study has not yet been done. No good results from past work will ever be thrown away: they will be incorporated.

[As you do not understand me, I also really do not understand you (but have grave suspicions).]

Dear

Thank you for the update. Your brief definition of abstract/concept seems like it might be good; I do not fully understand what you mean, but short functional "open" definitions seem good -- especially when also based on previous developments (prominently including representations -- developed "out of"/from visual spatial memories, which, when properly processed do seem to be key) . I, myself, still cannot really even roughly imagine what concrete aspects of the environment might direct attention for the inception of a new "level" of thinking. I do have a tendency to imagine that it has to do with some "gap" ** noticed by the organism between rich representations of important circumstances/situations: THEN, I imagine, when something "comes up" as a new aspect of a current environment that may fill the gap then it is 'seen' ('noticed' -- in the sense of "attentions noticed" in my last essay ([https://www.researchgate.net/post/Have Technologies in the role of a MICROSCOPE for psychology been developed which can now be used to investigate important observational specifics?](https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics?))).

[I do hope you have read both the "Answers" under that "Question", because those are (together) a bit more hopeful for AI. Also, the "Question" itself is free of editorial errors which affected meaning or were very vague.]

Thanks for the recommendation of the book. I will take a quick look, though I must admit that the topic of intelligence seems to me to often lead issues "off the track".

** FOOTNOTE: an example of a 'gap' would be noticing differential responses to individuals in a social hierarchy, where the immature organism has not yet come to an understanding of the full nature of the bases of status. (It is from such things, that were the likely evolutionary precursors to 'abstract thought' -- AND involve some abstract thought themselves).

Quick P.S. The good thing about the "gaps" idea is it does expressly indicate a relationship between present representations and understanding and the new aspect(s) eventually yielding further understanding. (There are gaze pauses likely in each context, both the known but incomplete, and the new where more is to be 'seen'. TO COORDINATE the represented/known/understood with the good-to-'see' new representables/knowables in the present environment is good -- this keeps the process very much like a biological thing should be. [This is as

close as a "knowing before found" could reasonably be -- I think much more reasonable than what you find in current popular theories that are like that.] (Also, you have more clues as to what the perceptual shifts will be, because of what-is-an-'issue' BEFORE a perceptual shift; potentially each may be equally 'seeable' with eye-tracking technology. Plus you have a pattern to look for : a "this" before "that".

Realistically representing the nature of key visual-spatial memories seems to me to be the main challenge and biggest challenge (the other knowledge and skill factors OF long-term memory are, of course involved, BUT those may be the easy parts). The other challenge is defining BUT NOT LIMITING the episodic buffer -- what is the "frame", what is the contextualization THEN yielding some of the "chunks" worked on in working memory?

Given our adaptive nature, the way all BIG qualitative changes in thinking occur ABOUT the same time may be related to TRUE analogies -- the same pattern for advancement repeated for developments in different domains. (I normally eschew analogies, but the idea of 'seeing' or looking for similar patterns (somehow) may be adaptive.]

Nothing should be considered "beyond one's control" -- such a view is not necessary and not useful, but destructive, especially when stated in such a "pat" way. (Unless you believe we must be destructive, abandon this view.)

There are eventually limits to control, though: simply because there is a nature to causation (AND actual causes**) and one cannot in any real sense ultimately transcend that, though progress in understanding and controlling things can occur and be very substantial -- even involving qualitative changes.

**FOOTNOTE: Re: actual causes: what these are are not well-known or often properly "seen", so do not over-presume here or you are self-limiting.

My best paper is "A Human Ethogram, Its Scientific Acceptability and Importance" (now NEW, because new technology allows investigation of the hypotheses). It is central to a new perspective on general (developmental/personality) psychology. And, specifically it outlines all the concrete terms for describing

behavior and its development AND cites NEW concrete foci (perceptual/attentional shifts) that may well be there (concretely, as an innate guidance factors) ushering in new levels of conceptual thinking (and new ways of learning). That paper also offers a critique of all major psychology theories (thus, in another way, showing how a new perspective is needed -- there is nothing wrong with starting again to observe more and better and establish things more empirically). [There is also an associated paper on "Information Processing theories", that covers this newer sort of major theory. AND, other newer theories/"theories" are critiqued here in my essays on researchgate.]

In addition to those writings, I have written over 200 pages of essays in my Questions and in my Answers, here on researchgate. These outline corollary views and consequences and implications of the new perspective of the major papers; AND, they argue for the need for the new perspective from many different angles. This is MAJOR explication of the full view, parts begun ("seeded") and/or outlined in the main papers described above and may be of equal importance to actually "seeing" the full new view. (Go to my Profile, then Contributions, then to Questions (I asked) and then do likewise to view Answers I have given to Questions -- this IS WHERE the 200 pages of essays of explication ARE.) The new perspective involves a qualitative shift in views and in theory - more so than anything else one can find, and ultimately empirical. For short, the new view is called ETHOGRAM THEORY.

This new view provides HUGE NEW research possibilities and potentials, using the new eye-tracking technology and computer-assisted analysis programs AND via careful observation. (Thus, obviously, for science this is included in why all this is important; plus, to be more specific in one area: quality observational studies (and how to do them) are also highly encouraged. In other words, a full range of studies follows from the new major perspective.) [The new perspective also has major implications for new ways of doing artificial intelligence and doing it efficiently and realistically.]

What's your best paper?. Available from: https://www.researchgate.net/post/Whats_your_best_paper/1 [accessed May 21, 2017].

Eibl-Eibesfeldt's Ethology: The Biology of Behavior (1975 ; it's the second edition and available in English, from used book stores anyway): It is still cited because it shows the absolute best of ethology -- the ethology that gave me "life" [now, perhaps partly forgotten but, in any case (in the last decade+), ignorantly and at times ridiculously and shamefully expressly abandoned].

The very best of this book is pp. 1 - 215 (if you have not yet read that, I believe there is no way you could read that and fail to be filled with admiration and with hope engendered by the promise, and want to bring the "life"

back to classical ethology -- the empirical nature and the quality of which nowadays is NEVER matched); learn (or learn again) how a real behavior pattern is recognized through and by discovery AND, by the way, SEE that ethology DOES NOT LEAD ONE TO THINK LESS ABOUT LEARNING OR TO SEE LESS OF THAT -- very, very likely to the contrary for any good-thinking people (that "less-about-learning" myth is purely from forgetfulness or misunderstanding -- and could not be otherwise

Dear

Buddhists try to eliminate any 'self' (directly considered) OR "contained" anywhere -- e.g. in any other concepts (like soul) or things (like "MY relationships" or even "MY thoughts" or "MY emotions" OR "MY house"). It is a long, significant PROCESS, though; they do not just push the concept away. The idea is that reality really is just a cause and effect matter and the processes (and things) are impersonal -- which, when things are closely examined, at least more often, seems true. AND: Helping this outlook is realizing the impermanence of many things (some say all things, which is true in the "long run") -- and if "things" (e.g. emotions, concepts, perception ...) do NOT LAST, then there is nothing that remains to be considered a self. It is thought that getting 'the self' out of things helps one come closer to seeing things in Reality "as they are" (at least many times, in many circumstances this seems true). Impermanence includes the fact that things change AND that all is unsatisfactory (you would (and often should) want things better). Impermanence; non-self; and unsatisfactory. "Dukka", usu. translated: suffering: It is only by realizing these things that dukka can end, though one must ALSO be moral/ethical AND ardently strive to do right to "get there" -- including striving to "see things as they are". Associated with all these realizations:

- 1) truth of suffering is to be fully understood [(eventually)][(normal human life is filled with suffering)].
Suffering is related to [unwanted] change and the [unwanted] impermanence of all things
- 2) The truth of the suffering's origin (craving) is to be abandoned
- 3) The truth of the cessation of suffering is to be realized
- 4) The truth of the path to the cessation of suffering is to be developed.

These are known as the 4 Noble Truths.

I would submit that only in conventional social relationships (or in thought relating to this) is a "sense of self" useful -- even there it should be minimized and only "there" as necessary for communication. Otherwise, Buddhists see it as even worse than just non-constructive and incorrect: they see it as delusion (often stemming from ignorance) and likely also craving. [Hatred, greed (esp. common is craving), and delusion are the sources* of all that is bad OR unwholesome -- the 3 sources of 'evil', if you like. (*FOOTNOTE: often in the combination: of delusion PLUS one other, though there can just be delusion by itself.)]

[Although an object of one's progress is no-self, along the way especially during states of concentration: when "things come to mind" YOU ARE encouraged to identify the 'feeling' (positive, negative, or neutral) connected to

the thought (whatever it is). This simple noting may seem to kind of imply some sort of "'self'-processing" on the way to enlightenment when you do this (and I would say: yes it does, because you are not YET no-self). Once some major realization or enlightenment occurs, though, there is no more 'feeling' to have to think about: because you have wise and good equanimity (at least temporarily, in some particular 'area' of major realization).] [When one achieves 'stream-entry', the first of 4 stages towards enlightenment and significant: One of three big things the stream-enterer abandons is identity view: view of truly existent self either identical with the 5 aggregates (look those up -- it's quick and easy) or existing in-relation to them. This does not mean he is free of delusion and does not still have some "sense of self". Stream-entry is a very doable accomplishment for an ardent, striving Buddhist (the other stages: not-so-much). One should know that "view of self", "I am" as vague, shapeless, but impervious sense of "I" as a concrete reality -- this can persist up to non-returner, the third stage on the way to enlightenment.]

A comprehensive, rational, realistic (real-world) presentation of Buddhism:
<https://www.researchgate.net/project/Core-Buddhism> (or more directly:
<https://mynichecomp.com/index.php?subject=12>)

Although I have just now asked you for the paper and although you provide no abstract here, I feel compelled to ask: What about those ways of life that find it is most productive to reduce and even eliminate any 'self' (including experience or sense of self -- though I am sure there are 'conventional-social' exceptions) and to learn that happenings are caused but impersonal? For this I would like to refer you to a comprehensive, rational, realistic (real-world) presentation of Buddhism: <https://www.researchgate.net/project/Core-Buddhism>

For more about Buddhism, see my Reply to Baruch Eitam 's Comment (I did my best there to say the most in a limited space).

What is your goal really? Isn't your current "goal" wording a conclusion, not a goal?

Dear

I argue at length in my "A Human Ethogram ..." ("Human Ethology and Development" Project) that many key fundamental (foundational) 'assumptions' of major general psychology/developmental psychology/personality psychology theories are demonstrably IN FACT conclusions rather than assumptions. Thus, hopelessly skewing the outlook on, and search for, relevant 'causes'. I argue this in complete detail in that long "Human Ethogram ... " paper.

My point , for HERE, is: though consciousness may be an especially difficult question, the topic is not unique in having conclusions operating in an incorrect role (being there and being bad, even as "pseudo-assumptions"). It is typical in psychology that this occurs in answering just about all major questions. (I believe these problems are due to a "Western" civilization tendency to very quickly and gladly (but inappropriately) "jump" to hypothetico-deductive (h-p) systems before there is a mature collection of direct observations (and via inductive work) -- i.e. long before h-p systems are necessary AND, when they are not necessary, they skew everything they address with needless a priori junk. It happens again and again and again, with about nobody learning how not to do this; no lesson ever seems to be learned with regard to this problem.)

I will say, though, that the Project you posted your question under is particularly strange; but I use any opportunity to get on my "soapbox" about these bad characteristics of conceptualization and of theory. I actually have no intention of dignifying the nature of the Project and perhaps should remove my Answer even to your question because it somehow stems from the Project.

Learn the good in being a neo-Piagetian cognitive-developmental human ethologist who is a STRICT empiricist (rightly outlining a way to relate ALL to directly observable proximate causes of central behavioral changes).

Perhaps I should characterize my writings, so any interested might read them. FIRST (something that tells a lot): What/who I am: a neo-Piagetian cognitive-developmental human ethologist who is a STRICT empiricist (rightly outlining a way to relate ALL important behavior to directly observable proximate causes of central behavioral changes); I have not done much, so perhaps I might well be considered a philosopher of some type (philosophy of science (of psychology)). If interested read me : https://www.researchgate.net/profile/Brad_Jesness2 (see all Questions (asked) and Answers (given): from Profile page, Click Contributions, THEN Click Questions, and click Answers; and, also see and read large papers under "Research Items" , there on researchgate).

Let me now invite behavioral scientists/ethologists TO DO well-based human behavioral science:
https://www.researchgate.net/post/Does_assuming_the_likelihood_of_cognitive_stages_make_the_empirical_foundation_of_psychology_ontogeny_easier?

Dear

I never cease to be amazed at how people want to "rise above" and try to usefully think of any set of similar things all at once and always expect to have good progress.

I never ever consider "complexity" as part of an answer about states of human consciousness, but rather representative of the confusion of those trying to fully-embrace and fully-'define' "something" key and important about all the states AT ONCE: WHAT THEY SUPPOSEDLY all HAVE IN COMMON (which is often either nothing, effectively nothing, or close to nothing -- and trying to define this would lead to confusion).

In the human itself, it is LACK of confusions that make consciousness useful and adaptive (and existent). In more important cases (of states) the context of consciousness (context given to the episodic buffer and working memory by visual-spatial memory and the types of long-term memory) is from well-established basically-VALID representations and understandings, based on basic RELIABLE experience in one's environments. From that one moves forward in properly representing and /or understanding more in rather small, clear reliable steps (and occasionally showing some qualitative stage shifts) -- all of which are basically found universally in all humans, educated (or civilized) or not. Stages and key characteristics of learnings are (and are based on) species-typical key perception of and/or attention to select aspects of one's experiential environments, with some special environmental characteristics of the present environment, providing for some partial-establishment of notable conceptual progress OR, often, just for more simple learning. (These sentences of this paragraph would 'provide' you with about as good-at-all-times-and-useful a general definition of 'consciousness' you could find -- unless you want to revel in the remembrance of some particular special-to-you state of consciousness, and think others have had that 'wondrous' experience as well.)

Incremental learning by such processes and factors, described above, is thereby "skewed" -- otherwise is simple.

One cannot define something, just because one wants to. That is like wanting to eat all the food in the world at once. Or, to have a clear most-useful generally-useful operational definition of all-the-universe, at once. WITH SUCH GRAND TOPICS, you really can define something often only in most-broad, basically vague terms (probably not very useful for any particular application of workable knowledge, for example: see my description, above). THIS IS TRUE OF CONSCIOUSNESS, that has many varied states, of which you can well imagine little/few at once -- you are not omnipotent, after all.

If philosophy is not proven useful, then it is worthless, like everything else. Let's make sure we all do not add any to this problem -- that is all basically noise.

Dear

I would very much caution against "the/a" socio-cultural approach. I/we may not know the "unit of learning",

but in a most-basic sense, we DO know the "unit of analysis" (this is the biological, organism unit; behavior, like the functioning of any other organ, IS BIOLOGICAL and must follow biological principles -- things are "incorporated" at the level of the individual). I hope this is what Matusov came up with in his "search" (something -- or some things -- OF the individual). (IN my experience you can ONLY gain, as you always remain able to relate things clearly "back to this level".)

View

Major central question of AI?: How can "something" be (in much of its nature) "bottom-up" _AND_ (also) a start of a new "top-down" structure/ability?

Unit of analysis in educational research and learning sciences?

Answer

Dear

... And, I am basically telling you: THERE ISN'T ONE (there isn't A well-defined "unit of analysis"). Thus, I was on-topic, though you may not have liked my answer. [I was also trying to indicate, constructively and realistically, how we "get there".]

You will no doubt get other answers, but they will likely not be better than what you could quickly find on the Internet. The fact you are still seeking may be a good sign -- but don't get your hopes up on anything "we" have at present. We have a LOT of real and hard work to do; it is doable (and this is the only hope).

View

To understand things, I ask myself: What is human consciousness?

What you want and what you may need may not seem to be the same thing (but I feel compelled to answer because you mentioned "learning sciences" -- and I am trying to help). Here's my answers for foundations and UNITS: "Getting there" will involve a good admixture of the known (e.g. some of the basic properties of the various Memories -- based on the best well-established BEHAVIORAL science) _AND_ important, clearly unknown, foundational behaviors (simultaneously: innate/overt-behavioral/environmental-aspect(s) behavioral change events, several, progressively emerging during ontogeny) -- which MUST BECOME KNOWN and, once known, will provide a true foundation (INCLUDING THE UNITS OF ANALYSIS) for needed refinement of outlook and methodology and for clear findings and for discovery. Until then, we are really "screwed" (as they say) because we really do NOT have a good understanding of the ways/types of (qualitatively different) learnings, or really of any "learning" at all. (The most basic types of learning need to be properly contextualized.) (AND: Even the classical and operant 'types' may not be clear types, and perhaps not only because they are not appropriately contextualized: I long ago read a great writer/thinker/behavioral scientist who showed how operant learning instances can be seen as "classical" and "classical" learning instances (events) as operant; perhaps this is an issue of proper contextualization, but maybe (at least at times), a matter of conceptualization. [I read this good well-founded essay several decades ago and thus cannot provide a citation -- but this is some

fun, important "stuff". :))

Psychology may be just now able to start anew and correctly with new technologies (e.g. eye-tracking and computer-assisted analysis) -- finding an empirical foundation; in a sense a good science of psychology may have not yet begun (and, as indicated, I believe this is likely). Outside of my many, many explications in Questions and Answers, here on researchgate, see as the core my "A Human Ethogram ... "

(

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

)

Even if it "sounds crazy", at least as briefly or superficially described, it is my learned point of view: something I am willing to identify myself by even at the end of (or after) my career.

Good luck otherwise, not so much on finding, but on finding even conceivably useful "comprehensive theoretical overview[s] from the field and/or systematic literature reviews" on the topics (you cited) "from methodological perspective[s] ". Delusions can be believed (as we know), but it is not advisable.

Dear

Yes. Humans are their own worst enemy. The reason is extreme irrationality and the failure to recognize this and (relatedly) the failure to put things in anything close to a proper perspective. One thing I always like to point out is how humans, in the way we often talk about those of our species, appear to take credit individually for all "we" have discovered and invented (things, we, as a species, with specialization, division of labor, communication, and culture have done as a large group, over a lot of time). Almost no one seems to appreciate the minuscule part MOST of us have IN ANYTHING. Again: We are the way we are as a species because of specialization, division of labor, communication, and culture; we do not each discover/invent/understand/ or engender any great accomplishment ourselves personally; RATHER, I would estimate: our individual abilities are quite commensurate with that of any ape. It is this just-mentioned perspective which is one most basic reality and we typically defy that. Basically, we defy Reality (and I point out another way we do that, below).

Given these great characteristics of irrationality "we" have (and other grave irrationalities, related and unrelated to that described above), we have people thinking we can invent our way out of any problem (at any time, at our convenience). We have respected people proposing we can migrate to another planet (when the closest one possibly compatible with our life is about 100,000 light years away). One could mention countless, likely fatal, irrationalities. Some of these lead us to have no concern for over-population, when scientifically it is nearly certain that alone will rather soon lead to the demise of the species. I STILL often REFER BACK TO THAT ESSENTIAL, MOST OUTRAGEOUS PERSPECTIVE PEOPLE TAKE (described in the beginning of the first paragraph, above) -- a way of seeing ourselves (or at least some others) as greater than "we" are..

Many people also (ironically) basically consider themselves babies and believe God (the father) will save us if/as

needed. This irrationality of considering yourself a baby and accepting that is another grave (FATAL) irrationality. This too may be related to the absence of any sensible concern about population per se and irrational hopes we can/will get anything we might need at any time.

There is a post (Answer) I just put up Dec 19, 2017 and a Message put up Dec. 21st (both after the newer mostly-complete version of the "collected essays" were compiled). These may help understanding (and in any case these indicate more detailed hypotheses that could better detail actual phenomenology that may be discovered) :

Something I never expected I do, I am now going to do. I am going to further hypothesize the NATURE of the perceptual shifts initiating each new stage/level of cognition. I am going to do this to address what seems to be a paradox between extremely major developments (as they are first initiated) and how the environmental aspect(s) involved must be absolutely basic/simple (as well as being flexible and open, and shown in many domains).

I have already noted that I think these "perceptual shifts" quite likely, at first, are NOT noticed in any way by the Subject (NOR by the researcher, without the latter having special equipment). (I have referred to these shifts as they first manifest themselves as "attentions noticed" -- simply because researchers can notice and see them with eye-tracking technology, and computer-assisted analysis, AND (of course) with some good knowledge of when and under what circumstances these could/would come up, during child development. The perceptual shifts probably at first should have been called patterned-gazes-noticed -- and perhaps that would be a good idea, here on, to call them that, until the Subject (the child) does notice new important environmental aspects changing experience -- and then these would be perceptual or perceptual/attentional shifts that are just THAT for the Subject (those both being other phases of the cognitive-developmental shifts).

(At all times (phases), these gazes and perceptual shifts DO involve innate guidance and will involve associative/discriminative (dissociative) learning -- AND to know the covert contextualizations and thinking involved, one must have done this research with all previous Periods/stages/levels, in order).

Freudians and neo-Freudians see a total of 5 such developmental stages (3 mo. to 18+ years) and neo-Piagetians can also most meaningfully see 5 if the Pre-Operational Period is divided into 2 stages, based on Piaget's own recognition of 2 phases OF this Period: the Preconceptual stage (2 to 4 y.o.) and the Intuitive stage (4 to 7 y.o.).

All this, I just outlined, is further described in my own third ANSWER under the Question ,

https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics

Though I never expected to say more (but rather just leave all the rest to actual observation and research), for several nights, it has occurred to me ("plagued me", might be a better description) that more about the likely nature of the environmental aspects setting off all those responses and developments, described above, should be presented. These environmental aspects (MOST CERTAINLY SOME PRESENT IN DIRECTLY OBSERVABLE BEHAVIOR PATTERNS AS THE PROXIMATE CAUSE(S)) are behind the inception of everything cognitive that can be manipulated in working memory, I.E. everything ever deliberately processed (though in the early phase they may well be described as unconscious). This may seem hard to understand, given this process occurs at the inception of even the highest levels of cognitive development, including that providing beginning content to 'abstract thought'.

What could this behavior pattern responses be, phenomenologically, given the role(s) these "shifts" have, and with their phases, have? To get the correct perspective, one must have a thorough understanding of the vast amount of contextualization (of the environment and of overt and covert behaviors) brought forth by our various types of memory. This factor is so huge, that the new environmental aspects, triggering off these gaze/perception/attention changes can be VERY limited additional stimuli: altering some cognition already existing or adding to existing behavior or adding (perhaps with some subtraction) a whole new aspect of experience.

I have also frequently thought that the "shifts" could begin as gaps "noticed" with gazes WHERE THE NEW ASPECT FOR NEW UNDERSTANDING of concepts and physical processes COULD BE USEFUL (a innate "understanding" of a lack of "understanding"). _THEN_, perhaps on other similar circumstances (or just other instances of the same circumstances): a good "gap filler" WILL BE patterned-gazes-noticed (phase two of my "perceptual shifts" processes). This idea of there being initial "gaps", where, soon with development, new environmental aspects will be seen, or new experience combined with existing cognitions ... enhances the ability for this process in development to be very open and flexible, AS IT MUST BE. In short, the "gaps" themselves are the impetus to

"look/see" further; the "gaps" themselves would be the organismic trigger (in Piaget's terms: where the recognition and response of the current Period are inadequate and a transition to the next Period must begin).

Also, the "gaps" in spacial or temporal/spacial patterns experienced could allow for SIMILAR responses to similar areas (OR TYPES) of experience, where more understanding is needed. HERE, I substantiate what may be behind TRUE actual analogies "in play" in situations, where similar developments are needed; and, of course, those needed aspects become "present", as appropriate, in the environment.

Here is another way I described and told about basically the same details as were described above, but which seems more biological (more biologically likely) .

This expression of these more detailed hypotheses may be much clearer so, while it is supposed to be about the same thing I said above, the following may be both a better written-up and more true :

The phases I was referring to are possible different behavioral/phenomenological characteristics during a "perceptual shift" (those overall occurrences at the inception of each transition from one way of thinking to a 'higher' level). Thus, I was referring to phases during any one of those perceptual shifts involved in any such stage advance (the INCEPTION of a behavioral/thinking advance). (So: They are, in effect, phases of any one single perceptual shift.)

The reason I keep coming up with idea of this extra phase is that it would facilitate openness/flexibility for learning and allow for some pre-apperception of things that structurally (e.g. like their place in visual-spacial memory) that are indeed analogously alike (what one could call "true analogies"). I usually dislike analogies, but in human development it could help the generalization and reuse of "noticing" processes (in a later phases) across domains where there is some real structural similarity (such at that I just described for v-s memory, above). (The "gaps" I refer to are fixations of gaze, but NOT on some new aspect of the environment -- but indicating a need for some more information to "fill up" the phenomenon the child is experiencing (basically a "something's missing" experience). Now, one whole "perceptual shift": In this conceptualization of a perceptual shift, it is thought it may involve: (1) such gaps, then (2) "noticed attentions" (--- this does involve an orienting response to a 'new' environmental aspect -- but an orienting response is all), (3) actual attention, and then (4) good integral processing; and then from that eventually the development of new representation and new ways of thinking.

** FOOTNOTE: The "attentions noticed" probably should be better named with the term "gaze pauses" -- to more clearly indicate the absence of any particular/specific attention OR of any specific orienting of any sort.

There may be other sorts of phases in stages, at a grosser level, as outlined by Andreas Demetriou et al; this could yield further points of clear discrimination in observations during the continued development of the major levels/stages of cognition. Piaget, too, may have indicated the nature of some invariant changes, with progress through a stage/level.

How about a description of a possible (hypothetical) inception of a new qualitative (stage) change in cognitive processes with a "perceptual shift"?

I want to present you with a possible particular concrete example (instance) of a perceptual shift, i.e. the inception of a stage shift (in 'seeing' and [at first, very vaguely,] in some sense IN cognition), showing all the 4 phases of a perceptual shift for the overall

process of the beginning of a qualitative stage shift part of the development of cognition -- before purely associative learning "holds sway" by itself again.

This hypothetical example comes from the ape (gorilla) social "world", from which our abilities to have progressively developing levels of concepts and thinking likely first evolved. Well, HERE IS IS:

Think of an child ape, not an infant but perhaps a mid-age-child individual. He has from his previous development a conceptual idea of the dominant (adult) male gorilla (and his behavior patterns, relating to this).

But, then he "notices" that this dominant male, at times rushes towards other adults, to seemingly show other ways to express his dominance (or other aspects of that dominance) which he has not shown before (or which the young ape has not clearly seen, noticed, or processed before).

This is the kind of thing indicating [with him, this child] innate guidance, given he has good, refined earlier knowledge: AT FIRST BEING some gap in the child ape's conceptual understanding of the OVERALL structure of this adult dominance behavior. That "gap", (phase 1) of the now first-emerging of a NEW perceptual shift, may show itself in a situation (or early situations) as just something involving automatically vaguely orienting TOWARD the key situation and behaviors (and would be shown behaviorally simply in prolonged gaze when/after this dominance phenomenon shows itself).

Soon (perhaps VERY SOON) he will better see such dominance events WHEN THEY OCCUR (because of the specific "gap" existing in his understanding); this second phase (of the perceptual shift) will show clearly: orienting to the aspects of this new-to-understand type of dominance expression (still, for the most part, not conscious).

In the third phase of the shift, he will reliably have seen regularities as he continues good orientation needed to observe things associated with this dominance event. HERE he can be said to be expressly and explicitly and consciously ATTENDING to occurrences of this event.

Finally (in the fourth phase of the shift) he will integrate the essentials into memory: facts-for-occurrence, key aspects of this dominant male's behavior (with respect to dominance behavior patterns), and key aspects of the spacial and temporal aspects ("in the world"), associated with these dominance behaviors pattern's key content in visual-spacial memory (which he will be able to play back in his mind, when NOT present in the situation where the adult male dominance behavior occurs; i.e. he can "reflect"). BUT, TO DO ALL THIS:

This fourth phase shows the development of some fact/declarative memory (basically the main static features of the dominance act and their relationships to each other, defined) -- this is the declarative/"semantic" aspect of long-term memory he has developed and is developing. Also, some procedural knowledge develops (at the same time) about how to act in response to this dominance expression (especially if he has something "to do" with he, himself): this thoroughly developed, active and automatized response (or set of responses) is the procedural aspect of long-term memory he has gained: this aspect, known as procedural memory.

Also, in the fourth phase FOR THE MOST PART, he has a record-of-incident (episode) memory which is most prominently in the visual-spacial memory which is, in an indirect way, the actual thing he is able to play back key portions of in his mind, just as he sits and thinks about this dominance phenomenon -- given the EPISODIC BUFFER. (Other key aspects [mentioned above] of long-term Memories are also determining the nature of the BUFFER and are "there".) So, the ability to do this out-of the situation reflection, just described above, relies on (and is delimited by) the content that will be a notable part of his EPISODIC BUFFER, doing some major contextualization of his working memory (entering into it) where further, now more-simple associative learning may now continue to occur, until all the Memories (each and together) are thoroughly refined.

He no doubt will also, through cued thinking (and likely some observation) relate this aspect of his concept of dominance to other aspects at the same conceptual level (and to/with earlier conceptual levels) that are related to shows of dominance. When ALL this (all of the 4 phases and associative learning needed for refinements and concept integration) has occurred (perhaps taking a year), he will be ready to notice other greater patterns BY HAVING a new perceptual shift (that, too, with 4 similar phases) -- these are the core foundational happenings in ontogeny (aka THE proximate directly observable causes of the development of behavior patterns

via perceptual shifts) and that which AGAIN allows qualitative NEW learning new ways (using a qualitatively different kind of learning, and also using well-refined aspects from earlier stages): to AGAIN further develop his representation system(s) (aka concept structure), this being related to all major aspects of the Memories and likely mostly connected with through visual-spatial memories, and all the other Memories connected to that AND USED (in the final step of cognizance) BY THE EPISODIC BUFFER; then working memory can work on new "things".

[Full explication and justification for this approach (and the implications of this approach) can be found via :

(

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

) and

THIS PRESENT COLLECTION (and its Comment)

]

Reply 1

I would like to add the following note at the end of the last section of the Comment, but the RG system is messing up in this way too. So, here is the note here:

I should have noted that this perspective can be seen as finishing Piaget's theory (and that of neo-Piagetians), by defining the stage shifts (associated with Equilibration 2, qualitatively described, ONLY, by Piaget, BUT something he clearly indicates is not accomplished with regular accommodation). In fact, Piaget just stated the real major factor behind the main stage changes was "maturation". Unfortunately, most psychologists completely overlook statements about Equilibration 2 and either do not know of it or totally neglect to mention it in any regard. In any case: THEY NEGLECT TO SEE THE STARK FACT OF THE LACK OF EXPLANATION HERE, which Piaget MORE than clearly stated; they somehow (often, and maybe always, adding in fictional executive and meta processes) explain cognitive developments just with assimilation and accommodation -- BUT THIS WAS NOT PIAGET'S VIEW (he had a qualitative idea of the situation and nature of things that would yield the need for big change: Equilibration 2, after previous developments have been well-refined), BUT PROVIDED THEN ONLY "MATURATION", otherwise, as an explanation and that is all (he would himself have seen, and DID see, his theory as empirically incomplete).

Thus, this perspective and approach is congruent IN THE MAIN with the Piagetian perspectives and all neo-Piagetian perspectives, just adding in the discoverable needed processes (and resulting in a way to throw out all those "meta" processes, because they are not only not well-founded, but they are not needed for explanation). Once these fictional (though on the "face of it" seeming totally descriptive) processes are eliminated, my perspective and approach is basically consistent with neo-Piagetian theories.

One returns to the empiricism of direct observation to substantiate these "perceptual shift" hypotheses, something Piaget would be very happy with. AND: We now also have the tools of eye-tracking and computer assisted analysis technologies to allow us to DISCOVER (see) what researchers previously could not. Researchers, today, with the new procedures now available should look for and see if they can find the overt phenomenon (though subtle) associated with my empirically hypothesized, directly observable phases of the "perceptual shifts".

If only today's theorists could recall or review Piaget and see that JUST THIS is what was and IS mainly missing (and otherwise just

modifying some accounts because the "perceptual shifts" testable and provable findings will have some implications on the descriptions of other processes/mechanisms, but those otherwise and mainly being almost phenomenologically correct).

[BELOW are notes I wrote to share with people in my ethology group, but I thought they should also be shared HERE. You may find a bit of redundancy at some points, because many had not read my other writings.]

The disappointing thing I am finding is that FOR ethology people and others:

Proximate explanations are ALWAYS neurobiological, endocrinological, or molecular-genetic. There appears to be ABSOLUTELY no concept of a behavioral pattern or change in a behavioral pattern (either, of course, in response to aspects of the current environment) AS THEMSELVES A PROXIMATE CAUSE -- true phenomenon proceeding, and needed for, a subsequent NEW behavior pattern change. I believe there is a BIAS there, due to our philosophical cultural traditional-beliefs. AND, THIS A PROBLEM.

I have written a 328-page book, and present a 160-page major paper, outlining the nature and likelihood of just such behavioral proximate causes. The major way to describe this (other than giving you the citations mentioned, which I shall later) is to point out that Piagetian theory (and neo-Piagetian theories) and, whatever other constructivist cognitive-developmental theories of human ontogeny HAVE ABSOLUTELY NO FOUNDATION IN-BEHAVIOR for stage shifts, for shifts in starting ways of conceptualizing leading to new ways of thinking and understanding. [Though many have forgotten, Piaget DID NOT THINK that just assimilation and accommodation were involved; he described the nature of a SECOND kind of equilibration (NEVER mentioned nowadays), which balances using old-stage or present-stage behaviors with developing new-type behaviors of a new stage. As far as underlying ultimate cause, he cited ONLY "biological maturation" AND HE _KNEW_ THIS WAS CERTAINLY NOT CLEAR AND THAT HIS THEORY WAS DEFINITELY INCOMPLETE.] Showing that this second sort of equilibration was just in-its-general-effect described and not explained. For clear evidence of his position, one should note that his very last book, before his death, was ON equilibration and indicated this matter has yet to be determined (as to any specific "how" or "what").

I now ask: What? We don't consider any new emerging or "shifted" behavior pattern AS one of the PROXIMATE CAUSES of behavior pattern change (of course, along with environmental aspect and, perhaps, other things)?? If one thinks (as reasonable psychologists do) that THERE ARE qualitative shifts in the way people see things (conceptualize), this leading to new ways of understanding and thinking, THEN it is CREDIBLE, ONLY, that there are some KEY INNATELY GUIDED SHIFTS IN BEHAVIORS (behavior patterns) "kicking things off". No credible universal learning or social learning (nor the bizarre "embodied (enactment) theories") CAN EXPLAIN THE PHENOMENON -- and certainly there is NEVER _ANY_ direct empirical evidence for any learning, etc, VIEW (nor are these theories amenable to finding ANY direct empirical evidence).

Well, I have hypotheses that, if correct, will yield DIRECT EMPIRICAL OBSERVATIONAL EVIDENCE at least at the INCEPTION of any new cognitive stage. And, one should consider my hypotheses since, with the new eye-tracking and computer-assisted analysis technologies, THE BEHAVIORAL CHANGES I HYPOTHESIZE AS PROXIMATE CAUSES are "perceptual shifts" -- WHICH CAN NO DOUBT BE FOUND AND SEEN, IF THEY EXIST.

[Here I repeat how my perspective and approach will finish Piaget's theory and others relate to it. I redacted it here because I said basically the same as above.]

The following is a P.S., providing a good second way (and a shorter way) to indicate "we have a problem".

Recall my statement : Proximate explanations are, at least almost always, neurobiological, endocrinological, or molecular-genetic .

There usually appears to be absolutely no concept of a behavioral pattern or change in a behavioral pattern (either, of course, in response to aspects of the current environment) AS themselves a proximate cause of a new behavior pattern [change] -- I.E. a true observable behavior pattern phenomenon proceeding, and needed for, the key subsequent behavior pattern change. I believe there is a BIAS there , due to our philosophical cultural traditional-beliefs. And, this is a problem.

[Now, new material, below :]

THIS PROBLEM HAS NOT ALWAYS BEEN THE CASE, and certainly has not always been the case in ethology. The ethology Tinbergen and Lorenz were given a Nobel prize for often did have one behavior pattern as a proximate cause for certain behavior pattern(s) that followed. This is what needs to be re-learned and abided by or real ethology may be lost. Such a relationship between behavior patterns was a hallmark of classical ethology.

I should also recommend my more specific remarks to a couple of papers on direct observation (by persons in an Ethology group):

Article Direct Observation Of Human Behaviour. What It Is and Why It...

AND

Article Direct Observation: Impediments and Approaches

Reply 2

The top Comment should have indicated that the 4 phases likely have to occur more than once in a stage -- in different domains (but may well occur more efficiently in later applications).

The 4 phases of a (each) "perceptual shift" is a PATTERN that might help computer-assisted analysis OF eye tracking data find THIS PATTERN. The difficulty is that the phases take place across-situations (and over time) _BUT_ each phases occurs in a situation which involves very similar key circumstances. So looking for a SEQUENCE (pattern) JUST ACROSS SUCH sets of of key similar circumstances MAY reveal that the entire pattern exists and where (in the data) the 4 different phases actually were.

FOR THOSE WHO WOULD LIKE TO READ ALMOST ALL MY POSTS FROM THE LAST 2+ MONTHS:

<https://mynichecomp.com/lastPosts.pdf>

(about 50 more pages)

An important last post

What are some BIG Reasons that "A Human Ethogram ... " is important reading for all interested in human behavior & empiricism (incl Gen Art. Intell.)?

Re: Article A Human Ethogram: Its Scientific Acceptability and Importanc...

Though many may not know about it: Piaget described TWO sorts of equilibration: one, a good balance between assimilation and

accommodation AND, THE OTHER, a balance between remaining with the behavior pattern sets of a given Period (stage) OR progressing to the next stage. This second sort of equilibration was never well-explained in any way by Piaget, and he knew it. He only said it depended on "biological maturation". (Because this was a continuing question for Piaget, there is no wonder why the last book he wrote in his life was on Equilibration.)

ETHOGRAM THEORY:

This neo-Piagetian Theory (described in a major paper and Project) completes (fills the gap in) Piaget's Theory: it describes generally, and then in some detail, the OBSERVABLE biological/behavioral adaptation processes that are the basis of the stages. ALL HYPOTHESES REQUIRE JUST DIRECT OBSERVATION (of proximate causes) AND ARE COMPLETELY TESTABLE (and thus are verifiable).

[Modern eye-tracking technology and perhaps computer-assisted analysis likely are needed.]

This is the ONLY theory that NOT ONLY fills these major gaps in ALL Piagetian and ALL neo-Piagetian theories BUT ALSO, for the first time, in any true and meaningful way, brings "innate factors" and learning actually TOGETHER SIMULTANEOUSLY -- that which is needed to end the long-standing dualism. There is no other theory like this. This is my offering to you. It takes only about 450 pages of reading/explication for its FULL JUSTIFICATION, and to understand the details of this theory. For all these readings: READ what's in the Human Ethogram Project (it's ALL here on researchgate).

PLUS: The "A Human Ethogram ..." is also the ONLY fully grounded developmental psychology theory (grounded, as any true psychologist would want it: in terms of verifiable directly observable overt behavior patterns AS proximate causes). AND: It is the ONLY theory that make full use of all the terminology of classical ethology (biology of behavior, itself (i.e. per se))

IN ADDITION: This theory also solves 3 out of 5 (or so) things-in-theory that "hold up" General Artificial Intelligence; PLUS, it is a concrete enough outline of that which is involved in cognitive development so that it is USEFUL, IN A FULLY PRACTICAL SENSE, for General AI (see my other Project relevant to this). Enough??Article A Human Ethogram: Its Scientific Acceptability and Importanc... AND: Book NOW the nearly complete collection of essays (RIGHT HERE) _B...

P.S.

In ADDITION:I must add that this long paper points out the unproven, likely incorrect "operating" 'assumptions' (basic 'foundational' beliefs behind, and for, VIRTUALLY ALL THINKING AND JUSTIFICATIONS) prevalent throughout psychology. _AND_ it states and describes the alternative (more likely, biologically compatible) assumptions one should use. Many of the ramifications of the new assumptions for much better science (a science of psychology) are spelled out (in the 323-page Collected Essays -- written recently to explicate all that was just indicated).

With this new perspective and the new research it generates (through its testable hypotheses) , psychology (like classical ethology) becomes "a biology of behavior" ; <-- This in spite of the fact that THIS PSYCHOLOGY is just psychology AS CLASSICALLY defined, just behaviors (behavior patterns) and the associated environmental features to which these are a response, AND that is basically ALL -- though SPECIFIC, verifiable, directly-observable innate guidance is thought to exist for (in/amongst) behaviors initiating MAJOR QUALITATIVE SHIFTS AS some OVERT ASPECTS of these major behavior patterns (in particular, behavior patterns intimately related to, and key to the progress of, cognition, memory, and cognitive processes). [These aspects (also) are explicated in the recently-written collection of essays -- the Collected Essays also in the reference list for the Project: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> .]

Can philosophy help to innovate and develop scientific theory?

My many Answers under the Question, above, are not included here; go to that thread to see them all.

Can artificial intelligence think?

Dear

Why not build-in the very training needed (that which may be necessarily required, but no more)? (You would be very hard-pressed to show HOW that would be, or would have to be, different from "external" (e.g. parental) guidance -- kids "don't listen" that much anyway; and, thus more than you might imagine, behavioral change likely relies on their "internal", "self" guidance (correctly termed: major innate guidance factors) in play throughout child development, i.e. ontogeny, some only having their effects (or big effects) ("emerging") late in child development, i.e. adolescence or young adulthood.

Dear

Again, we have "philosophical concerns" posing (or posed as) questions SUPPOSEDLY TO BE ANSWERED [seemingly] simply by using the cognitive facilities OF ONE'S OWN MIND (or should I say "minde") , and apparently requiring NOTHING ELSE (or at least no guidance on how the answer should be obtained, specifically, what is required to be OBSERVED).

The real problem with these "questions" situations is that the meaning of the question could not even be agreed upon and, likely, could not remain the SAME question in any reliably expressible way, EVEN WITHIN ONE'S OWN MIND. The reason for this assertion and for related assertions, below, are BASED ON FACT (or at least VERY reliable, oft-proven valid, strong data from THE SCIENCE OF MEMORY -- among the very best and strongest findings in all psychology).

The real problem, though, is that even the "philosophical" questions, THEMSELVES, are too much to entertain or contemplate without the bolstering and guidance of external (direct, empirical, real, real- time) observations. This primary fact (fact which has primacy) is shown by all the best and good research on the nature of our Memories -- the limitations of which it would be irrational to deny.

Dear Others:

For all those several above who basically delimit why AI cannot be like a human:

It is clearly possible that you cannot conceive of the needed sort of open [though inherently guided**] system (in the hardware/software) to progress and change on its own forever. BUT: You certainly do not prove otherwise, and you simply cannot prove the impossibility of my last sentence.

** FOOTNOTE The "inherently guided aspects" have yet to be discovered and well defined, to say the least; but, there is no reason to believe that is impossible.

Can artificial intelligence become self aware?

I think a major part of a good Answer to the Question is: WHEN does a human need to be self-aware? It can be argued that this is very largely in social situations OR when one has social concerns (e.g. communication). Otherwise, one may not have (AND BEST NOT HAVE) "self"-awareness as any key or deliberate (or conscious) aspect of interacting with aspects of the environment, regardless of the "level" (stage) of representation and cognition one may have achieved. (I am referring to stages/levels, which unfold during ontogeny, similar to Piaget's view.) (At higher levels, it is true, you often DO have social concerns, but it may well, at times, be best if you do not -- why waste precious resources (of working memory) on anything that is irrelevant?) (And, of course, in response to basically the same content one can at times NOT have self-awareness, but then alternate that with times when you DO (again, e.g. for communication).)

This characterization, which I see largely as a truism, would be quite important for AI. And not recognizing the considerations, above, could lead to a less-effective and partially off-task (and "self- centered") robot -- and you do not want that. (There are ways to seek continuous self-improvement that involve NOT personalizing things and realizing that (MUCH) in the world with NO SELF (e.g. Buddhism)).

Who will be next Albert Einstein on this planet?

Hey, maybe it's people who have figured out how to return to classical ethology (its **direct observational findings of proximate causes** of even the most advanced behavior patterns / thought level changes -- BY using proper assumptions, **consistent with biology**, and a proven good set of terms (terminology)). Maybe people are not reading or studying such things closely enough; you can start with my research items and writings ("A Human Ethogram ... " and collected essays -- from Q and As) to get a start seeing that perspective. This perspective/approach **will eliminate all the "classical" psychology debates from horrible, needless, and destructive dualisms** (e.g. nature/nurture , continuous development vs. abrupt changes). It will **replace presumptions and beliefs** with much better-founded, real assumptions.

AND: The complete empirical grounding of this perspective and its hypotheses, when verified (and they are testable and verifiable) also will provide the additional knowledge of human cognitive ontogeny to allow for true AI -- because directly observable foundations can also be mechanical foundations.

You can also **see the destructive role philosophy has played in behavioral sciences for centuries** -- and stop that sort of "stuff"

Is this enough accomplished? : True behavioral science (where behavior is within the purview of

biology); the concrete missing foundations for true AI; and putting the correct perspective on philosophy.

BUT THIS WILL ALL ONLY HAPPEN IF SOME GOOD PEOPLE **SEE** THE APPROACH AND HYPOTHESES, **AND USE AND VERIFY** THOSE, RESPECTIVELY -- and if they **really do the work (do all the real work)**. (Sorry to just cite my own work; while I certainly consider myself no Einstein, there is a LOT of potential for a good re-start of good ethology there, and that is what I know of that is publicly available -- and it's here on RG !) This is simply how important I see this outlook and approach, with seeming certain positive results with huge ramifications. Perhaps I did have to put some modesty aside, to say it as I see it; if you saw something like that, you too would say so.

Why people take hypothesis in research as facts?

Dear

I agree with you about the key importance of "a process of inductive reasoning." Often what gets this off track, is IT getting "off-tracked", by the premature formulation of hypothetico-deductive systems (which Western "man" just loves to jump to **)(models and analogies are common examples of these bad things); such "thought systems" should be avoided if at all possible and formulated only as absolutely needed (and then be very modest). AND: in a sense you should never stop being inductive because you should never, ever lack empirical grounding in directly observable proximate causes AT LEAST AT THE INCEPTION OF EVERYTHING noteworthy (every significant behavior pattern in psychology, and other everything in other sciences). [In psychology: empirical grounding is directly observable proximate causes in overt behavior patterns and current environmental aspects, AT LEAST AT THE INCEPTION of all major behavioral patterns or processes (then perhaps seeing simple known processes, like associative/discriminative learning and the nature of our Memory systems, allowing for SOME advances, after the INCEPTION of new behavioral patterns). **BUT**, any advances-after inception (of a behavior/response pattern) should also show, at the very least, clear empirical signs -- and NEVER fail to be clearly related to that with directly observable proximate causes (which likely involves continued observation and simple, continued summaries of observations from induction, without inappropriate presumption (or false 'assumptions'); I can imagine this as not impossible).]

In science, you can guess at where the key observations will be, consistent with good necessarily applicable assumptions, and then a reasonable inductive PROCESS OF DISCOVERY to establish the soundness of your "guess". THE SCIENTIST DEFINES very close to NOTHING; the SUBJECT defines EVERYTHING, and this is SEEN by observation and discoveries of the Subject.

** FOOTNOTE: Limitations of study environments to small spaces and time frames is a major impetus for bad science thinking in psychology.

I would guess people take hypotheses as facts, **ONLY** when it is congruent with what they believe are valid assumptions (and/or what their professors told them or guided them toward). And, **THEN**, MAYBE THEY DO , **when** there are models which have hypotheses that could NEVER be grounded

or related to directly observable findings yet the models SEEM to be the best way to explain things : there are some big, imaginative models ("thought systems") related to sensori-motor contingency 'theory', embodiment 'theories' and 'enactment theory', for example -- and this junk seems unstoppable. Yet, "ON THE OTHER HAND": I know of hypotheses that are "out of the box" which people never even think to consider, though no good assessment or judgment of these have been made -- and there is nothing clearly wrong with them. The models or analogies used to "model" behavior and behavioral change OR their unfounded, baseless presumptions (often SEEN as 'assumptions' OR even SAID TO BE 'assumptions', and as "more than reasonable") are at fault here, because this is what puts people in "the box".

How does cognitive psychologists view behavior analysis?

P.S. Dear

You say: "In terms of psychology, behavior analysts are not interested in cognitive phenomena. This is not because they reject the existence of private events, but because they argue that cognitive events cannot be observed; only its behavioral outcomes." In a MAJOR WAY I say this is not likely true. I believe they reject wrongfully and shortsightedly and, really, their objection is not on objective (empirical) grounds.

While you cannot see all aspects of cognition you CAN **see each new major aspect** as it develops with ontogeny (this is a VERY reasonable argument). These may well "show" in only subtle perceptual (perceptual/attentional) shifts, but with modern eye-tracking technology, they can be discovered. If longitudinal studies are done, after finding all the "bits" of conceptual representation related to clear perceptual shifts (and taking the very reasonable assumptions in my longer paper), then you can basically know all of the nature of the covert cognition (even of an adult).

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Do behavioral science theories correspond to learning theories?

Dear

If all you said was " Learning is a vague and outdated concept. If you stick to behavior you will be on firm ground ", I would fully agree with you (and DO agree, up to -- and including -- that final word 'ground'). Unfortunately, then you go "off the tracks" looking to social learning (largely a crutch, since the UNIT Of ANALYSIS -- and of processing EVERYTHING -- is the individual organism -- and we can NEVER, EVER, in any way lose real "track" of that).

I would, and do, replace your "answer" with: my whole "book" (approx. 500 pages) on a classical ethological approach detailing the entire perspective, the fully TESTABLE type of hypotheses indicated, the implications of the perspective and approach, what is and has been wrong with psychology, and how it would change psychology for the better (not asking much, since its status as a science has been poor over its entire history). It describes clearly how cognition is what it is ("phenomenologically", as they say) at the moment or moment-to-moment, WHERE **ALL the so-called "parts" ("innate, genetic, motivational, and other factors")** are there (in each 'moment') combined, i.e. simultaneous. **AND, THIS IS SOMETIMES very likely NEARLY COMPLETELY OVERT AND DIRECTLY OBSERVABLE** (esp. now very likely 'seeable' with the new eye-tracking technology, etc.). THAT is what needs to be seen, AT KEY TIMES discovered: when all those "parts" (factors) are not only as I just said and have OVERT directly observable aspects (as proximate causes) but also THAT is **THE foundation** strongly linked to ANY further inferences. Please do see, READ and digest:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

AND

Deleted research item The research item mentioned here has been deleted

THE WHOLE PERSPECTIVE AND APPROACH, its full justification and implications AND ITS TESTABLE HYPOTHESES . (It's approx. 500 pages -- like a book ; read it.)

What is the artificial intelligence?

Dear

Perhaps you lack some appreciation for an "open" system. Achieve that appreciation and realize also that the AI robot can have different experiences from any human. (The exact content and in-effect the nature of experience is not what is programmed in AI; the AI robot has its own experiences, with only [effectively] qualitative parameters (LIKE those we ALL have), and otherwise just USING **at-any- given-time** limiting systems that simply are the same as a human.) Let me recommend for you: my Project, <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

AND especially <http://mynichecomp.com/Almemory.txt> and

<http://mynichecomp.com/onmemory.txt>

What it "boils down to" is that different experiences can yield different learning AND different DEVELOPMENT and thus yield very different results (likely in ways realistically bounded, but NOT controlled by the human makers). "Bounds" (boundaries) do not control or much limit experience and reactions, if done correctly. **Certainly the possibilities exceed anything any of us can imagine, and if indeed possibilities are beyond what we can imagine, we cannot really make any clear pronouncements (like you did when you said: if a computer is better than Mozart, the programmer must have been better than Mozart too)(Oddly you seem not to realize that, by the**

same reasoning (according to you), you should say: any computer that can beat anyone at chess, must have had a programmer that can beat anyone at chess -- and we know this is not so.)

[P.S. Philosophers over define and, thus, overly limit (creating limits that need not be there); they are simply putting themselves in a "box" AND certainly not a box we necessarily have or need for ourselves OR for what we create.]

Dear

You say: "*Realize an intelligent machine equipped with consciousness?* Ridiculous. What can be done, and that is already being done, ..."

I would say you simply do not have a reasonable functional definition of consciousness. I am biologically-phenomenologically oriented and **HAVE NO PROBLEM HAVING A CLEAR, USEFUL CONCEPTUALIZATION OF CONSCIOUSNESS IN ANY GIVEN CIRCUMSTANCE**

(and this is all you need); my writings here on RG make that crystal clear and make it clear how such a definition suffices. Otherwise -- i.e. cross-circumstances -- consciousness will vary and be about impossible to usefully define. (The way many "philosophically-oriented" people like to think, seeking "general" important definitions, inevitably leads to CONFUSION.)

Biological intelligence IS good adaptive (open) functional intelligence. That is all.

The consciousness conceptualization I use is a consciousness that clearly an AI "robot" could have. To learn more check out my RG writings.

[P.S. I have always had it as my "job" to better general psychology (esp. developmental and personality psychology). You may find it interesting to know, that seeking to do THAT, using the traditional (classic) definition of psychology (behavioral [pattern] response(s) to aspects of the environment) AND THAT IS ALL, _AND_ to do that with as much confidence in empirical bases as may well be warranted, you end up with the complete needed, intelligible, and functionally practical, biologically sensible, **ultimate PROXIMATE concrete directly observable behavior patterns/environment foundations THAT ARE EXACTLY WHAT A PROGRAMMER WOULD NEED to "mechanize"** (direct/control/orient/develop) **a true AI machine**. See: citations in my LAST POST in this tread.]

Just as info.-processing theory led psychology, I will not be surprised to see AI lead new psychology, in the near future. The "right kind" of empirical" (true, real, concrete empirical bases anchoring everything) is what AI needs. Psychologists show less discipline in clearly relating to this (or requiring this) good empiricism.

[It turns out, in psychology, beliefs (false, groundless, unproven pseudo-assumptions) out-weigh seeking the most empirical grounding that may well be possible; unless false 'assumptions' can be seen for what they are, and the consequences of them seen as skewing and limiting like they do, psychology is ridiculously "scattered", putting their faith in one ridiculous groundless model OR another -- creating the "Tower of Babel". This, starkly, is the situation, and NO ONE could show otherwise.]

Here is a new saying for "today": **IF YOU choose what to believe, that is believing and is NOT discovering and knowing and is, in fact, antithetical TO truly coming to KNOW.** (Much related to this is the appreciation that you must do massive observations to confidently find the way to do the

good, important inductive inference needed BEFORE any chance you have (and it may well be: piecemeal) to reasonably (and in a well-founded way) do any hypothetico-deductive reasoning.)

I should add that my theory of development and learning is the **ONLY one to have everything clearly, reasonably founded and grounded**, that is: **key points in behavioral responding (key pivotal phenomenon) are ALWAYS directly founded and grounded, in directly observable behavior- patterns-and-environmental aspects that are PROXIMATE causes (necessarily present at all the first inceptions of the most-major qualitative shifts in behavior, especially those related to developing thought and higher thought)**; and, also there are clear signs of the associative learning that has existed before and now continues on after such shifts but now there is ALSO new associative learning due to the qualitative shifts (each of them, as they occur in ontogeny): behavior patterns and incipient understandings associated with the resultant behavioral products of key new perceptions - again, these being the beginnings, i.e. the inception, of the development of "higher thought".

My theory is the only one **to actually explain stages shifts and does so related to the key directly- observables, as indicated above**. Other theories have unclear, overly "internal", quasi-explanations (wrongfully and needlessly/artificially lacking in external expressions and external referents *), resulting in "explanations" that are too unclear _and_ too indirect, at best. **It is not hard to argue that other theories do not empirically explain the development of higher thought at all directly or in any reasonable empirical way**.

The empiricism I provide shows major pivotal phenomenon of behavior and behavior change related to new key, important directly OBSERVED innately-guided responses to aspects of the then-present environment ("perceptual shifts"), and clearly, expressly involving PRESENT(at the key times) observable new behavior patterning for new responses and response change.

Thus my Ethogram Theory is the only one with some concrete present-at-the-KEY-times particulars FOR EVERYTHING. Only such concrete findings can be the basis for the programming of AI. The other developmental theories are too vague to "ground" (way too much being left to intuition, notions NOT close to directly testable hypotheses -- bad for science, as well as for AI).

* FOOTNOTE: These theorists never tried to look for certain empirical referents that would BE THERE, would be EXPECTED TO BE THERE, for any thorough-going empiricist who believes psychology (behavior patterns in response to environmental aspects) can explain everything ITSELF (in its evolving structure and functioning, and SHOWN (at KEY points) as directed by qualitatively new changes in OVERT behavior patterns) (i.e. believing there can be a science of BEHAVIOR per se, the way psychology has been classically defined).

For more on Ethogram Theory (and its justification and consequences) see the "book" and the major large papers under the Project, <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>.

For the catalog of all other related capacities and capabilities of the various Memories FOR AI (largely explained in relation to each other and indicating their relation to major shifts beginning cognitive developments), see: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based->

For a human ethogram, isn't all you could reasonably expect just a good start?

No one could really expect to outline (then research) ALL the species-typical behavior of the human (or any advanced animals, such as mammals and birds) AT ONCE. WE SIMPLY ARE NOT omniscient (and not capable of ever becoming or being so -- though, in time, perhaps TOGETHER we can approximate this state).

Thus, a good start for a human ethogram IS ITSELF the beginning of the human ethogram. Of course, you **must have a correct start: Look for the always-involved capabilities which basically is a "containing system" for all other interesting things** -- things less pervasive and less-flexibly-and- openly applied (by themselves) (like emotions and language). Yet **it must be essential aspects of real particular human behavior.**

I chose (for the **first and ONLY human ethogram, in existence**): the cognitive-development behavioral system AS IT UNFOLDS AND DEVELOPS in ontogeny; I posit such a study can be done grounding everything (at the root, in very key ways) in **behavioral patterns and the environmental aspects** involved. BUT, in addition, **one must understand the nature of our types of memories , and how awesome amounts of perspective and context can be brought forward with that.** YET, at the same time, the **INCEPTION** of anything (including new ways to represent and conceptualize and eventually think) will themselves have real (overt directly observable) **environment aspects required at least at the beginning (inception) [as well as some clear overt, directly observable behavior PATTERNS, acting at the inception]** -- THIS would be true of any SIGNIFICANT new DEVELOPING behavior patterns (including the inception of 'abstract" thought) : this is **simply sensible empiricism**, which MUCH BE ASSUMED AND SOMETHING A SCIENTIST SEES as necessarily "worth a try", because there **simply is NO alternative for an empiricist.**

The likely BEHAVIORAL PATTERNS INVOLVED (along with these environmental aspects, at the inception of significant new behavior PATTERNS) **not only could simply be perceptual shifts (see first link below) BUT VERY LIKELY WOULD BE _AND_ now these very things are investigable** (verifiable, provable, replicable) using the new eye-tracking technology (likely along with computer-assisted analysis). Now the citations: First what I see as the likely phenomenological nature OF these very perceptual shifts, which occur with each hierarchical and new stage/level of thinking:

[https://www.researchgate.net/post/Have Technologies in the role of a MICROSCOPE for psychology been developed which can now be used to investigate important observational specifics](https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics)

THEN: see the overall position, for the role of these perceptual shifts during child development, by reading the paper (Research Item) "A Human Ethogram ...: :

It would likely also be good for people to see:

[https://www.researchgate.net/post/Have Technologies in the role of a MICROSCOPE for psychology been developed which can now be used to investigate important observational specifics](https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics)

(also see **my** THIRD Answer to this Question)

Why would moderator of yahoo human ethology list throw a classical human ethologist and author of a necessary start of a human ethogram off the list?

[To summarize several of the basic problems with the 'moderation' of this Yahoo Group: The moderator believes it has been determined that a human ethogram cannot be done (is not possible). (And, he cites the view of a 1989 committee, as great support for this (HIS) position.) NOR, in his firm (set) view is an ethogram needed for coming to ANY OR ALL the understandings we need. (And, IF an ethogram were to be done, he insists it address all significant human behaviors at once "BY DEFINITION", as you will read about again in coming paragraphs -- ignoring very cogent and rather indisputable arguments to the contrary.0

He also insists on strict dualisms BETWEEN classes of major behaviors that DO involve or require innate patterning (and this, in his view, is mainly motor behaviors, motor behavior patterns) AND OTHER very significant behavior patterns/ behavioral systems that he says DON'T -- all this when all reasonable biological scientists would say some significant innate guidance is involved in the development of ALL major systems of adaptation.

PLUS, this moderator **insists on NOT discussing** what (in his view) need no more be discussed (INCLUDING AN ETHOGRAM), and insists that issues regarding an ethogram (both its definition and how it would have to be done) have already been resolved and warrant no further discussion. **He quickly enforces, i.e. CENSORS, expression of views contrary to these.** Plus, moreover, his view of what 'THOUGHT' is and what can be considered 'BEHAVIOR' is basically extreme Skinnerian AND he is absolutely insistent on his views here ALSO. Finally: He seems to respect nothing other than the short writings found in peer-reviewed journals -- only such authorities can present all worthy arguments and conclusions about all matters of argument. On all these latter matters he not only insists over and over but, **AGAIN, HE WILL CENSOR.**]

What follows may offer more detail about what this 'moderator' accepts and what he doesn't (and what he does not accept is soon CENSORED AND NOT POSTED TO THE HUMAN ETHOLOGY

YAHOO GROUP OR MAILING-LIST). :

Basically, he demands that anything that is to be considered an ethogram address ALL the species- typical behaviors of an organism (here the human) ALL AT ONCE, **because that is the definition of an ethogram. He would not publish my rebuttal, which says one must start with the discovery of the development of a central ("containing") behavior system** (cognitive development) FIRST, to get that major pervasive system understood first, before adding in basically associated or subsidiary systems (like emotions and language). **Here is the "moderator's" assessment (NOT based on well- founded assumptions of any sort OR on fact):** Quoting:

Jay R. Feierman [NEW]:

(writing to me, and **NOT publishing my view.** And, see my **rebuttal to his rejection of my view (also NOT allowed on the 'list' by him)** .) -- and my exception to the rejection of THAT, below) [(Fortunately, my view/perspective expressed is at length here on RG (and elsewhere)] :

(His objection is just the standard, memorized meaningless junk.): (now quoting Feierman) :

"The cognitive-development behavioral system as it unfolds and develops in ontogeny is important. **However, it is not an ethogram, which has a very specific meaning. An ethogram is a catalog of all of the fixed action patterns of a species organized into functional groups.** Most but not all of the fixed action patterns are going to be parts of coordinated motor pattern (aka fixed action pattern) instincts. This can be done but it would be very time consuming and difficult, which is why I turned down the offer to do it in the 1980s. Even I. Eibl-Eibesfeldt, who is the father of human ethology, never undertook to do this. ** The reason why it would be so difficult is contrary to all other mammals (with the higher primates partially excepted), humans have many other behaviors that are not fixed action patterns that are innervated by a different part of the nervous system. So for example, a functional category like mother-infant care, can be easily a category in the ethogram of a canine. However, it is not so easy to make an ethogram of mother-infant care for humans. I currently have a collection of Eibl's tribal films of mothers interacting with infants in many different tribal societies. There are behaviors in common but some of the instinctual behaviors are mixed with "voluntary" behaviors that are mediated by another part of the nervous system. It is a lot easier to make an ethogram of the infant's feeding behavior than the mothers' infant care behaviors. "

(end of my quote of him) (This quotation has MANY MANY VERY QUESTIONABLE, but typical, assertions: example: most behaviors with innate action patterns are motor systems; the others are just too variable to involve innate guidance; and, note the complete dualism between innate action patterns and "many other behaviors" -- defying biology, and **THUS DEFYING SCIENCE, ITSELF.**)

My response to this was (in large part): Dear Jay

Feierman,

You cannot chose for the definition of something (here an ethogram) SOMETHING THAT CANNOT EXIST -- at least the one you 'define' cannot exist, for some time and after a lot of peoples' efforts [(it is not simply something you can, in any way-of-discovery, just 'define' and begin with)]. Thus, **to start an ethogram, and appropriately be working for it to be all we want, WHAT I OFFER IS ALL THAT CAN BE OFFERED** (and I explain that -- in 500 publicly available [(and published as much as

possible)) pages -- if you would only "do me the honor" of reading); **my human ethogram is thereby ALL THAT CAN BE CONSIDERED, AT FIRST, AS _THE_ HUMAN ETHOGRAM.** THAT'S A LONG SHOT BETTER THAN WHAT YOU OFFER: hopelessness. And, you should strive to offer something better than what is hopeless.

Apparently, you indeed fail to read me (any of my writing). Even in 1989 I knew and informed I. Eibl-Eibesfeldt (my friend and associate) what more was needed in his Human Ethogram book to begin the ethogram that I DID begin. **(Did you even bother to read the review, which I posted here??)** I can tell you that if you do not "slow down" and really try to "smell the roses", neither of us will learn anything from each other. (AND, I WILL REMAIN not only the **first and only author [of the first] [partial] human ethogram, but the only ethologist fully using the terms of, and inductive approach of, classical ethology** (or at least the ONLY one doing so with human behavior).

Everything else you say in your response other than what I just addressed, is thus irrelevant (completely). You have to be real. As soon as you think in terms of definitions that simply have been "agreed upon" (perhaps, with a little conjuring on your own), you ARE OFF-TRACK. ALL IS FROM THE _SUBJECT_ ; the Subject defines all . **If it starts that way and stays that way, you are building the ethogram (a more complete one) -- that is precisely what I am proposing.** You should at least try to empirically describe one before "flushing" mine; you will not be able to do better.

Your response is extremely disappointing and makes outrageous **impossible requirements.** **Your only way to argue against this last statement, IS to directly argue against it: this would involve showing/describing a clearly workable, usable COMPLETELY EMPIRICAL alternative** [(like the one you ask for)].

Your definitions are foolish (pardon the word, but it only seems apt). For some good therapy: TRY JUST DESCRIPTION, and of only behavior patterns and environmental aspects _and_ associative/discriminatory learning (and with major developments involving all these things **at the very same time**) -- involved in ALL major behavioral developments, i.e. ontogeny.

(end of me quoting myself).

Well, if you are in this group (on the mailing list), you will not see me or hear from me any more, because he threw me off for being too "speculative" and seeming like I am describing things that could not be tested. BUT, the truth is, my view is very much less speculative than most of psychology (with its more poorly founded and baseless assumptions; and, with ethology being similar these days). AND though I did not (in this particular post) indicate the more particular nature of hypotheses and how they could/would be discovered true (and tested and verifiable or not), I do describe this in other posts. **CLEARLY MY SYSTEM IS IN EMPIRICAL TERMS AND TESTABLE and is less**

speculative than his write-up of what an ethogram would be like and must be like.

YET: He went on in other responses (I also did not get to rebut) to say my views are untestable (that is FALSE) and just "speculation" (that is FALSE). Again, my view can be considered LESS speculative than the standard view (and more biologically consistent) and I most certainly have **clearly and empirically described the phenomenon at the inception of major cognitive developments**, as perceptual shifts, and I have indicated how these could clearly be discovered with new eye-tracking technology.

TRUTH IS, IF YOU DO NOT SUPPORT THE PRESUMPTIONS AND 'DEFINITIONS' OF THE EXISTING SYSTEMS (mostly all memorized junk), YOU WILL BE THROWN OUT OF SUCH A GROUP, actually JUST FOR THOSE REASONS ONLY. Not for any empirical or science reasons.

If

you would like to ask this "moderator" why he is so off-base, feel free to do so: jay.feierman84@gmail.com. Maybe if you are on this list you might ask him to better explain why I CAN'T BE ON IT.

** FOOTNOTE: A human ethogram has not been done in over 35 years since it has been deemed impossible; yet my start for a human ethogram, which may be the only way to get one, does not even deserve to be heard, according to another "authority" of the "system".

NOTE: Much of the highlighting and a few explanatory phrases, added in brackets, were added by me.

It is CLEAR why there is a need for a HUMAN ETHOGRAM group. Read about one here:

https://www.researchgate.net/post/For_a_new_real_empirical_science_of_human_behavior_clearly_the_biology_of_behavior_lets_move_towards_a_human_ethogram_Might_a_Yahoo_group_help

This assessment may also help indicate how the existing structures are irrational, but rigidly enforced. This IS the kind of thing you may well be up against:

Quoting a follow-up note, I sent to 2 of the Yahoo Human Ethology group members:

It seems that Feierman does not read anything, and thus has no true interests. He does not make up for that by being otherwise appropriately open-minded. Feierman seems to just judge things as one type or another he likes, and the rest he dislikes (without exploring the content at all) -- though he may publish a large part of that when it does not violate any of his existing views ('assumptions') or 'definitions'.

Basically, he must like something or "not care" to allow it to be shared with the list. Anything not easily recognizable and NOT in-line with the pseudo-assumptions he operates by (unfounded, baseless 'assumptions', which are actually just beliefs) and/or not in-line with "official definitions" that have been "handed down through the ages", he rejects.

He just uses concepts and opinions he formed long ago (and some obviously just memorized) for his judgements. It is unlikely he would either recognize, or put on the mailing list, ANYTHING he is not already familiar with IF it covers differently what he thinks has already been "dealt with" -- especially if by him. Thus, because he once was asked to try to do a human ethogram and he could not with his 'assumptions' and 'definitions' which would have required many unreasonable, non-integrable outlooks, to put "it all" together "however", he sees that as how it must be and would be for anyone (i.e. hopeless).

He requires for himself (and others) an unreasonable approach, 'defining' too much and too much "up front" -- defined by him or tradition, and NOT: BY the Subject, the human organism, with ALL understood as based on observation -- as anything in science starting up or progressing should be. He

basically has seen behaviors as "unconnectable" to an extent that he does not see things in a way even consistent with biology, and thus he is not doing, recognizing, allowing, or envisioning science at all. NOTHING that would ever allow true and continuous progress to a human ethogram would be found noteworthy and he would censor it. He has.

This guy is effectively ignorant of any new ideas, and sees "speculation" in different new things WHERE THERE IS NONE. For example, my entire system requires EVERYTHING be grounded clearly at some point IN DIRECT OBSERVATION OF OVERT BEHAVIOR PATTERN RESPONSES with proximate causes (and what follows being as similar as one can expect as more development (with some signs) and learning (with some signs) occur. This is a requirement holds EVEN with regard to any covert behavior that must be posited (also with/using a good understanding of our Memories) as ontogeny progresses. That is as empirical as any cognitive-developmental approach could be.

It seems like since he and his pals could not think of any way to progress to a human ethogram, no one else could do so either and he could not imagine it could be good science, if not totally conforming to what he sees as "the way it is". YET, even in the shortest of statements he shows he operates with unfounded assumptions and (relatedly) sees things in terms of conventional, extreme dualisms (my paragraph after quoting what he wrote, published yesterday on researchgate, points up much of this).

(My treatise on an approach for a human ethogram has been available since 1985, yet he never read it (try Google: human ethogram). (JUST RECENTLY, with the new eye-tracking technology and computer-assisted analysis, can the type of "perceptual shift" hypotheses I propose and see as important be investigated; my old long (160 page) paper IS NOW NEW AGAIN -- BUT Feierman will not hear of it (and still won't read it).

See:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses

Dear

You certainly have a different view than mine; but, do you have an approach? My approach is defined and could be used and tested and, if correct, it could progress to a full human ethogram. Do you have anything like that or are you just another in the "you must be hopeless" camp?

I have a traditional CLASSICAL VIEW of ethology, where individual organisms can be studied very thoroughly and understood very well. You may well have not seen this view of ethology for decades; and, over the last decade "official definitions" of ethology do NOT EVEN INCLUDE THIS, but describe ('define') something very different.

Hey, regarding the Human Ethology group: even if the 'owner' did have a problem with a post or 2, why not just not publish those posts. He kicked me off the group. (I cannot read or post there -- and it is

a human ethology group!)

P.S. about Feierman, the 'moderator' of this Human Ethology Yahoo Group (and mailing list): (much of this addresses details of problems already noted):

Feierman has said : "there is no reason for a human ethogram". Could anything be more ridiculous? How about coming to know what innate guidances there are with qualitative cognitive stage/levels changes? Do we not want to know anything about the innate guidance VERY likely behind the development of our most precious abilities? And, this is not to mention that, **without discovering the manifestation OF the innate guidance mechanisms here **, then there literally are absolutely no empirical foundations for qualitatively different levels or stages** in the development of thinking. **NONE.**

Moreover, since we are biological organisms and behavior patterns and responses are BIOLOGICAL FUNCTIONING: then there is no reason not to expect **SIGNIFICANT INNATE GUIDANCE** for any and **all significant human behavioral systems** (behavior patterns).

Feierman's position is anti-science. He is a little dictator, in love with JUST peer-reviewed stuff (which is mostly junk) and that is about all he thinks is worth hearing/reading, except for the committees of those same peers that declare what and what is not worth looking into.

We are talking about a serious problems with this moderator. (Anti-biology, and thus anti-science is a problem. There is no "pure learning", yet this is basically -- as far as anyone can tell -- what he says.) **This is INCOMPETENCE.**

Is this any kind of Human Ethology group anyone with any dignity would submit to?

** FOOTNOTE: I say (AND THIS IS NOW RESEARCHABLE AND TESTABLE AND CAN BE VERIFIED OR NOT): there are perceptual shifts, at the inception of such qualitative cognitive changes

Feierman has also said: (quoting):

"There is no controversy over what is an ethogram. According to the Immelmann and Beer *Dictionary of Ethology* (Harvard University Press, 1989), an ethogram is "Behavioral inventory; catalogue of actions; a survey, as complete and precise as possible, of all the behavior patterns characteristic of a species."

The term ethogram was derived primarily for the behavior of non-human vertebrates where all the behaviors are either reflexes, orienting movements, or fixed action patterns. It is difficult to make a human ethogram because of all the ideosyncratic "flexible" behaviors that are innervated by different parts of the nervous system than what usually are involved in the fixed action pattern behaviors of an ethogram." (end quote)

Other untenable positions Feierman holds are: (showing things are really much worse than previously described or indicated):

* "Thought is non-vocalized (and non-written) language" [(Obviously thought is not always language-related.)]

* " Cognitive development is not behavior "... "behavior is movement"

With views like these, it is obvious this group (mailing list) moderator cannot only not entertain important questions, but **cannot speak in terms of the modern understandings of psychology** (even THOSE are better than his understandings) . And, so he otherwise (when things are not as he conceives them), greatly limits and RESTRICTS discussion to skewed, distorted (even perverse) definitions and otherwise **very often censors what would be seen in almost any psychology or behavioral science forum as reasonable discussions** (e.g. discussing assumptions, related to usual conceptualizations of the behaviors of thought and of cognition). HIS IGNORANCE is beyond belief and that certainly disqualifies him as moderator of any forum about behavioral science.

In short, the Human Ethology Yahoo group is moderated by someone who is **unfit in his knowledge and understanding** and is a **dualist in all sorts of unnecessary and wrongful ways**. He **squelches normal questions and discussions**.

It is CLEAR why there is a need for a HUMAN ETHOGRAM group. Read about one here:
https://www.researchgate.net/post/For_a_new_real_empirical_science_of_human_behavior_clearly_the_biology_of_behavior_lets_move_towards_a_human_ethogram_Might_a_Yahoo_group_help

Here is another write-up of my assessment of modern psychology AND ethology, which might shed some further light:

The fact is modern "human ethologists", very typically are not ethologists at all, because of a lack of sufficient empirical concerns and interests. The type of interests they have nowadays, as indicated again several paragraphs, below (those being: evolution of behaviors, phylogeny, or comparative psychology or neuroscience) are ONLY A SLANTED VIEW of a _PART_ OF WHAT THE REAL subject matter of real ethology is to be (Tinbergen would agree with my assessment); the subject matters of these current interests are incomplete and uninterpretable onto themselves, plus they are **inherently speculative**.

Metaphorically, the way I see it is that typical modern 'ethologists' have left the "beating heart" of true ethology behind. They have adopted the assumptions of mainstream psychology that are unfounded, baseless, and lead to a tremendous presumptive skewing of the way subject matter is viewed (here, behavior patterns and aspects of the environment, or any natural portion thereof).

And, thus, because of this new, strong, adopted 'stance', modern "ethologists" have redefined ethology in a stereotypical way (as bad or worse than the way it was characterized by other sorts of behavioral scientists). No classical ethologist would approve of any of the commonly found definitions of 'ethology' I am nowadays able to find. Plus, they are actively hostile to thinking they need the sort of definition [in behavior pattern responses] that classical ethologists provided.

So, to continue my metaphor: Not only have they left the "beating heart" of ethology behind, but if they encounter that "heart", THEY WILL STOMP ON IT.

The post "**Why psychology is NOT a science**" (below) was rejected and not posted to a Human Ethology Yahoo Group.

I want to convey to you the importance of presenting this summary (the content of that very essay, below) of the way things are in psychology vs. the way they should be. The very significant differences between the presumptions/'assumptions' of psychology and a view that is consistent with biology also presented. AND, the central points about the better alternative view are basically the difference that should be seen between mainstream psychology and the best (or real) ethology. The main consequence of the better perspective is to believe that any significant and reliably occurring, **species-typical major behavior patterns OR any significant species-typical behavioral developments (big qualitative changes, e.g. cognitive stages) during ontogeny** MUST at the core (MINIMALLY: at the inception; at the first appearance) **have THEN (at that point in ontogeny) innate guidance involved**. AND, one should **have the confidence and have some idea how this is something that can be looked for via sophisticated studies**. THEN one is a human ethologist (and otherwise: NOT).

So, to me, this perspective is the "acid test" of whether a person is really an ethologist, or just interested in things RELATED TO, but not directly being, ETHOLOGY. These involving interests such as evolution of behaviors, phylogeny, or comparative psychology or neuroscience -- ANY of those in isolation with NO real concern towards finding the ACTUAL proximate (real time) causes of major species typical behavioral changes.

Rejecting the essay, below, as the Group 'moderator' did for the Human Ethology Yahoo Group, is thus the height of doing wrong. In the interest of decency, biology, and necessarily-true [actual] facts, that the following essay should be published for the good of furthering a basic perspective that IS ethology.

The should-be-published essay is ALSO clearly less speculative than the 'assumptions' of mainstream psychology, because of the consistency of the view (of the alternative assumptions) with necessarily applicable biological principles.:

HERE IT IS AGAIN, below: (the rejected post that should have been published in the Human Ethology Yahoo Group, but the 'moderator' engaged in rationally inexplicable censorship): Here, below, is the contribution I tried to make to the Human Ethology Yahoo Group (mailing list) , but it was not put up (published) on the list because it was thought to be "too speculative" by the 'moderator'. It is not speculative, and certainly not more speculative than the foundational 'assumptions' of mainstream psychology. This **warrants discussion, and this is one of the few ways to start to handle such a fundamental set of issues/'assumptions'/beliefs**. BUT: The 'moderator' thought it was to be "too speculative". AGAIN: It is not speculative, and certainly not more speculative than the foundational 'assumptions' of mainstream psychology.

"Why psychology is NOT a science"

It is possible to argue** that innate guidance is inextricably involved in ALL significant behavior patterns (all significant "behavior" at some time, to use the unwise typical psychology word) , at least at their inception -- in all organisms. Otherwise, you are a dualist. Nature and biology are not. ** And, actually very hard to argue otherwise, when sufficient thought is given.

Just as a Preface: The fact that psychology so rarely uses the term "behavior pattern", when it ALWAYS SHOULD _and_ that psychologists speak as if they understand "learning" and that it is all one thing (or a few simple things). That is almost proof perfect that psychology is "totally off-track". BUT HERE IS MORE (the final nails in the "coffin"):

Scientific psychology IS an infant discipline, at best; it is really not a science at all and, certainly not, if you believe in qualitatively different levels/stages of cognition -- unfolding in childhood; if you see the biological and empirical NECESSITY of such qualitative changes (which I think is impossible not to believe), THEN you should recognize that there is NOW (in present psychology) NOT ANY EMPIRICAL FOUNDATIONS, WHATSOEVER FOR SUCH STAGES/LEVELS.

Here are some MORE of the clear specifics of what is wrong: (1) theories of development (and personality) are not expressly of a biological nature, where they show abidance with biological PRINCIPLES -- that is one thing that should be considered STEP ONE to having a decent (or mature) theory of behavior; (2) psychologists continue to falsely dicotomize nature and nurture when the best minds have said this is NOT the way it should be considered (they have said this for decades) -- so this is another feature of poor/immature theory (in particular, today's typical psychologists have NO conceptualization of innate factors and learning happening at exactly the same time (SIMULTANEOUSLY), when that may be precisely what's needed -- AND psychology provides no way NOT to rule out this likely truism, though psychology has only the support of philosophy and NOT the support of research for its beliefs); (3) there is still a presumption that all innate factors in behavior are present in infancy (and there is absolutely NO evidence that this is true) -- failing to do any reasonable investigations to prove or disprove this assertion, makes psychology a crude and immature discipline. (4) There is the baseless assertion that the more "advanced" an organism, the LESS innate guidance -- again, there is absolutely no reason to believe this (and until put to the test, and this limits conceptualizations and TESTS of modern "theories").

In short, psychology is a "victim" of presumptions and false assumptions (and actually often accepting CONCLUSIONS as basic assumptions), as fully shown in "A Human Ethogram ..." . NO perspective of this nature could be considered other than poor and in an "infant state" . Another clue for you: researchers and good theorists do NOT do the defining; the subject matter , well-observed, provides your definitions (just as in other sciences). This should count as MAJOR start-off failure (5)!! Thinking one must predetermine so much makes me think : old-time philosopher, NOT A SCIENTIST.

In summary, psychology has bi-passed basic tests of its foundational beliefs (I shall not even dignify with calling these assumptions -- because there really has been NO REASONABLE TRY to find and set well-founded assumptions and no tests show that the presumptions adopted are correct (or otherwise); WHERE THE "ASSUMPTIONS" CAME FROM IS WRONG).

What can "straighten out" the mess that psychology is? I believe it is by coming to realize that SEVERAL basic assumptions (actually, just totally unproven beliefs) are incorrect and the opposites are true.

You will see much/most of the following is the OPPOSITE of what psychology professors tell you, but it can clearly be argued that all of the following are more likely true (more in line with biology) (organismic, if you like):

- 1) one should develop a theory expressly consistent with biological principles (e.g. homeostasis) -- it should clearly and, in effect, constantly show in the theory;
- 2) The most significant learnings and innate factors occur, in effect, completely simultaneously (and the innate factors at times may well be more important, regardless of the stage of development one is looking at);
- 3) Major innate guidance emerges with each significant qualitative advance in conceptual abilities (last one around adolescence, at the earliest);
- 4) The more "advanced" the organism, the more learning occurs, BUT ALSO the more [significant] innate guidance (factors) are involved; to believe otherwise is unfounded. Innate guidance for cognitive stages of development ACTUALLY (VERY arguably) ALLOWS FOR MORE LEARNING (more types).
- 5) Inductive work should be emphasized and hypothetico-deductive systems should be formulated ONLY when you must (and then with no loss or bias of/in observation)
- 6) Everything that develops, including our most prized abstract conceptual abilities, are very likely and potentially observable, concrete (in their inception) -- and likely seen as perceptual (perceptual/attentional) SHIFTS and adaptive biases. (This is the empirical assumption and the way it would happen with the organism adapting in its environment. NO abstract conceptual abilities emerge from just internal processes -- from just "thinking" in the brain/mind.) [(This is the very thing that has to do with providing some empirical foundation for cognitive-developmental stages.)]

None of the above indicates there is less learning (more if anything); but, there is no "pure" learning. Seeing things this way totally frees one to be a thorough-going empiricist and to DISCOVER answers with key real-time observations of the subject. THIS "straightens out" psychology. The Subject can begin to provide the definitions and the related-definitions; research becomes a MUCH more inductive process.

For a new real empirical science of human behavior, clearly the biology of behavior, let's move towards a human ethogram. Might a Yahoo group help?

A new Yahoo Group: "A Human Ethogram":
<https://uk.groups.yahoo.com/neo/groups/humanethogram/info>

Towards A Human Ethogram:

This group is about approaches that are 100% empirically-based & these approaches must deal with the individual human, & only that, as its subject matter. It is to be (eventually) a way to outline ALL the major innately-guided behavioral developments that result in an adult human (this should include revealing significant innate guidance with the development of all significant human behavior patterns); it is thought that this must be a developmental approach (tracking ontogeny). For clear practical reasons & reasons related to the centrality of some systems of behavior, a proposed approach may begin with the study of the development of just a major pervasive subset of behavior patterns -- any major related system(s) of behavior. The approaches to an ethogram presented may well not cover ALL an ethogram is supposed to cover, but should make clear how to study major aspects of a human behavioral system(s) & its development. One example of such an approach could be a cognitive-developmental approach. Again, ALL must be clearly empirically founded or grounded in all respects, AND with clear testable hypotheses. All descriptions of behavior and concepts MUST have a clear relationship to some directly observable behavior patterns & the corresponding environmental aspects -- with some directly observable proximate causes in BOTH for (involved in yielding) behavioral change.

Full plans for ESTABLISHING a new human science, not limited to very short inadequate unclear unreliable peer-reviewed studies

Keywords: ethology, human ethology, classical ethology, human development, child development, ontogeny, observational research, developmental psychology, theory, human development theory, personality theory, innate action patterns, fixed action patterns, developmental stages, learning, adaptation, behavior patterns, proximate causes, cognition, cognitive development, emotions, emotional development, behavior patterns, environmental factors, behavior change (end description)

This might be a good way to find out who else is seeking this kind of thing, instead of spending all my efforts letting people know about my part in establishing a significant PORTION of a human ethogram. I don't know if there are a lot of other ideas, but surely there may be some and maybe I should stop acting like I think there are no others. I do think my proposal for a cognitive-developmental portion of an ethogram is good and should be considered (read and studied closely); but other people might be doing similar things with respect to other behavioral system OR may have good input for me.

P..

Participants in this Yahoo Human Ethogram Group, need not have a full-blown plan. They can discuss aspects of such plans. Or ask questions about needed/necessary features of such plans. And, of course, people may simply ask me questions about my plan, my empirical approach to understand a major behavioral system (cognitive development), which I think will help lead to a FULL HUMAN ETHOGRAM.

Any research report that looks like it could be part of the information for an ethogram, or clearly pointing to such information would, of course, be VERY WELCOME.

A new Yahoo Group: "A Human Ethogram":

<https://uk.groups.yahoo.com/neo/groups/humanethogram/info>

For a critique of the deficiencies of, and censorship occurring in, the present Human Ethology Yahoo Group, see:

https://www.researchgate.net/post/Why_would_moderator_of_yahoo_human_ethology_list_throw_a_classical_human_ethologist_and_author_of_a_necessary_start_of_a_human_ethogram_off_the_list

Dear

I like your strong emphases on observation (and a lot of it -- taking time).

I also agree: "It is not yet time to rest on our notions of what is universal about human cognition, behavior, and flexibility. " A major reason I support the latter position (and it relates to the first point of yours I noted and I agreed with) is that we have not yet seen-as-combined nature-AND-nurture as they really ARE combined: with past developments and associated learnings (and our Memories, as they are, and developing) setting up (contextualizing) ENTIRELY new sorts of behavior patterning for learning/representation -- AND this new behavior pattern change is so complex, yet reliable (and species-typical) that the behavior patterns involved MUST have innate aspects (IN those very patterns),

i.e. they have some of their actual, real, concrete directly observable, substantive patterning FROM innate adaptations (and I believe: **at least at key points, THIS is OBSERVABLE ; new technology, like eye-tracking AND computer-assisted analysis may need to be involved to see "things" , since new patterning (I have described as "perceptual shifts") may well be subtle and too hard "to catch" (or see) otherwise:** I believe psychology with the new technology now has a "microscope" and just has to use it and figure out how to use it).

Our culture and continuing basically authoritarian academic institutions and leaders, in OPPOSITION TO REALITY AND TO SCIENCE, can only talk about what's "innate" and what's 'learned' in a back- and-forth fashion (you can "test them out" and this is ALL you will hear again and again, no matter what is implied by their "strong" assertions otherwise on 'how it is "BOTH"'); this is an absolutely unjustified (and essentially total) false DUALISM. This skews and COMPLETELY FALSELY limits thoughts (and frankly, at some point, quickly is delusional) -- yielding ridiculous 'theories' with NO decent evidence, like the "embodiment theories", because other types of conceptualization are 'assumed'/presumed against and NOT allowed -- even to enter thought (and students learn to automatically 'police' their thoughts that way instantly -- certainly VERY quickly not even aware of their own self-limiting of thought at all). There are huge limits to ALL one can think of with the presumptions about the nature of what is "innate"* . Behavioral science will NEVER progress this way, basically because this is a REFUSAL to view behavior as BIOLOGICAL FUNCTIONING (and, relatedly, as being in PATTERNS (BEHAVIOR **PATTERNS**), as well).

[*FOOTNOTE: There are other baseless and foundation-less and unjustified presumptions operating as 'assumptions' in our culture and also very much not escaped by academia BUT RATHER BOLSTERED BY THEM (a few others are related to 'the "innate" '(e.g. : all main innate aspects of behavior present "at birth or in infancy"; never significant new "innate factors" emerging with development; and a total belief in EVERY WAY that ALWAYS "the more 'learning' the less innate factors involved -- see my other essays for more).) I believe that innate guidance, very arguably is what provides for 'higher' types of learning (and MORE learnings !!) -- and we will eventually, if we finally

do the good needed research, see that "learning" is not simply one of a few types we now 'understand', and that is all; we will find learnings of different types, corresponding to the qualitatively different levels/stages of representation (abstraction) -- which now have NO foundation or cause ! Piaget himself referred to an equilibration (type 2) which has to do with the balance between continuing at a stage or shifting to a new one, BUT ONLY 'EXPLAINED' that as "due to maturation" -- and thus leaving it to us to discover the details !]

In another thread I said the following: " [People] break down cognition into various "parts". (For example, something like the following is often said: "Cognition includes learning but also other phenomena involving innate, genetic, motivational, and other factors ".)

After recently hearing this, I continued my remarks and response to such a position, much like these statements, coming up:

The thing is, cognition is what it is at the moment or moment-to-moment, and ALL those parts are then (in each 'moment') combined, i.e. **simultaneous**. **THAT** is what needs to be **seen (actually seen)** and, AT KEY TIMES discovered: when all those "parts" (factors) are as I just said, AND all have OVERT directly observable aspects (as proximate causes) which can be SEEN. Then **THAT is the foundation strongly linked to ANY further inferences**. And, if you believe that behavioral science (as behavior patterns and environmental aspects -- and as psychology was originally defined) CAN itself provide such full explanations (as I do), then the answer is in the perspective and approach of classical ethology. (And, it takes very involved observational work, as you described.)

The main difference that there may be between us (but perhaps not, and hopefully not) is the never-to- be-for-a-moment forgotten (or for a moment not in one's understanding-sought) is: the INDIVIDUAL human is the unit of analysis and where all behavior patterns exist, emerge, and change as directed to new learnings (i.e. "where everything actually happens").

Scientists (even behavioral scientists) should DEFINE nothing just by putting things together or separating them in their own minds; **THE SUBJECT DEFINES ALL**. So present 'notions of what is universal about human cognition, behavior, and flexibility' are wrongfully defined.

P.S. Also see my final Answer under,

https://www.researchgate.net/post/How_does_cognitive_psychologists_view_behavior_analysis

What is the shortest description of a cognitive- developmental human ethology?

Let me try to provide an answer by sharing a relevant essay I wrote to a friend. (This contains that "shortest description".)

Let me answer "What is your definition of 'innate guidance'? " in the only way I ever will answer anything when it comes to a scientific study of human behavior (aka ethology). My answer is I do not

define; I never define anything. All is discovered and the Subject (the human) will define what, in any given type of case/circumstance, the innate guidance IS (and what that is like). ("Ditto" for 'learning'.)

This is the only way other ethologists should have things 'defined' . IN FACT: Real and good scientists (in any science) NEVER 'define' anything just with their imagination; no guessing EVER, except just "where to look" -- THEN they find that which is important and worth noting FROM THEIR SUBJECT MATTER).

Everytime (literally) I hear the word "define", I cringe.

NOW: This may not be easy to understand, or understand as I intend, but I have written 500 pages explicating, elaborating, and justifying the following view:

From what I said before: I can only tell you where I would look and hope for the discovery of what is at the INCEPTION of new 'seeing' new things and differently (that then eventually leads to new representation, then to new thinking): IN PARTICULAR: This (coming up) is how I will look for the proximate causes OF the behavioral shifts, in BOTH directly observable overt behavior patterns AND in the associated directly observable aspects of the current environment (and WITH the special sort of associative/discriminative learning that THEN OCCURS; and THAT along with other behaviors -- some developed in just this same type of way in the past, which now function in some similar way to when the behavior was overt, though now covert). I hypothesize, and it is now testable and verifiable (yes or no) with new eye-tracking technology and computer assisted analysis :

That "perceptual shifts" are the overt behavioral patterns aspect(s) WITH the innate guidance that there is/are at the inception of a transition starting a qualitatively different level/stage of representation . Such an inception, of course, includes (for contextualization) what is brought forward from our Memories -- to have the new environmental aspect(s) meaningfully seen . The perceptual shifts will result in finding and using "things" thus discovered (by the organism), BEGINNING with the perceptual shift(s) FOR new elements processed from the environment which allow the key new/additional "ingredients" that need to be added to existing cognitive abilities' contents (the latter, existing already, at a lower level of the hierarchy), to begin to move to the next higher hierarchical level/stage-type behavior (behavior including not only necessary overt aspects, but also existing cognition <-- understood, in important part, by seeing similar perceptual shifts beginning earlier stages; THUS: you have to do investigations longitudinally, beginning just after infancy; you must track the relevant ontogeny).

You will note I use the word WITH very intentionally: that is because the innate guidance (which, in a sense can be seen as manifested in the perceptual shift) IS ALSO OCCURRING SIMULTANEOUSLY WITH new LEARNING, IMMEDIATELY (or in effect, immediately) ALSO INVOLVED at the same time as the perceptual shift occurs. (In short, 'innate' and 'learned' occur literally (OR, IN EFFECT) SIMULTANEOUS, TOGETHER -- there is no dualism, this is that 'problem' solved. If you really want to say BOTH the innate and learned are always involved, then this is what you mean.)

I think this is the only brief 2 paragraph version I can provide. To really know more:

SEE: https://www.researchgate.net/profile/Brad_Jesness2, then <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> then https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses and then

<https://www.researchgate.net/publication/322818578> NOW the nearly complete collection of essays RIGHT HERE BUT STILL ALSO SEE THE Comments 1 for a copy of some important more recent posts not in the Collection include reading the 2 Replies to the Comm -- if you really want to know.

Isn't it important to see how our empirical hopes are LIKELY empirical facts?

I have outlined a view of a total combination (no separation) between major sets of behaviors (actually behavior PATTERNS) AND that which is innate. This allows us to potentially come to actually see "the innate" AS aspects of behavior patterns themselves -- and both TOGETHER as responses (or, 'the response', if you like, when able to see the new patterns AT FIRST) to aspects of the environment. This is not only an empirical hope, but is a tenet to be held if one is an empiricist and it has not been disproved (a disproof seemingly "more than unlikely").

To think like this is to think in terms of adaptedness or adaptivity: seeing major behavior patterns **AS** literally BOTH learning AND innately-guided **at the same time** -- where not only **major behavior patterns for learning show innate guidance**, but where (at the same time) **the innate guidance ITSELF IS integral aspects of these very (self-same) major behavior patterns (at their inception/first use) AND likely seen as PART OF some important behavior [pattern] changes (essential learnings), or otherwise: THERE, and certainly and clearly necessarily involved with such learnings.**

This would cover "adaption WITH" and "adaption TO" major environmental aspects -- all which is to be expected in species-typical behaviors (no matter what the exact morphology).

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#) and Deleted research item The research item mentioned here has been deleted

Social, social, social: seems to "answer" a lot of questions, but does it really?

I think it is extremely important that it be seen that (and how) social development **HINGES on** individual developments which have **occurred or are occurring**, Without this part, psychology (of any sort) has lost the true unit of analysis: the individual (the biological unit).

Do you do this?

There is a tremendous tendency to confer nearly magical influences on/to social interaction, when/where other important things that are likely going on are ignored (and knowledge from direct observation and knowledge from discovery is never sought for these factors).

"Embodiment processes": since there is no good directly observable evidence of any such things past infancy or very early childhood (NONE), such things are seen as poor, bad, useless and even destructive (wrong) explanations. This has been well peer-reviewed:

Article [The poverty of embodied cognition](#)

Thus, there are actually (commonly), in such approaches as yours, 2 magical fictions: (1) the over- importance (and PRESUMED ubiquitousness) of social interactions (with basically fictional quick effectiveness -- some cited, which I suspect, sometimes DO NOT occur at all in the early lives of some individuals) and (2) extrapolation (BY ANALOGY ONLY) from Piaget's great findings on sensori- motor development and cognitive development in infancy TO the general idea of "embodiment". The real reason for this elaboration just-by-analogy (and for the "powers" of "social learning") is because of common unfounded, baseless, unjustified, and likely false "assumptions"/presumptions in psychology (which CAN be replaced with much more likely true assumptions): these false "assumptions" limit possibilities considered in HUGE ways. These wrongful 'assumptions'/presumptions include: all notable innate "stuff" being present already in infancy; and no significant emerging innate guidance during later stages of ontogeny; AND that "the more learning, the less innate guidance" -- thinking this true in absolutely all ways (w/r to all behaviors).

Along with common "social learning" problems, it is no benefit to understanding to take your "embodiment" position. BOTH are mainly just a result of the unfounded (and likely false) 'assumptions'/presumptions, which basically keep all your thought and imagination from going other useful, likely "places" for the explanation of behavior (like innately guided "perceptual shifts" being the likely beginning of new ways of representing, yielding new ways of thinking, RATHER than some fictional, or fictionally-powerful "social learning" and "embodiment" ; this "perceptual; shifts" perspective assumes innately guided development important at all stages of ontogeny (child development), and it relies on the nature of our Memories and the nature of memory development to maintain changes. (Thus, NO key internal embodiments (or any of the "social" magic).)

[It is not just happenstantial that NONE of these modern theories are even mentioned in basic textbooks on General Psychology, Developmental Psychology, Cognitive Science, Personality, or Memory (only the same classic theories, present for decades, are presented).]

If we continue to be so literal and perpetuate this, won't we become the stupidest animal on the face of the Earth?

If we continue to be so literal and perpetuate this, won't we become the stupidest animal on the face of the Earth? --> **Yes, we will.** <--

There is such a tendency to **need 'definitions' in existing words and concepts upfront**, before observations, and to **often do just about nothing but seek to do more of this**, that we will never see anything without a fatally heavy weight of presumption -- and **NEVER see anything correctly (in behavioral sciences, anyway)**. All this already has been going on since the "Age of Reason" , though **a real age of reason HAS NOT YET BEGUN. There is a consistent, long, basically unchanging history of doing this.**

We are not adapting well because we are performing (doing)/interacting badly. **Reason NEVER trumps reality.** And, our **ability to well-reason is limited by the KNOWN natures of the types of Memory we have**; we apparently **cannot, or do not, accept and conform our behaviors (very much including 'thinking') TO THIS REALITY.** (Just to make an honest attempt to conform to these facts of reality would help quite a lot.)

Most academics in the behavioral "sciences" could just as well spend their time in church.

Philosophy, spit, spit, spit

P.S. We just keep "making 'crap' up", each group doing its own thing, largely not understandable, especially to other groups. We would just about be better off doing nothing, than to behave as described above, AND this is reflected by the fact that the theories presented in ALL basic psychology texts (no matter what the sub-area) are just the very same theories that have been there for 4+ decades: apparently behavioral 'scientists' somewhat recognize the "new stuff" is indeed 'crap'. Talk to any modern academic psychologist and you will VERY soon find his/her hopeless desperation (or clear arrogance and conceit, with he and his pals -- often reflected in the sub-group's complex, seemingly clever 'models' or analogies). (I do provide solutions: see my writings.)

When someone asks you to define things further, tell them that rather you will SHOW them the actual phenomenon (phenomenology), and tell them the words you use to describe THAT -- AND "ditto" for any necessary previous observations ('necessary' for clear understanding of the involved behavior patterns in vivo); this is how the successful sciences work.

Shouldn't I provide a shorter (or graduated) way to see what I am all about (Artificial Intelligence and Psych.)?

Shouldn't I provide a shorter (or graduated) way to see what I am all about? Well,

here is an attempt at that :

I (myself) avoid (eschew?) **defining** anything, I have viewed attention as an aspect of working memory or/and an aspect of the episodic buffer (usually or always both). Both change a lot and frequent (both are very "dynamic") . It is hard to see how attention would not be similarly dynamic (as well as a guiding factor for those 2 memory aspects or types of memory). That being the case, it seems to me it would be well nigh impossible to factor "attention" out. (And "we" should define nothing; the Subject should define all -- as it was with the classical ethologists of the 60s and 70s -- AND AS IS THE CASE WITH ALL TRUE SCIENCES.)

An easy (shorter) way to see my outlook is to read the outline and guidelines I provide for AI people (that about 35 pages long) -- and THAT is also what I believe should be roughly, the as-of-yet outline of good behavioral science: cognitive-developmental human ethology, with (always) an eye to contributing towards an ethogram via that which is ALWAYS founded in the sometime present directly observables (as true proximate causes, along with aspects of the present environment, and simultaneous "innate direction" provided). (This is basically a type of classical ethology, which unfortunately even today's "ethologists" do not know, recall or respect.)

Anyhow, if it is good enough to "mechanize" in AI, AND IS NOT A MODEL OR ANALOGY, but a fair and likely necessary outline of our rather well-defined memory facilities (and capacities) (AKA our differ sorts of Memory) - - all based on the best research -- _AND_ the key "containing system" seen as innately guided qualitative shifts IN/by gaze changes, then things 'noticed' (though often unconscious, and thus better termed "patterned-gazes-noticed") , then defined (conscious) attention, and then new processing (for new representations, and soon, new types/hierarchical levels OF THINKING (all the connected cognition there)). The latter is where BOTH psychology and AI need to make discoveries to progress empirically and systematically (and as any kind of decent science). Anyhow, for a short version of my view,

see:

<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

AND also read the COMMENTS below the item,

AND

And then, read my major Project description:

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

AND, finally, for MUCH more (for "everything"), if so desired, see:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ (160

pages)

and

read my 326-page collection of essays, everythinga.doc_0B.pdf , UNDER

<https://www.researchgate.net/publication/322818578> NOW the nearly complete collection of essays RIGHT HERE BUT STILL ALSO SEE THE Comments 1 for a copy of some important more recent posts not in the Collection include reading the 2 Replies to the Comm

BY clicking the link to that collection (and, again, read the new additions, as Comments, under that).

Maybe I am wrong, but I give a clear completely empirical approach to see if I am correct or not. It has been correctly said that I am -- as much as a cognitive developmental ethologist could possibly be -- a "methodological behaviorist"; and, all else cited except such behaviorism (<-- as usually understood) ALSO has clear empirically directly observable foundations, at least at the inception of any major new behavior patterns OR qualitative changes thereof.

P.S.

Editorial correction (of the main post, the Question, above):

... AND

<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

Following this SHOULD HAVE READ :

AND also read the COMMENTS below the item (the BOOK),

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

LET ME ADD, here too, the rationale for the combination of AI and Psychology (as related/linked):

Since the requirements for AI and behavioral science & the requirements for human behavioral science (psychology, human ethology) are in their basic nature the same, THAT is the basis for the combination of topics, in this post (Question): Empirical, concrete bases, for EVERYTHING, in DIRECT observation (to literally see ALL proximate causes of behavior pattern change: existing observable patterns, current (present, directly observable) environmental aspects, AND observable innate guidance IN the behavior patterns OR their change, SIMULTANEOUS with those 2 other factors -- no nature/nurture "conflict" (debate)).

W/ unfounded cultural presumption (long held baseless philosophy), rigid institutions, dogmatic professors & related failings, can behav.sci.progress?

Perhaps many would say: No, or not likely (since nothing much has changed in about 100 years). (Of

course, you could "check me out"; my attempts at contributing may help; **maybe others could and would say similarly, and say so here, in this RG "gathering place"**. No one would really much argue the assertion of the Question, though, would 'they'? And, that admission may be some impetus to think/do differently **OR NOT**.)

How well do we solve similar large problems (due to several of the same sorts of causes)?; for a bit of insight, perhaps you can answer this question: when we talk about keeping our Earth habitable, how often does the topic of population get discussed?

We are just arrogant irrational inconsistent babies, perhaps a poorly adapted species that will not survive. And, our institutions perpetuate denial and ignorance. But for most: for their "own good", they must "forget" and just move on (what could be much more ignoble and support, perpetuate and grow our problems, AND cause -- or "allow" - us to "lose track"?.) I believe one must work hard to be an existentialist and take appropriate responsibility; anyone in power who is not open to such new individual initiatives is a corrupt (perhaps evil) "force".

Do you appreciate where you are in all this? P.S.

It is so bad that what has NO direct empirical foundation AND no reasonable empirical foundation (connection), **but simply is usual in 'theory' and research**: that is **considered fine and good**.

BUT **NEW hypotheses, 100% founded on the key direct observations** of ALL that is hypothesized as central, and clearly "behind" other related phenomenon (and those key observations being **proximate causes of the inception of all major behavior pattern changes hypothesized**) , when THAT is addressed and spoken of: you can find THAT **being called "speculation"**. This is literally hostility to science.

FOR EXAMPLE:

This is exactly the way the people in the International Society for Human Ethology have become (over the last few decades). They have completely forgotten the approach and great true inductive empiricism of classical ethology and just talk about **absolutely indirect** and **completely unclearly related things** like evolutionary "psychology", comparative psychology, and neurobiology (**and this is about all**). To any empiricist, with his head on properly, **these topics are _INHERENTLY_ SPECULATIVE**. But, this, trumps empiricism today. People, we are just "going through the motions".

I know that "developments" in much of psychology have paralleled these declines.

In short, **things are NOT GETTING BETTER**, in behavioral science, anyway, but worse.

Thinking things up in the "muddle"; it's something to see, & see again ...; isn't it a

phenomenon to behold (perhaps more true than thoughts otherwise)?

If only we could see ourselves, truly, "outside the box".

The Answer to "the problem" is in the problem-response itself.

The problem could be called "the philosophy of/for the lack of progress of social sciences" ; if only we could 'see' more clearly and 'see' alternatives : How could we possibly 'see' more? I am not posing this question for myself, but for many of you; I KNOW THE ANSWER.

Clue: Don't start with "how would you define ... "

"we must speak carefully so that we and our listeners do not get stuck in words or concepts. It is our duty to transcend words and concepts to be able to encounter [and share] reality."

... "The secret ... is to remove all ideas, all concepts, in order for the truth to have a chance to penetrate, to reveal itself." ["In" the Subject matter.]

— Thich Nhat Hanh [Brackets hold insertions, provided by me.]

I know and have known the Way. I have tried to show you the Way, for yourself and for others (the latter including, "for science"). It is in, and consistently in, my works and that way (the specific application for an approach/perspective/HYPOTHESES (<-- testable)) can be revealing and continue to be generative, as coming to "see things as they are" would be.

Realize all that can be tested; when you realize that is all of it, you will test it -- but this may well rely on one/some "outside the fold". If no one steps up, the centuries will just continue, as they have.

Choose hope and new and better perspectives or chose hopelessness (the latter is easy; it is the "default"). [(Expect little more from me.)]

Do we have a scientific definition of "Learning"?

I am sorry (truly) that, briefly, I am "back", but Psychology is so messed up that occasionally I have to more expressly comment on yet another aspect, especially if it is seen as basic or fundamental.

ISSUE: Should psychologists define "learning" as :

"a relatively permanent change in behavior as a result of experience" [(with no guidance on, or demarcation of, the "experience" involved)]? ("Behavior change" may also be ill-defined.)

What? Are researchers supposed to assume that anything THEY see as "experiences" can be taken to mean "distinct in processing" all-equal-experiences FOR LEARNING, and for these experiences to simply be AS THEY SEE them??

How about : Learning : a relatively permanent change in **behavior patterns*** due to the association (or disassociation) of distinct certain, well-specified aspects of experience (or documented types of experience), clearly corresponding to aspects of the present (or once present) observable environment and/OR clearly and properly having their foundation in behaviors directly related to such **. [Often learning, most notably includes: that for useful representation and understanding, for species-typical adaptation -- though this last part can be (and can "safely" be) implicit, so the definition can end at : "... related to such" .]

If psychologists want to grow-up and be real scientists, the latter definition is what they MUST use (AND **they MUST do any research necessary in order to use it** !) Otherwise (as most psychologists now seem to see for themselves): the situation in their field is hopeless. (I have presented a solution for understanding behaviors, consistent with this opinion and with that better definition of learning -- click my name, and seek and you shall find.) Psychology concepts are simply (STILL) **not good enough** for a **continuously developing science** (which is a sure aspect of any real science).

* FOOTNOTE: If you find the **patterns** (which, **in a biological organism WILL BE THERE**), this at least somewhat demarcates or specifies the real behaviors. **The fact that psychology rarely speaks in terms of behavior patterns, itself, indicates how far "off base" past and present psychology has been and IS.**

** FOOTNOTE: Other than these aspects of overt behavior patterns (and corresponding environmental aspects), including those that are foundational, there is only associative and discriminative learning -- terms which, if taken to mean ONLY what they indicate, are ALREADY well-defined.

Being able to well-understand this definition involves knowing the nature of our Memories, and using that to contextualize much behavior (the content foremost in our memories changes with development, of course). **If you think this definition is incorrect, know that it relies ONLY on hypotheses which are testable.**

It should be possible to provide ONE overall definition of learning. Even as we describe things (learnings) that are varied (e.g. learning over ontogeny -- including some involvement of behavior patternings with innate guidances*, resulting in certain changes to some behavior patterns), we can still find common core terms so it IS possible to give a definition inclusive of all "types" of learning. I surely believe that, in some real and important senses, there ARE qualitatively different kinds of learning; but, this does not keep us from using language (properly, as a tool) and coming up with a definition which is all-embracing; **different definitions would only be necessary IFF the learnings (types of learning) were independent or, in the main, independent. THIS IS NOT THE CASE. THAT IS CERTAIN. Otherwise, accepting different definitions very likely involves confusion and leads to more confusion.** This I what I am out to fix. If you cannot cite what is common with all

learnings, your definitions of learning are INCORRECT. Incorrect = confusion, leading to more confusion (and more of the desperation and hopelessness most fields of Psychology now show).* FOOTNOTE: The innate guidances per se not being learning, BUT immediately (or almost immediately) affecting behavior patterns SO AS TO effect the nature of some significant learning.

P.S. In responding to my view, **it is incumbent on YOU to state or summarize other views you subscribe to (or views that seem inconsistent with the definition I provided)**. If these 'definitions' you are talking about can only be "appreciated" through the contortions of long papers, I believe it is very likely they are incorrect (and, in a good or final analysis, unintelligible). [I provide a perspective, and a clearly defined approach, WHICH DOES ALLOW FOR A SINGLE DEFINITION -- the one I just gave, above. See: my papers available, and writings here, on researchgate to learn of the perspective and approach. It takes long papers (and many associated essays) to clear confusions, not to give a good definition of learning -- if your 'assumptions' (/presumptions) allow you to understand it.]

Another P.S. The authors of "Embracing multiple definitions of learning" (fulltext.pdf) decide that the way to state what is the common ground between definitions of learning in various sub-fields (or fields related to psychology) is to provide the following definition of learning : "processing of information derived from experience to update system properties" . This is certainly more vague than necessary, and definitely much more vague than the definition I provide -- and my definition allows parts of the 'learning' process to define and demarcate each other (via discoveries). Their proposed definition is certainly too vague for psychology, defined as the science of behavior (and environmental aspects affecting behavior), aka the specific direct empirical studies corresponding to the intended definition of "psychology". This "common ground" definition these authors provide leaves determining what the "information" is and what "the 'system'" is (and is like) _AND_ what 'experience' is to each of the various sub-fields , while it is unlikely there would be acceptable agreement on the specific definition used EVEN WITHIN A SUB-FIELD. And, the vague definition in NO WAY (unlike my definition) helps any discovery of any progressive definitions of those key parts of THE definition. And, other than accepting ALL this, then we are to allow the people in the sub-fields to use such a definition as they see fit. Simply accepting between-sub-field differences in the actual use of this vague definition (and ignoring or glossing over within-sub-field differences). AND, yet: Somehow putting all the findings of the different sub-fields together supposedly will not be harmed by such a needlessly vague definition (just because we supposedly know "what" that their real definition differences are !!??). That this will make anything more understandable is beyond doubtful and, yet somehow just understanding "THE differences" in definition and accepting them supposedly will HELP multidisciplinary studies - - somehow help both their understanding and integration. This is beyond highly doubtful. It is ridiculous and stupid.

AND, all this ridiculous-ness when a better "common core" definition can be provided, as I did above - - a definition not wrong for any sub-field.

Frankly this paper shows the stupidity of Psychology (yes, it IS at the point of STUPIDITY*), that does not expressly accept behavior as biological and cares nothing about providing any evidence for its now (and long-held historical) baseless, foundation-less, and unjustified 'assumptions' (presumptions) -- these leading to the rejection of other better assumptions (off hand) AND not even seeing (or being able to see or conceive of) any of the possibilities for behavioral change allowed for by alternate hypotheses which are in line with better assumptions. (YET: Likely, when looked at individually, all would agree

of each of the possibilities, not knowing the true assumptions behind them -- there is a limit to denial of factors of reality.) **(See everything I've written, available here on researchgate.) [(About the stupidity: I can and DO tell you how and why, in my writings. OR you can keep backing and/or using STUPIDITY).]**

* FOOTNOTE: I believe, the fight against what is true will tend to get stupider and stupider with time (here: over the history of Psychology); we are just waiting for a breaking point and for the ability to THINK.

For those who have not "read me", I should say that the basis for my definition of learning and the basis for a consequential set of related views _AND_ for the outline of a NEW type (and set) of testable hypotheses, can be found (and known) by reading a book-sized set of papers and related essays: especially:
Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

How about a description of a possible (hypothetical) inception of a new qualitative (stage) change in cognitive processes with a "perceptual shift"?

I want to present you with a possible particular concrete example (instance) of a perceptual shift, i.e. the inception of a stage shift (in 'seeing' and [at first, very vaguely,] in some sense IN cognition), showing all the 4 phases of a perceptual shift for the overall process of the beginning of a qualitative stage shift part of the development of cognition -- before purely associative learning "holds sway" by itself again.

This hypothetical example comes from the ape (gorilla) social "world", from which our abilities to have progressively developing levels of concepts and thinking likely first evolved. Well, HERE IS IS:

Think of an child ape, not an infant but perhaps a mid-age-child individual. He has from his previous development a conceptual idea of the dominant (adult) male gorilla (and his behavior patterns, relating to this).

But, then he "notices" that this dominant male, at times rushes towards other adults, to seemingly show other ways to express his dominance (or other aspects of that dominance) which he has not shown before (or which the young ape has not clearly seen, noticed, or processed before).

This is the kind of thing indicating [with him, this child] innate guidance, given he has good, refined earlier knowledge: AT FIRST BEING some gap in the child ape's conceptual understanding of the OVERALL structure of this adult dominance behavior. That "gap", (phase 1) of the now first-emerging of a NEW perceptual shift, may show itself in a situation (or early situations) as just something involving automatically vaguely orienting TOWARD the key situation and behaviors (and would be shown behaviorally simply in prolonged gaze when/after this dominance phenomenon shows itself).

Soon (perhaps VERY SOON) he will better see such dominance events WHEN THEY OCCUR (because of the specific "gap" existing in his understanding); this second phase (of the perceptual shift) will show clearly: orienting to the aspects of this new-to-understand type of dominance expression (still, for the most part, not conscious).

In the third phase of the shift, he will reliably have seen regularities as he continues good orientation needed to observe things associated with this dominance event. HERE he can be said to be expressly and explicitly and consciously ATTENDING to occurrences of this event.

Finally (in the fourth phase of the shift) he will integrate the essentials into memory: facts-for- occurrence, key aspects of this dominant male's behavior (with respect to dominance behavior patterns), and key aspects of the spacial and temporal aspects ("in the world"), associated with these dominance behaviors pattern's key content in visual-spacial memory (which he will be able to play back in his mind, when NOT present in the situation where the adult male dominance behavior occurs; i.e. he can "reflect"). BUT, TO DO ALL THIS:

This fourth phase shows the development of some fact/declarative memory (basically the main static features of the dominance act and their relationships to each other, defined) -- this is the declarative/"semantic" aspect of long-term memory he has developed and is developing. Also, some procedural knowledge develops (at the same time) about how to act in response to this dominance expression (especially if he has something "to do" with he, himself): this thoroughly developed, active and automatized response (or set of responses) is the procedural aspect of long-term memory he has gained: this aspect, known as procedural memory.

Also, in the fourth phase FOR THE MOST PART, he has a record-of-incident (episode) memory which is most prominently in the visual-spacial memory which is, in an indirect way, the actual thing he is able to play back key portions of in his mind, just as he sits and thinks about this dominance phenomenon -- given the EPISODIC BUFFER. (Other key aspects [mentioned above] of long-term Memories are also determining the nature of the BUFFER and are "there".) So, the ability to do this out-of the situation reflection, just described above, relies on (and is delimited by) the content that will be a notable part of his EPISODIC BUFFER, doing some major contextualization of his working memory (entering into it) where further, now more-simple associative learning may now continue to occur, until all the Memories (each and together) are thoroughly refined.

He no doubt will also, through cued thinking (and likely some observation) relate this aspect of his concept of dominance to other aspects at the same conceptual level (and to/with earlier conceptual levels) that are related to shows of dominance. When ALL this (all of the 4 phases and associative learning needed for refinements and concept integration) has occurred (perhaps taking a year), he will be ready to notice other greater patterns BY HAVING a new perceptual shift (that, too, with 4 similar phases) -- these are the core foundational happenings in ontogeny (aka THE proximate directly observable causes of the development of behavior patterns via perceptual shifts) and that which

AGAIN allows qualitative NEW learning new ways (using a qualitatively different kind of learning, and also using well-refined aspects from earlier stages): to AGAIN further develop his representation system(s) (aka concept structure), this being related to all major aspects of the Memories and likely mostly connected with through visual-spatial memories, and all the other Memories connected to that AND USED (in the final step of cognizance) BY THE EPISODIC BUFFER; then working memory can work on new "things".

[Full explication and justification for this approach (and the implications of this approach) can be found via :
:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#) and
Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)
]

I should note that **this perspective can be seen as finishing Piaget's theory (and that of neo- Piagetians)**, by defining the stage shifts (associated with Equilibration 2, qualitatively described, ONLY, by Piaget, BUT something he clearly indicates is not accomplished with regular accommodation). In fact, Piaget just stated the real **major factor behind the main stage changes was "maturation"**. Unfortunately, most psychologists completely overlook statements about **Equilibration 2 and either do not know of it or totally neglect to mention it in any regard**. In any case: **THEY NEGLECT TO SEE THE STARK FACT OF THE LACK OF EXPLANATION HERE, which Piaget MORE than clearly stated**; they somehow (often, and maybe always, adding in fictional executive and meta processes) explain cognitive developments just with assimilation and accommodation -- BUT **THIS WAS NOT PIAGET'S VIEW** (he had a qualitative idea of the situation and nature of things that would yield the need for big change: Equilibration 2, after previous developments have been well-refined), BUT PROVIDED THEN ONLY "MATURATION", otherwise, as an explanation and that is all (**he would himself have seen, and DID see, his theory as empirically incomplete**).

Thus, this perspective and approach is congruent IN THE MAIN with the Piagetian perspectives and all neo- Piagetian perspectives, just **adding in the discoverable needed processes (and resulting in a way to throw out all those "meta" processes, because they are not only not well-founded, but they are not needed for explanation)**. Once these **fictional** (though on the "face of it" seeming totally descriptive) processes are eliminated, my perspective and approach is basically consistent with neo- Piagetian theories.

One returns to the **empiricism of direct observation** to substantiate these "perceptual shift" hypotheses, something Piaget would be very happy with. **AND: We now also have the tools of eye- tracking and computer assisted analysis technologies to allow us to DISCOVER** (see) what researchers previously could not. Researchers, today, with the new procedures now available **should look for and see if they can find the overt phenomenon (though subtle) associated with my empirically hypothesized, directly observable phases of the "perceptual shifts"**.

If only today's theorists could recall or review Piaget and see that **JUST THIS is what was and IS mainly missing** (and otherwise just modifying some accounts because the "perceptual shifts" testable and provable findings will have some implications on the descriptions of other processes/mechanisms, but those **otherwise and mainly being almost phenomenologically correct**).

Good citation for **Piaget's position: HIS LAST BOOK, its on Equilibration** (NOT A FINISHED MATTER); in there also the 2 types of equilibration are clearly described, and very different

See my last two answers under

[https://www.researchgate.net/post/Have Technologies in the role of a MICROSCOPE for psychology been developed which can now be used to investigate important observational specifics](https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics)

for a general, abstract, main-aspect-and-nature, defining description of the phases of a "perceptual shift"

Where has Classical Ethology GONE??

AWAY ! Unfortunately.

Nowadays, proximate explanations are, at least almost always, in terms that are neurobiological, endocrinological, or molecular-genetic . There usually appears to be absolutely no concept of a behavioral pattern or change in a behavioral pattern (either, of course, in response to aspects of the current environment) AS themselves a proximate cause of a new behavior pattern [change] -- I.E. a true observable behavior pattern phenomenon proceeding, and needed for, the key subsequent behavior pattern change. I believe there is a BIAS there , due to our philosophical cultural traditional-beliefs.

And, this is a problem.

THIS PROBLEM HAS NOT ALWAYS BEEN THE CASE, and certainly has not always been the case in ethology. The ethology Tinbergen and Lorenz were given a Nobel prize for often did have one behavior pattern as a proximate cause for certain behavior pattern(s) that followed. This is what needs to be re-learned and abided by or real ethology may be lost. Such a relationship between behavior patterns was a hallmark of classical ethology.

Modern ethologists failed to have the "backbone" to maintain that which was most distinctive and best about ETHOLOGY. They basically "caved in" to how others characterized them. (Now, the field is indistinguishable from comparative psychology and/or evolutionary psychology.)

Listen up, International Society for Human Ethology !

Real science, real biological science, the real biology of behavior **DEPENDS** on behavioral pattern(s), themselves, being seen as a major **proximate cause** of new behavior patterning [and of behavior

pattern change]. Ethology must return to what it uniquely was OR THERE IS **NO CHANCE OF BEHAVIORAL SCIENCE**. I am sure, if I were a analytic philosopher, I could argue this. It really is logically and scientifically irrefutable. Behavioral sciences, of all "stripes", have been becoming more and more **stupid** -- there is no better word (since **they defy biology and defy science**). (Simply look for the lack of the words "behavior pattern" and you are on the way to seeing the whole problem.)

P.S. Consider this a big "kiss" to our philosophical cultural heritage; certainly the stupidity is a "love letter" to those arm-chair thinkers.

Doesn't a Theory of Behavior that can be fully programmed to simulate human behavior (i.e. an AI program) have to be clear, specific, and Concrete?

Indeed. And, this is what I have tried to provide in the Project,
<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>.

This is real good for psychology, too -- where things also need to be clear and specified. Theory that is good for AI is simply good theory. Thus, the Project above completely "fits with" my other Project , on a human ethology (Ethogram Theory) (and the theory and hypotheses there): <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> (The theory is presented in a much more organized way in this latter Project, plus the full justification of the theory and its ramifications are made clear -- but it is a lot more to read.)

There is a single paper with the beginning core of the perspective and the beginning justifications (about 160 pages). This is a necessary part of what needs to be read (but is yet not the full argument and has no clear specific hypotheses -- for that see the Collected Essays):

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

The first main paper, above, is greatly elaborated on (including with some rather specific hypotheses) and rather fully argued for (and justified) BY the Collected Essays (a 328-page "book"):

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

P.S.

I guess a shorter way to get to what is involved in the system of cognitive development is to see what I have provided for general artificial intelligence people. This material is not-so-well organized BUT is only about 35 pages total. These are the key faculties and capacities (of the resultant view argued for in the large papers and the Collected Comments) AND how things get put together for the simulation of development and learning (or for actual human development and learning) (the "how" is also in the large papers, etc.: argued-for and, perhaps in some ways, in more detail there):

<https://mynichecomp.com/onmemory.txt> and
<https://mynichecomp.com/Almemory.txt>

(YET: It is my view that all the vital details are in those 2 .txt documents: I represent that as the necessary and sufficient core for general AI.)

Is it really biologically likely that all innate behavior patterns related to all complex thinking ARE PRESENT AT BIRTH OR IN INFANCY?

No.

This notion or belief, and THAT is all it is, no matter what BIG impacts on thinking it has, and no matter what big effects such beliefs have in creating firm limitations on thinking (not even allowing people to think of certain phenomenon). [In effect such false closures and thinking (and they are there) is a clear sign that something is wrong.] This all-innate-at-birth-or-in-infancy notion of THE innate factors -- resulting in no real innate guidance thought to come up later in childhood -- and related beliefs (used as "assumptions") is from philosophy and not from ANY good observation and not related good understanding. 'Learning' explanations are given which have NO clearly related direct evidence at all, yet researchers and theorists are satisfied with what they basically just make up (and then attribute to such "self"-functioning of the organism), e.g. the fictions of 'executive' functions and all the "meta's" (a "man" within "the man") OR wild (unsupported and unsupportable) ideas about 'social learning' AND/OR the fictions of literal-supposed "EMBODIMENT" of 'action' giving us our thought -- such pure garbage being a big part of 'explanations'). [

[Apparently, for higher learning, logic can just pop-up and pop-out when the time/circumstances are right (when earlier learnings have been well-processed); this is apparently where developmental maturation factors ORIGINATE INTERNALLY (!!???), no matter how not-environmentally based the POP-UP logic seems to be in its origin, i.e. NON-EMBEDDED. It is basically hocus-pocus.]

Old-time philosophers can't "cut it" nowadays.

Because of these 'garbage' beliefs, we cannot differentiate different [levels of] learning -- this resulting in not defining or understanding learning well at all.

So many things work better and are seen in more understandable ways IFF one can see fundamental qualitative shifts in behavioral [response] patterns occurring (even if the beginnings of such behavior pattern changes are kind of simple and caused by seemingly simple CHANGES in VERY basic behavior patterns -- that works!). I am at the point where I basically do not need to listen much to people that think learnings are all basically the same and completely ubiquitous, operating in an "uninterrupted" way. (And, don't talk to me about "social" and "cultural" factors BECAUSE the individual organism clearly remains the "unit of analysis" and center of ALL true understanding -- if there is no account with the individual, there is NO accounting at all.)

Hey, graduate students: if you buy all the "crap", you are "tools".

[P.S. Note how "innate action patterns" (or anything meaning that) are not even topics here on researchgate. Come on, people]

P.S. I did not address the strange idea of "internal" processes allowing for more correct logic or formal logic, providing some advances in thought that are beyond the usual 'learning'.) Also, for a more biologically consistent ALTERNATIVE to the status quo, see: _

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ and
https://www.researchgate.net/publication/322818578_NOW_the_nearly_complete_collection_of_essays_RIGHT_HERE_BUT_STILL_ALSO_SEE_THE_Comments_1_for_a_copy_of_some_important_more_recent_posts_not_in_the_Collection_include_reading_the_2_Replies_to_the_Comm

Why should the International Society for Human Ethology be called another evolutionary/comparative 'thinking' group (rather than true human ethology)?

[I understand that looking at evolutionary roots is ONE thing ethologists do, but that is much less important than the other aspects of ethology, i.e. than observation and seeking an ethogram. If you just do evolutionary/comparative work, and represent ethology as THAT (with the near-total neglect of these more important things), you are misleading people AWAY from what real ethology is and leading them to misunderstanding.]

Value observation; AND, value the ethogram (and realize there is a way to start, but that may be inherently partial)

About observation: what really needs to be made clear is that a hopeless and confused morass results from losing a clear connection to/with DIRECT OBSERVATION OF OVERT BEHAVIOR (as a proximate cause) FOR ANY MAJOR BEHAVIOR PATTERN (and damn it, note the word: "PATTERN" -- biological behaviors, i.e. all behavior of living organisms, occurs IN PATTERNS). The only thing that sustains the morass (just noted) (aka the resultant "tower of Babel") is adherence to unproven, likely false, unjustified, baseless pseudo-'assumptions' (many ingrained in our culture from old-time philosophers).

I make all of this explicit and completely clear in valid arguments in my writings (I totally and I think irrefutably "spell it out"): (The writings, totaling 480 pages):

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ

and

https://www.researchgate.net/publication/322818578_NOW_the_nearly_complete_collection_of_essay_s_RIGHT_HERE_BUT_STILL_ALSO_SEE_THE_Comments_1_for_a_copy_of_some_important_more_recent_posts_not_in_the_Collection_include_reading_the_2_Replies_to_the_Comm

THEN, with a better perspective used (often using the opposite to today's, and history's, long-time 'assumptions') AND BASED ON more likely true assumptions (because they are consistent with biology and more than BIOLOGICALLY PLAUSIBLE) AND WITH AN APPROPRIATE ADHERENCE to having directly observed overt behavior as a clear referent of ANY often-used major or central concepts, I outline explicitly (with clearly TESTABLE HYPOTHESES): very arguably the good beginning core of a cognitive-developmental human ethogram. [Unfortunately, people CALLING THEMSELVES 'ethologists' rarely read my works -- because of those very sorts of assumptions which automatically lead psychologists "OFF TRACK" (of the nature described above) -- assumptions that make even considering some concrete possibilities IMPOSSIBLE TO EVEN THINK OF, MUCH LESS CONTEMPLATE -- yes, the "affected" cannot even THINK/conceive of certain possible concrete and objective possibilities (that's "culture" FOR YOU).]

I refuse to have anything to do with any 'ethologist', including, it seems, all members of the International Society for Human Ethology, UNTIL THEY READ MYWORKS. These works happen to be the VERY 2 LARGE WORKS REFERENCED ABOVE.

Come on, you people, you can read 480 pages:

<https://www.researchgate.net/publication/286920820> A Human Ethogram Its Scientific Acceptability and Importance now NEW because new technology allows investigation of the hypotheses an early MUST READ

and

<https://www.researchgate.net/publication/322818578> NOW the nearly complete collection of essays RIGHT HERE BUT STILL ALSO SEE THE Comments 1 for a copy of some important more recent posts not in the Collection include reading the 2 Replies to the Comm

Those of the International Society for Human Ethology would have made MUCH BETTER PRESENTATIONS at their annual meeting IF THEY READ MY STUFF. Why would I attend a conference of backward, pig-headed people?

Psychology Researchers & Theorists: If your findings & Theories aren't good enough for Artificial Intelligence, HOW ARE THEY GOOD ENOUGH FOR ANYONE?

Let me elaborate a bit: Psychology Researchers and Theorists: If your findings and Theories **aren't good and CLEAR (clearly and explicitly empirically-based and well-founded) enough for Artificial Intelligence**, THEN **HOW ARE THEY CLEAR ENOUGH AND GOOD ENOUGH FOR ANYONE** (including you and your associates) ??? **Please, pray tell; DO EXPLAIN.** [And, don't tell me: "progress can be made from where we are"; that does not "cut it" for me -- I fundamentally dispute THAT (a bad direction does not automatically "straighten out" OR get "straightened out"); many cases supporting my view can be cited. And: Don't think brain science itself can save you NOR interdisciplinary studies -- looking for salvation in such can also easily be argued against.]

See: https://www.researchgate.net/post/Doesnt_a_Theory_of_Behavior_that_can_be_fully_programmed_to_simulate_human_behavior_ie_an_AI_program_have_to_be_clear_specific_and_Concrete

and

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

and

<https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

P.S. Once information-processing theories had to be clear enough for you (or close to that); how and why do you think you do not need to reciprocate?

Dear

I am not reducing psychology to AI (as you seem to think somehow); clearly, I am just noting (from evaluation) that psychology is not objective, empirically-grounded OR well-founded enough TO BE GOOD ENOUGH TO **USE** FOR AI .

I should add, as I indicated before, that modern psychology is really NOT GOOD ENOUGH for ANY continuously progressing science -- thus, in a sense, modern psychology is **not good enough (or anything near the best it might be) for anything or for any decent scientist** (including those in psychology itself). It is not good enough for anything to be truly or well understood AND is not moving in an appropriate direction to further establish itself (towards more essentially-needed objectivity, empiricism). Here's the basic case:

Modern psychologies (and this is true of EVERY BRANCH) is not able to be put many of its central concepts in any concrete terms (OR in terms that are always clearly RELATED to directly observed key concrete happenings); specifically: [it lacks] **having all significant behavior (including ALL that goes on "in the head") CLEARLY RELATED TO SOME KEY DIRECTLY OBSERVABLE OVERT BEHAVIOR PATTERNS** (occurring at some key times), **OPERATING AS A PROXIMATE CAUSES (along with the key, relevant aspects of the environment, present at that time -- also as proximate causes)**. <-- To establish THIS is the solution to the problem. Hey, this is only a firm, complete empirical stance (and I have such a stance in my writings, with **ALL MY HYPOTHESES being testable and verifiable**).

ALL this in no way demeans the "precious" human (unless you cannot bear thinking of humans as mistaken). It just says that psychology is NOT EVEN good enough for AI (or much else) !
[SEE: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> for the directions to solutions, esp.:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

and

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) _ B...](#)
]

Next, about your statement, "**fallacy to scale human science up against the standards and criteria**

of natural science". I completely DISAGREE, if you include BIOLOGY as natural science. I fear your statement is something many students HEAR AND BELIEVE and those students have not personally taken the issue on and evaluated it for themselves (they are keeping their own field, in a sense, not known to themselves -- a way for NOTHING TO IMPROVE). [This may seem like harsh response, but it is a harsh response to the harsh point-of-view your statement represents.]

P.S. I have read a LOT, and certainly am NOT at all impressed by your book/article list. (To me, Skinner is not only dead, but DEAD.)

Dear

Indeed it seems a clarification of what I am talking about as "psychology" is needed. I am happy to provide that. ALL psychology I think about is that which fits with the classic definition: The **science of behavior** (all types, including cognition and cognitive processes, AND centrally: the Memories)

AND the environmental aspects to which the behavior patterns are a response. That is it forme: behavior and environment. AND, I believe a full science of JUST THAT is possible (and I make this more than clearly plausible in my writings, available through RG), even with no help from brain science or anything else. That classic psychology alone can provide a true science with endless progress possible --- and there is a way it can all be the most empirically-based psychology possible !!!

I largely abhor philosophers; I see most as deceitful, pretending "pure" general conclusions when they arrive at supposedly-such but, really, only with a hidden "ax to grind", i.e. only with some significantly biasing hidden assumptions -- even if some may not recognize their deceit or being deceitful. I certainly see almost all the philosophers who have been taken-in as part of our culture this way.

Philosophy IS the basis of all the huge problems with psychology, outlooks and **pseudo-'assumptions' used AND making us (that is : 'THEM', and most of us) ABSOLUTELY BLIND TO MORE- LIKELY, BIOLOGICALLY-COMPATIBLE AND BIOLOGICALLY-CONSISTENT REAL**

ASSUMPTIONS, often the opposite of the unproven, baseless, unjustified, and foundationless "assumptions" used by psychology today. This culture of grandiosity from philosophy (e.g. that ubiquitous simple sorts of "learning" is all there is) limits even the ability to IMAGINE OR CONSIDER certain likely possibilities, so much so that today's psychologists posit things without ANY direct evidence (and which will never will have any direct evidence) and which are absurd* -- and could only come about through such serious bias and related skewed-ness (<-- now at the point of being desperate and depraved). I have about 480 pages of large papers and essays (all available through RG) that **irrefutably make the case, I just described. It also provides important testable hypotheses that WOULD ASSUREDLY (when verified) provide a core of a totally workable true psychology** (as a strong biological science, i.e. AKA ethology) AND ALL ON THE BASIS **_ONLY_ GOOD well-founded ASSUMPTIONS, AND GOOD CONCRETE DIRECT OBSERVATIONS OF**

OVERT BEHAVIOR [PATTERNS] and their changes, as the central basis for understanding all behavior patterns (all "behaviors", in common parlance) . [All still: just behavior patterns and environmental aspects -- in case you think I have drifted away from that.]

P.S. If you want to know more my views on philosophy (spit, spit), see my MANY posts under the

thread: **Can philosophy help to innovate and develop scientific theory?** (https://www.researchgate.net/post/Can_philosophy_help_to_innovate_and_develop_scientific_theory) **MORE IMPORTANTLY read my long papers and hundreds of essays PROVING MY POINT OF VIEW and outlining the basis of a true psychology and definitive showing the problems with today's psychology I indicated, above:**
Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#) and
Book [NOW the nearly complete collection of essays \(RIGHT HERE\) _B...](#)

* FOOTNOTE: Examples: all the embodiment (and enactment) theories. AND: all the pure junk positions requiring making up and using "Meta" this and "meta" that and all [the other] "executive processes" -- phenomenon likely occurring only with social contexts, sadly including these "scientists'" 'measurements' of these supposed-general and central and important things (yet THEY ARE ALL UNJUSTIFIED AND USUALLY JUST FICTIONS). All this is cultural/philosophical warped-ness.

WORKINGMEMORY: What is the difference between "working memory" and "thinking"?

Dear

I would say "thinking" (formally: cognition/cognitive processes) likely includes all the relevant automatic or near-automatic contextualization of content that goes on supporting (and that goes "into") working memory, <--where significant changes are made. The contextualization includes both long- term Memories (as relevant) (i.e. both declarative and procedural) AND often significant visual-spacial memory AND the episodic buffer (as an initial major filter for contextualization, changing dynamically, as WM needs to change, and then "drawing on" the other major Memories again). (Some automatic rehearsal loops and some 'time' (timing) mechanisms should also be considered involved in "thinking".)

Thinking as so conceived is quite dynamic in all regards mentioned, as working memory is, and it is largely to subserve working memory. (Of course, working memory adds content or arranges content and/or sees patterns, including sequences -- all yet to be integrated and coordinated into the well- developed knowledge, understanding and skills we have or will have.)

P.S. No reason to distinguish, functionally, STM from working memory. And, all the "meta"-this and "meta"-that _AND_ the [other] "executive processes" do not exist, as presently conceptualized; they are the homunculus (man-within-the-man) fiction, for the most part.

What are some BIG Reasons that "A Human

Ethogram ... " is important reading for all interested in human behavior & empiricism (incl Gen Art. Intell.)?

Re:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Though many may not know about it: Piaget described TWO sorts of equilibration: one, a good balance between assimilation and accommodation AND, THE OTHER, a balance between remaining with the behavior pattern sets of a given Period (stage) OR progressing to the next stage. This second sort of equilibration was never well-explained in any way by Piaget, and he knew it. He only said it depended on "biological maturation". (Because this was a continuing question for Piaget, there is no wonder why the last book he wrote in his life was on Equilibration.)

ETHOGRAM THEORY:

This neo-Piagetian Theory (described in a major paper and Project) completes (fills the gap in) Piaget's Theory: it describes generally, and then in some detail, the OBSERVABLE biological/behavioral adaptation processes that are the basis of the stages. ALL HYPOTHESES REQUIRE JUST DIRECT OBSERVATION (of proximate causes) AND ARE COMPLETELY TESTABLE (and thus are verifiable).

[Modern eye-tracking technology and perhaps computer-assisted analysis likely are needed.]

This is the ONLY theory that NOT ONLY fills these major gaps in ALL Piagetian and ALL neo- Piagetian theories BUT ALSO, for the first time, in any true and meaningful way, brings "innate factors" and learning actually TOGETHER SIMULTANEOUSLY -- that which is needed to end the long-standing dualism. There is no other theory like this. This is my offering to you. It takes only about **450 pages of reading/explication** for its **FULL JUSTIFICATION**, and to understand the details of this theory. For all these readings: READ what's in the Human Ethogram Project (it's **ALL here on researchgate**).

PLUS: The "A Human Ethogram ..." is also the ONLY fully grounded developmental psychology theory (grounded, as any true psychologist would want it: in terms of verifiable directly observable overt behavior patterns AS proximate causes). **AND:** It is the ONLY theory that make full use of all the terminology of classical ethology (biology of behavior, itself (i.e. per se))

IN ADDITION: This theory also solves 3 out of 5 (or so) things-in-theory that "hold up" General Artificial Intelligence; PLUS, it is a concrete enough outline of that which is involved in cognitive

development so that it is **USEFUL, IN A FULLY PRACTICAL SENSE, for General AI** (see my other Project relevant to this). **Enough??**

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#) AND:

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) _B...](#)

P.S.

Another ADDITION:

I must add that this long paper points out the **unproven, likely incorrect "operating" 'assumptions' (basic 'foundational' beliefs behind, and for, VIRTUALLY ALL THINKING AND JUSTIFICATIONS)** prevalent throughout **psychology**. **_AND_ it states and describes the alternative (more likely, biologically compatible) assumptions one should use.** Many of the ramifications of the new assumptions **for much better science (a science of psychology)** are spelled out (in the 323-page **Collected Essays** -- written recently to explicate all that was just indicated).

With this new perspective and the **new research it generates (through its testable hypotheses)** , psychology (like classical ethology) becomes **"a biology of behavior"** ; <-- This in spite of the fact that **THIS PSYCHOLOGY is just psychology AS CLASSICALLY defined**, just behaviors (behavior patterns) and the associated environmental features to which these are a response, AND that is basically ALL -- though SPECIFIC, **verifiable, directly-observable** innate guidance is thought to exist for **(in/amongst)** behaviors initiating MAJOR QUALITATIVE SHIFTS **AS some OVERT ASPECTS** of these major behavior patterns (in particular, behavior patterns intimately related to, and key to the progress of, cognition, memory, and cognitive processes). [These aspects (also) are explicated in the recently-written collection of essays -- the Collected Essays also in the reference list for the Project: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> .]

A Beginning of a Human Ethogram: seeing the inception of cognitive-developmental stages as involving a couple of phases of non-conscious perception?

WHAT? "Non-conscious perception": isn't that an oxymoron; isn't anything like that SENSATION?? NO. Such conclusions involve one believing he/she knows all the sorts of species-typical basic,

primary kinds of perception AND that all that is innate is present at birth or in infancy; THESE [mere] beliefs, very likely are associated with incorrect ill-founded (and groundless) pseudo-'assumptions': these quickly leading to wrongful conclusions -- these conclusions often also "taken" (put forward) as "assumptions". A LOT of this is part of our "culture" based on the views and ways of old-time philosophers. Staying grounded and doing all one can to be well-founded, based on what little reliable and true data exists, I HAVE SHOWN THESE bad things TO BE THE CASE IN MY WRITINGS.

I do believe that the inception (the beginning, just the beginning) of cognitive-developmental stages occur as perceptual shifts, each with 2 phases being non-conscious, and with 2 later stages involving attention. [Why? **Let's face it: BIOLOGY does not likely need our attention for beginning all major developments, and maybe not for ANY, for that matter.]**

I believe, based on hundreds of pages of realistic, grounded, reading and empirical thinking, and very mindful of good, central data -- especially, specifically: on the Memories (and most-notable the importance of visual-spatial memory for all higher organisms) and on the likely actual ubiquitous-ness of associative learning -- that these "perceptual shifts" EXIST AND are subtle overt directly observable behavior patterns (seen in real-time), detectable NOW with the new eye-tracking technology (and computer-assisted analysis). **As empiricists, we MUST believe this, if we do not know better.**

Way back in 1985 I did propose a very basic similar well-founded outline on how to very empirically start a human ethogram, in the way indicated. ONLY PROBLEM (but it was a BIG one) was that the type of hypotheses, WERE AT THAT TIME, _NOT_ TESTABLE. [(I did, way back then, start to show quite well some of the major interpretation problems due to "pseudo-assumptionism" ; in more recent writings I have found the baseless beliefs, serving as basic "assumptions", behind these other assumptions -- all "spelled out".)]

Most importantly:

The fact of the matter is that NOW (in the present) such hypotheses have become researchable: the type of hypotheses -- now further specified in recent Collected Essays (and a connected Comment and Replies) -- can NOW be tested/verified , specifically with eye-tracking technology (and, perhaps, also using computer-assisted analysis). **(I have waited over thirty years for this.)**

The **328 pages of NEW (< 1 yr old) supporting essays (the Collected Essays)**, fully explicating and further and completely justifying the perspective, AND refining and specifying the hypotheses, are now available. Links to both the main 1985 160-page paper (still good and needed to be read), a treatise, entitled "A Human Ethogram ... ", and the Collected Essays (of 328 pages) can be found through the researchgate link:

https://www.researchgate.net/post/What_are_some_BIG_Reasons_that_A_Human_Ethogram_is_important_reading_for_all_interested_in_human_behavior_empiricism_incl_Gen_Art_Intell

(Expand the essay at that link, above, to see the links to the important paper and essays.)

In addition, for your convenience, I shall provide (with this Post) AN attachment (attached as the rich- text document, Comment2Replies.rtf): this contains the later posts (in a Comment and Replies), associated with the Collected Essays. That will give you a "taste" of things.

P.S. WordPad on a PC will open a rich-text document

- [Comment2Replies.rtf](#)
28.54 KB

A little more qualitative description (of possible related states), having to do with the new perspective (on RESEARCHABLE "perceptual shifts"):

Think of visual-spacial memory. Imagine that what's there has become well-integrated and consolidated. At that point "free space" may be in v-s memory; but, this will NOT be arbitrary "space" but an actual "gap" in what you need to know (a "gap" **in the v-s memory you are USING in important contexts**).

This "gap" will be the basis of at least the early phases of a "perceptual shift" -- where you (as an organism; not YOU as an attender) will be "looking for" proper circumstances and proper content to "fill the gap" and you, the organism, will soon FIND that needed for "answers" and THEN soon come to realize with it: that content or sort of content -- actually IN YOUR CURRENT ENVIRONMENT -- with your attention (specifically: in phase 3 of the "perceptual shift").

This would likely occur not only at the beginning of a new cognitive-developmental stage, but perhaps occur several times as different "domains" are dealt with (it is possible, of course, that the process, as it reoccurs, will become more efficient).

I hope all this helps you imagine these possible empirically-verifiable states. Now, I have gone 2 steps beyond what I once thought necessary: I have hypothesized phases in/of the "perceptual shifts" (trying, you might say, to "channel" biology -- a reasonable careful sequential process -- in important behavioral contexts) (P.S. do remember, now, that behavior IS BIOLOGICAL FUNCTIONING).

AND now, secondly, I have specified how this likely IS in/with-regard-to a certain type of Memory (v- s). I am quite sure there is little more I can do -- and, it seems there should be little more I would have to do. I am retired and MUST leave hypothesis-testing (and even some hypotheses formulation) to modern investigators, using eye-tracking technology (and computer-assisted analysis) -- things I have never used or even seen. Please "carry on".

I hope I have now indicated clearly-enough the type of hypotheses there can be and which could be investigated -- an 'answer' to something I was first asked over 30 years ago, when I had essentially no answer.

Can modern eye-trackers do what I clearly indicate needs to be done?

I can assure you my way is **empirical** and **all major hypotheses are directly testable** (via direct observation of overt behavior patterns). It is a viable approach, with all testable hypotheses, and with **explicit, well-founded and biologically-consistent assumptions behind it all. Eye-tracking technology will be needed and perhaps computer-assisted analysis.** FIRST, See:

<http://tiny.cc/ethogram> AND

then you must see the **recent LARGE Collection of Essays explicating and fully justifying** my approach and clearly **indicating the positive consequences and ramifications** : HERE'S the BOOK:

<http://tiny.cc/collectedEssays>

*** PLUS * : YOU MUST SEE THE COMMENT _AND_ THE 2 REPLIES TO THAT COMMENT (below the BOOK's shown text), to have all the needed specifics.**

EYE-TRACKERS: If you do not want to read as much as I ask people to do above, you should be able to get a pretty good idea of what would be involved and if you could do it by just reading COMMENT _AND_ THE 2 REPLIES TO THAT COMMENT on the same page as the BOOK. (This is less than 10 pages.)

--> Can modern eye-trackers do what I clearly indicate needs to be done? <--

Are more concrete methods (seeing/detecting directly observable overt behavior patterns) a better foundation for "abstract" concept [development]?

One could argue that a much more empirical set of data, based on concrete and directly observable overt behavior patterns, detectable with eye-tracking technology, at key times, yet in "real time" (i.e. in then-current behavior patterns), could be used, AND HYPOTHESES DIRECTLY TESTED, as explanations for concept development. Start at the following Question:

https://www.researchgate.net/post/A_Beginning_of_a_Human_Ethogram_seeing_the_inception_of_cognitive-developmental_stages_as_involving_a_couple_of_phases_of_non-conscious_perception

The "sensori-motor" explanations have turned out as not well-founded and based on VERY indirect evidence, at best, and seen IN PEER REVIEW, as having "no future":

Article [The poverty of embodied cognition](#)

Dear

Eye movements are used to see the evidence FOR my theory and perspective AND ARE NOT THEMSELVES, or in-themselves, or by themselves THE EVIDENCE, i.e. the evidence as fully seen and understood. With the new technology of eye-tracking, eye movements help us define the important behavior patterns (on a much more holistic scope). The "relevant" environment is a bigger thing with this approach (related to Memories brought forward), not limited to what you would spontaneously or happenstantially see in eye movements -- without LOOKING FOR EXPECTED PATTERNS, related to cognitive-developmental theory).

You obviously have not encountered Ethogram Theory. See: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> and especially see: "A Human Ethogram ..." and the Collected Essays (a BOOK)(these fully explicate and show the grounding for this fully empirical approach, based (founded/grounded) in direct observation of subtle, overt behavior patterns, found USING eye-tracking technology and perhaps computer- assisted analysis).

This perspective deserves consideration from any empiricist and from any psychologist who has any intention to use the classical definition of psychology (and understand behavior in terms of behavior patterns and environmental aspects) -- inferring NOTHING ELSE that has not been well-shown in excellent Memory research AND considering the likely big (ubiquitous) role of associative learnings. That and new technology is a very good "kit". (This is a way to use only the "good stuff" as part of the perspective.)

P.S. Like published peer assessments of the "field" of "embodied-behavior"-as-thought, I consider that approach no longer plausible (and NEVER with any direct evidence, nor will it ever have any). This approach exists only because of the adherence to unproven, unjustified, and likely incorrect "assumptions" (actually, beliefs). It is from false "assumption" biases (and perhaps, desperation). They(you) are in a "box" and it is the wrong "box"

Dear

I see the "embodied" ideas, if not entirely incorrect (much past the sensori-motor period), are at least an outrageously incomplete account -- to the level of NONSENSE. **The bias against any significant innate guidance for/with major cognitive developments late into childhood is absurd AND BASED ON FALSE, unjustified, baseless, unproven "ASSUMPTIONS"** (and/or related pseudo- 'assumptions'). I have clearly outlined THIS CONDITION (many, many psychologists have) in detail, just see several of my writings here on RG, in my Collected Essays BOOK. AND, **I have chosen biology-consistent, 'opposite', more-likely-true, real assumptions**, and have been able to imagine what you may not even start to be able to imagine, which are **directly empirically-based hypotheses for other ways of cognitive development WITH innate guidance therein** -- a nature/nurture combination many psychologists indicate (actually, **pretend**) **they speak of**, but, in fact, they cannot ever (even in/for a moment) escape the real and strong and complete dualism in their nature/nurture

concepts AND just **momentarily, with unclear thinking, as needed, "fool themselves" and "fool" others** (with nothing but **DOGMA** behind it).

If I were you: I would "read me", to see other **BETTER-RESEARCHABLE , DEFINITE, AND REAL possibilities you are likely completely AND irrationally totally "blind" to (on no decent basis, scientifically speaking)**. Some of these **new perspectives are much more empirically founded and grounded in DIRECT OBSERVATION OF OVERT BEHAVIOR [patterns]** -- like something "embodiment theory" **CAN NEVER REALLY EVEN HOPE FOR (ever)**. In my view, you are **VERY** likely a 'victim' of wrong learning, as **SO MANY** other psychologists I know **ARE**.

OVERALL (w/r to "embodiment theory"):

Regarding embodied cognition as a research approach, I agree with the **TOTALLY NEGATIVE critical review of 5 peer scholars in a published review**, called "The Poverty of Embodied Cognition" :

Article [The poverty of embodied cognition](#)

See www.ncbi.nlm.nih.gov/pmc/articles/PMC4975666/ for FULL-TEXT

This is well beyond the damning of present work; it indicates **NO HOPE** for that approach whatsoever, ever.

Some of my works, to reasonably and validly "see more":

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

P.S. One of my diagnostic claims (above) is **VERY** easy to see demonstrated. Just ask the professors to show a single instance **OF ACTUAL BEHAVIOR** where both "the innate" and the "learned" are at work (think: simultaneously): ask them for an instance in later childhood. **THEY WILL FAIL THIS EVERY TIME**: All they [can] **EVER DO** is go back-and-forth and back-and-forth indicating these "2 influences" on behavior. [And, don't let them claim, having **NO EXEMPLARS**, that it is because the matter is simply [(always, at all times)] too "complex". Often "complexity" is the hobgoblin of small (or stilted) minds, it seems.]

I have definitively concluded:

Psychology is bad-enough off, one basically has to personally do an assessment and creation "from the ground up". Immediately assume nothing; "believe" NOTHING -- in both cases w/r to "what's around". And, when starting anew: **THINK BIOLOGY**; any scientist must realize and believe **BEHAVIOR PATTERNS** are **BIOLOGICAL FUNCTIONING** (it you cannot do this, you might as well go to church). -----> -----

-----> -----> -----
--> My works (above, and now: below) are one big instance of **JUST THAT "ground-up" approach**. (Know how and why you assume or believe **ANYTHING** -- think of this approach as existential ethics, if you need support or convincing and, also, see the Question that is linked to below.) **I ASSERT NOTHING; I basically simply say : "look there" and consider my fully direct and empirical, truly completely-concrete hypotheses, if you will.**

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

Again, if you need more reason to start again anew, see also the following Question:

[https://www.researchgate.net/post/We think of something perhaps with others or we name somet hing does that mean that THIS IS something key-and-distinct or in some way primary](https://www.researchgate.net/post/We_think_of_something_perhaps_with_others_or_we_name_somet_hing_does_that_mean_that_THIS_IS_something_key-and-distinct_or_in_some_way_primary)

P.P.S. To read me thoroughly is too love me. Thank you, in advance.

Is there any relationship between culture and science ?

Dear

There is a BIG relationship between culture and science in the behavioral sciences area (esp. developmental psychology). A notable part of our "culture" includes the prominent views (/ASSERTIONS) of old-time philosophers. THEY have "taught" us, directly or indirectly, that **all that is innate is present at birth or in infancy. This is not only unproven, but also baseless and without any actual or real justification; MOREOVER this position, it can be well-argued, defies BIOLOGY** (behavior must be biological functioning). Still this (the all innate-present-at birth-or-in- infancy assertion), is what is believed firmly and completely (and why psychologists believe so much occurs just by "learning"). It restricts even the consideration of definite (and very arguably probable) biological effects-in phenomenon: in particular, it forces one **NEVER to think of psychological/cognitive qualitative shifts as involving ANY NEW INNATE GUIDANCE**; it is not even possible for psychologists TO CONCEIVE of such a possibility (there is no frame in their mind in which to assimilate or accommodate this even as a concept much less a consideration). YET the very unsubstantiated belief they have (and it IS MERE BELIEF) **creates an unwanted (and known to be false) absolute dichotomy between "the innate" (aka innate guidance) AND "learning" IN ALL DEVELOPMENTS BEYOND INFANCY.** Ask any psychologist how BOTH "the innate" and the "learned" are involved in ANY development (illustrated in any instance of phenomenon) after age 2; they will NEVER BE ABLE TO GIVE AN EXAMPLE of BOTH being involved. Because: for that to be in-reality involves the idea of nature and nurture occurring in behavior **SIMULTANEOUSLY** (to be more precise: both aspects, literally, being **clearly present in the SAME BEHAVIOR PATTERN**) ; BUT instead they always go back and forth, back and forth (over and over), between "this aspect has notable innate factors involved" and "these aspects are what is learned". **NEITHER the "innate factors" NOR the "learning" is NOR the "environmental aspects" (for that matter) are well- specified.** With regard to "learning": learning is always just one of a small number of very simple phenomenon, similar throughout life. E.G. classical conditioning, operant condition, habituation/sensitization, and a strange hodgepodge of very hypothetical and most often UNPROVEN

(and even unprovable) vague "SOCIAL LEARNING". To THEM: these are asserted as ubiquitous and as much the same throughout life.

The outlook of modern psychology is also strongly (actually, completely) tied up with the notion that **"the more advanced the organism, the less innate guidance there is" AND BELIEVING THIS IN EVERY CONCEIVABLE SENSE.** Again this has no foundation or justification AND IS UNPROVEN. It is **actually quite easy to argue that WITH INNATE GUIDANCE, BEHIND QUALITATIVE SHIFTS in cognition and cognitive abilities, there is THUS MORE OPPORTUNITY FOR LEARNING (a whole new field for learning opens up).** (And, with this latter point of view, innate guidance and learning are NOT the dichotomy now firmly believed.) **And "their" view, again, defies biology.**

Also associated with the old-time philosophers is the notion (again, belief) that **one can go into a hypothetico-deductive mode at will** -- whenever it seems you may make some case; BUT, in reality, ALL NECESSARY INDUCTIVE WORK needs to be done in an area, BEFORE any firm if-then hypotheses are made (**I like to say: one only does hypothetico-deductive work WHEN FORCED TO;** I might add that this would be for clarity, closure, or some finality, when no additional observations will do this for you.)

Also, for modern psychology: **THERE IS NO empirical directly observable overt behavior patterns, themselves (along with environmental aspects), as the proximate causes of significantly new behavioral developments.** **THERE IS A SERIOUS LACK OF EMPIRICISM HERE, throughout psychology.** It is especially apparent when you find **THERE IS NO EMPIRICAL BASES FOR QUALITATIVE SHIFTS** in later childhood (i.e. **developmental psychology is completely UNGROUNDED**, if qualitative shifts in stages or levels are thought to exist).

In fact: It is **IS possible for one to hypothesize directly observable overt behavior patterns behind/yielding even our prized most-"abstract" thought** [as an EXCELLENT, empirical alternative to "stuff" like "embodied cognition" -- where the thinking is JUST BY wild, unlikely, AND unprovable PRESUMPTIVE ANALOGIES to developments actually occurring in infancy; this false and bad way of thinking really just occurs out of desperation, when those who hold the pseudo- 'assumptions' (BELIEFS) handed down through history (i.e. culturally) cannot think "outside the box" at all]. **My writings available HERE on RG *) clearly indicate HOW to free oneself; one should read this material just to free your thinking:** i.e. getting it into the free and open range of possibilities your thought should be able to AT LEAST CONCEIVE OF, AND MAYBE even CONSIDER.

Start finding behavior **PATTERNS**, and start seeing things consistent with necessarily-applicable biological principles (e.g. homeostasis). Behavior is biological functioning. (If you ever see/hear talk of "behavior" without reference to a PATTERN, you should be able to see this as very poor thinking, with no progress for psychology, no good future.)

* FOOTNOTE: See:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#) And:
Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

(on same Question)
Dear

I certainly cannot agree when you say: "Science is unburdened by a cultural or political agenda." **Just because science searches for truth, does NOT mean that science is true OR even that it is true to its subject matter** (as I have put forth) -- and this comes from a big aspect of our "culture". [When science is not true or correct, even its basic approaches or foundations, where do you think the biases (with the intimately associated wrong thinking or beliefs) have come from? (Answer: culture and especially, philosophy.)]

But, I would like to point out that psychology (a supposed science) did not go wrong AFTER somehow deliberately accepting several views of philosophers; it **started wrong FROM THE BEGINNING, without good thought and unknowingly to a significant extent** (and it has never been correct, i.e. it has always been wrong in some of its major foundational bases -- of thought) because it **accepted the unproven, arrogant, domineering views of philosophy EVEN BEFORE THE INCEPTION of the "science"**. Think about it: These **views (of philosophers) were very prevalent for everything they seemed to apply to (for a very long time: centuries)**, even before psychology "came along" (e.g. manifest destiny).

Regarding psychology: The effect has been and is so great that psychology has been messed up (**in basically the same kind of ways!!**) FOR OVER A CENTURY. The "road to hell" is "paved with good intentions."

Regardless of the purpose or intent of psychology, this is the kind of thing that CAN HAPPEN even to a "science", AND DID HAPPEN. [The fact that I cogently and in detail describe objectively and empirically this situation with psychology (AND provide more-likely-true alternative views and hypotheses, acknowledging and accepting behavior PATTERNS as biological functioning *), make my writings important. It would really be a shame if all people for whom my viewpoint is essential (if correct, which I believe it has to be) do not read my writings -- all available at or through researchgate.

P.S. One might be able to say: "Science **attempts to be** unburdened by a cultural or political agenda" -- **but I truly even doubt that:** for example, think of biases due to the time and space limitations of the "experimental" "laboratories" they have used (and still use); THIS RESTRICTS THEIR AGENDA and, VERY likely greatly restricts their views, or perspectives. And, this same strange, unnatural situation may support some of the wrong views of the "arrogant ones", "helping" to keep psychology "in the dark" for such a very long time (so far, forever). We may have concepts and definitions of science which "make us" believe things that are not true, are. But, DO NOT ASSERT THOSE THINGS. All should know: one's concepts come into being as one's own (even as, in good part, "passed on" from others), and our concepts can and do change (individually and collectively, both -- and sometimes, in good part, separately) as life progresses (sociology notwithstanding).

P.P.S. If people see me as correct, they should ACT like it (otherwise needed change will not be actualized); so far, it appears I have accomplished nothing (though no one has seen any noteworthy counter-arguments for the ENTIRE TIME I have been on researchgate).

* FOOTNOTE: Some day we all will understand that any given behavior pattern is best defined by the

behaviors (patterns) SURROUNDING IT (/them) (always some overt at key times -- UNTIL AND UNLESS SHOWN OTHERWISE; and, nearly, if not always, also involving covert thought and thinking -- yet these well-related to previously overt behavior (AGAIN, UNTIL AND UNLESS SHOWN OTHERWISE). Yes, that's correct: behaviors will always best defined by other related behaviors (AND OTHERWISE they're defined by just the environmental aspects they are responses to). **THAT IS THE DEFINITION OF PSYCHOLOGY MANY OF US ORIGINALLY LEARNED.** I am a true empiricist and true psychologist; with my perspective **I have been able to use this classic definition of psychology**, noted above -- **that much having been "hoped for" correctly, even very early on in psychology.** ARE YOU WITH ME??

Dear

You say: "Science is a set of rules that can either be followed, stymied or cheated on". With your statement, looking at it in context, you are clearly and strongly indicating the science has the correct "rules" (and we just need to follow them). How could anyone operating rationally and realistically make any such claim, **especially about a field that can be shown to be clearly still IN ITS INFANCY? Psychology has not even "taken off" yet; psychology is a disparate mess -- as most EVERYONE knowledgeable has noted and seen as a serious matter.** Your claim is very **debatable at the very highest (foundational) levels** (as I have tried to indicate in this thread and which I have proven in my writings available through RG <-- which you and many others desperately need to read).

Your view may make you (and others) happy or satisfied, but it is false. WHY: Because **you cannot just SAY IT: you must show it reliably OR prove it** -- otherwise your statement is a statement of RELIGIOUS FAITH.

AND: Psychology with its **now-proven unreliable studies** (results not holding up across studies or across time), **not only has not had good true findings, but also lacks utility** (that would directly follow simply from the first part of this last phrase, but **also for other reasons see the note at the bottom of this response**). SEE :

Article [A manifesto for reproducible science](#)

and

<https://www.nature.com/news/over-half-of-psychology-studies-fail-reproducibility-test-1.18248>

and

<http://science.sciencemag.org/content/349/6251/aac4716> and

https://www.gesis.org/fileadmin/upload/events/Vortragsreihe/Schoenbrodt_GESIS_p-hacking.pdf and

<https://psmag.com/news/where-does-bad-science-come-from#.rjgin1d3a>

AND, THE RELIABILITY ISSUE IS SOMEWHAT A SEPARATE ISSUE FROM

STATISTICAL TRICKS (e.g. huge sample sizes for $p < .05$) _AND_ FROM WHETHER THE RESULTS ARE CLEARLY INTERPRETABLE, USABLE, IMPORTANT, OR USEFUL (for those studies that ARE reliable and reproducible).

Dear

As I said in one of my posts (above, in this thread): because of foundational false assumptions, the **basic problems are true in ALL PSYCHOLOGY (all branches)**. Sharing unproven, unlikely, unfounded, unjustified, baseless assumptions (with a total inability to consider likely or even more likely alternatives) is true of every area (sub-field) of psychology. I have said this above, and spell-it- out in full details in my writings, all available through researchgate. [I see psychology, through its history, to have **NEVER made the most significant needed and important "transition": to see behavior [patterns (<-- an important word and indicator, OFTEN NOT PRESENT directly or indirectly)] AS biological functioning AND requiring theories to clearly be consistent with biology**. Now, can you start to see?]

Psychology is disparate to the extent that one cannot integrate or coordinate or clearly-relate a lot of research in some areas (e.g. cognitive development). AND across sub-fields this problem is total. This should not be the case. AND: This cannot continue to be the case. A "tower of Babel" IS NOT OK. Each of the sub-fields are part of what is a whole psychology. [ACTUALLY, other sciences are often integrate-able (or results may be coordinated), when that is needed, even though their subjects are diverse (do you really know, or think you know, otherwise?). Psychology's Subject is just the human (for most psychologists): behavior patterns and the environmental aspects to which behavior patterns respond (or to which they have responded).]

MY PERSPECTIVE IS TOTALLY EMPIRICALLY BASED, totally founded/grounded in direct observation of overt behavior patterns; ALL MY HYPOTHESES ARE TESTABLE/VERIFIABLE. **Your inability to consider that a much better new perspective and approach may even exist makes your view non-credible (and hostile to science -- and hostile to me and, perhaps, to your most creative students)**. About your statement that my position has been "without any justification up to now" -- IS FALSE; **have you read my total of about 600 pages (total) of long papers and essays (the latter now collected, in one BOOK), which explicate my position thoroughly, and justify it and compare and contrast it with other perspectives/approaches????** [You seem to be being authoritarian ON THE BASIS of just what you want to be true (for whatever reason(s)).]

P.S. Therapies might well be effective mainly in ways not directly related to research or to the supposed "therapy" (I will clearly indicate one reason this is true at the end of this paragraph); AND, the effectiveness of therapies as uniquely good or special is HIGHLY QUESTIONABLE. **For an example for all of that:** how "good" is a therapy as opposed to having long conversations with a well-adapted good friend ? (a **very important control group**) <-- which is **not typically (if ever) used** (usually **intentionally useless "helpers"** are used as "control groups" **OR no treatment**) .

Dear

There is a much more efficient, yet more thorough, way to "take on" or counter your position. **As I pointed out in my last response to you: You say: "Science is a set of rules that can either be followed, stymied or cheated on" and with your statement, looking at it in context, you are clearly and strongly indicating the science has the correct "rules" (and we just need to follow them).**

Rather than bringing up how seriously disparate psychology is and how it has reliability (replication) problems with its research (most of it), one can provide **a more general argument that basically covers ALL modern psychology research:** This has to do with the real nature of science, which is **well beyond simply what's known as "the scientific method" -- there are more crucial factors to ALL science in-operation, or science as-it-really-is:**

One needs to appreciate that psychological science is not JUST: (1) the researcher defining things (behaviors and their 'triggers') as well as he/she can, (2) forming a hypothesis, (3) properly picking a sample from a reasonable population, and (4) "well-defining" experimental and control groups. This **((1)-(4)) is not enough, BECAUSE because all THAT hinges on proper definitions, starting with properly defining the behavior(s) (behavior patterns) of interest in the first place. THESE behaviors must NOT be so much defined by the researcher as DISCOVERED FIRST, before any behaviors are selected for study (using (1)-(4)). This involves rightfully conceptualizing behavior, with WELL-FOUNDED ASSUMPTIONS behind the conceptualizations.**

IF ONE HAS BIASED OR SKEWED OR WRONGFUL, UNREAL ASSUMPTIONS or pseudo-assumptions, the definition of the behaviors of interest AND everything else that follows (all other definitions) will be fouled up irreparably. And, this bad situation is exactly the situation I see existing in psychology, throughout its entire history. (This well-accounts for all the problems pointed out in my last response to you (and more).)

With our extreme acceptance of engaging in hypothetico-deductive (if-then) thought when ever we want to (forming models as soon as we think we are well-imagining things), AND the degree to which we allow the researchers to just define things as they will, THEN any improper 'assumptions' held will implicitly or explicitly come to bear. I have identified several 'assumptions' used in all psychology which are likely incorrect and false: baseless, unjustified, and unproven. I have asserted that alternative assumptions (often the OPPOSITE of present assumptions used) are better justified, and biologically consistent.

While the assumptions come to bear more with some sub-areas of study than with others: to the extent that the false, wrongful, pseudo-assumptions are used knowingly (explicitly) **OR implicitly**, they will screw up all the research, rather quickly dead-ending it -- plus research will be inordinately disparate and impossible to "put together" into a grander view of overall behavior (we will not be able to coordinate such research with other research).

Reliability also will naturally suffer, too. Many see the use of statistics as way to claim (often WAY over-generalize) a lot about mere trends (this being true, even with replicable studies, with good statistical results). One must appreciate that the best research, like basic research in biology and other sciences (or in Piaget's work), does not even need to use statistics because the results so very often occur, as predicted, that it is apparent that the results are very meaningful (really "significant") and that statistical test results will add little to nothing to "the picture".

I would also recommend the 328 pages of recent essay explicating, justifying the approach, specifying

hypotheses, and comparing my perspective and approach with that of others. THESE RECENT COLLECTED ESSAYS may be found at:

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

My responses in the Question thread,

https://www.researchgate.net/post/What_is_my_religion_Who_is_God , are not included -- you will have to go there to see them.

We think of something (perhaps with others), or we name something: does that mean that THIS IS something (key-and-distinct or in some way primary)?

NO, of course not, not even if it seems consistent with all we know. Relatedly: QUIT THINKING UP HYPOTHETICO-DEDUCTIVE SYSTEMS, to use. If this is what you do, and if such a way of thinking is not basically FORCED on you, then it has NO PLACE in basic research.

But this would eliminate what portion of modern psychologists?: perhaps all of them?

Examples of unjustified entities or analogies:

- * embodied cognition

(by irrational analogy with behavioral changes that DO HAPPEN in Piaget's Sensorimotor Period)

- * executive functions

- * meta-memory

- * meta-cognition

[and ALL other "meta"s]

(all of the above are NOT EVEN CLOSE TO PROVEN-NEEDED)

- * systems theories, where the system was formulated with a hypothetico-deductive approach, not clearly or necessarily needed ...

- * "Ditto" for dynamic systems theories ...

- * And, for hodgepodge Relational Developmental Systems Theories (including the 'Bioecological Approach' and sociocultural theory) -- which have no clear system and

represent subjective researcher intuition (the 'researchers' are the "relaters")

* information-processing theory (by-analogy)

* Perceptual Control Theory (which is inconsistent with itself, at least unless some key changes I have proposed are accepted)
(see their Project and my inputs there).

* explaining all behavior change in terms of a small number of supposedly basic types of learning (considered to be homogeneous, all the "same process", explicitly or implicitly). Any thought enables one to see this as terribly presumptuous and likely wrong. AND, the same wrong is occurring when explanations are just in terms such TYPES OF learning -- that is still, not ok, unless it is indicated how to discriminate learnings within TYPE.

* the "spawn" of attachment theory and the neo-Freudian ilk
(close to mythological in nature)

* Piagetian or neo-Piagetian theories, which can only be seen to have important process going on, "all in the Subject's head" -- this is big-time hypothetico-deductive (and, of course, NOT JUSTIFIED)

[While rightful and true thinking may self-correct (if one keeps related to all key relevant observations which can be made), wrongful thinking does not, but quite the opposite: unfounded BELIEFS strengthen with commitment - and especially if one can think only of things related to unproven, unjustified, **baseless 'assumptions'*** -- as IS commonly the case. "'Houston', we have a problem."]

* FOOTNOTE: Re: Very common **baseless (unproven) "assumptions": I have made a major case here, good in-itself:** see my longest paper and my Collected Essays -- all here, on RG. <http://tiny.cc/ethogram> and , respectively.

Did I miss anything? I do not want to "miss" any such thing. This is just all that readily came to mind; but, I would like a complete list.

Also, in contrast, I would love to hear about good theories (other than one I have presented).

How can I define human consciousness?

Dear

Consciousness is as-it-is-in-use (and OTHERWISE varies dramatically, to such an extent that there is no impressive overall definition, none people would find "acceptable"). But, THEN, so viewed (as

situation-developmentally-variable), the topics/issues/phenomena of consciousness are quite easy to deal with. (A lot of the context determiners are the Memories (and, of course, emotions, broadly understood, are also involved, though I like to just say this is "often" the case, to avoid misunderstanding.)

I have had no trouble indicating to general artificial intelligence people how to define in-action and "handle" these phenomena; basically, like so many important behavior patterns, consciousness is defined by the behavior patterns contexts in which such occurs (and, of course, on environmental/situational aspects, also). This WILL work for AI, and would work for psychology; for philosophy: don't worry about the losers.

It is unfortunate that the idea that something can only be well-defined as-it-is-in-use is so unacceptable to so many. This is part of the sickness of our culture and cultural history, esp. philosophy (which to a large extent deals in wrong thought and confusion) -- this can make almost a whole society that way to some extent.

Otherwise, Alfredo Pereira Junior, when viewed in contexts (as described) your set of related concepts (in the original Question) seems fine (but, realize (1) emotion may be neutral, rather than "there" as positive or negative -- this is often the good, adaptive state (equanimity). (2) Also, when innate guidance is considered: to some extent some perception may precede sensation OR occur with it, at the same time -- at least as currently "framed" or understood.

Dear

You said: " Your advice to AI researchers was flawed! "

I did not specify the advice I gave to AI people here (and not much elsewhere), but it was/is totally consistent with everything else I said, which you seemed to find agreeable. (A particular important aspect: behavior patterns contextualizing and essentially defining other behavior patterns.) So maybe the guidance I gave is fine. (I do have an entire Project regarding AI, which may help you see, BUT I left a LOT of the putting together necessarily to the AI people (AND actually: to the experience of the AI robot). To see that Project: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>)

You say (ask): " Please tell me how to reduce to behavioral patterns ". Answer: in context of the circumstances and of the Memories and, at least at times, of the emotions involved (the latter, which is simple enough, I left this to the programmers to address) -- AND: ALL THIS, given the related (Memories-related and situation-related) experiences and especially those related to particular development(s) that have gone on w/r to particular circumstance/types of circumstances. (Major learning goes on with major developments, so I find no need to use the otherwise vague word "learning". Outside of innately-guided, cognitive-stage-related learning ("mixed in" with the new innate perceptual shifts), I posit only associative learning, which is what it is, just occurring phenomenologically very much based on developments which HAVE occurred and then thusly (as above), based on 'experience' (experience not being something that is -- or "apparent" -- onto itself or "raw").)

[A P.S.]:

Dear

I keep editing and adding (something I really should do off-line, but I never do). Sorry. But, now (in the last 5 minutes), there is more:

At this point (and I think I am done): I now also note: innately-guided qualitatively different cognitive stage shifts (perceptual shifts) especially affecting learning AND associative learning (in contexts, such as I describe in general).

[In short, before recent edits, you were correct, it was essentially (in major aspects) incomplete/partial.

] Proof I made nothing "up, on the spot": <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>

NOTE: It is best not to try to think too much "in general", but think in terms of capacities and capabilities and on-going developments -- making A LOT quite dynamic and changing. Yet, still (though it is not something to make too a big deal about): what you say is quite agreeable and correct.

If every neuron in a human was accurately simulated in a computer, would it result in human consciousness?

Dear

W/R to your original Question:

Perhaps not. But, good general AI WILL have consciousness (it is a very important aspect of functionality) and, I guess, that would often include consciousnesses some hypothetical human(s) could have. In many regards we may want AI to have consciousness that is qualitatively better than most humans and, perhaps overall, have consciousnesses better than any human -- at least for its many purposes (<-- an important and always inevitable stipulation). (Overall a General AI robot may not be better than most humans; that simply may not be necessary.)

Dear

I agree with you to the extent that "If every neuron in a human was accurately simulated in a computer, it would not necessarily result in human consciousness". And, that is because experience and interaction are involved in making neuron connections and determining what their function is (it is not possible to see their adaptive functionality as inherent in the neurons, of course). An AI robot, otherwise can have significant mind and thoughts, as needed in its sub-areas of human simulations.

Consciousness does NOT require being everything like us (as some say or clearly imply): the reason: one does not bring forward everything one is in every situation; if things were made to depend on THAT you would have a sick and poorly functioning system.

Dear and , respectively

Dear B.T.: While it may be " not possible to 'simulate' such an impossibly complex random pattern ", it seems clear to me we are not talking about "impossibly random patterns" and, given no arguments from you, we just have your characterization and assertion.

We are talking about an AI robot doing what we **need it to do in a WAY like a human (and developing and "learning", like a human IN THESE AREAS NEEDED, as well)** -- does this sound "random" to anyone? Maybe it somehow makes you feel good to declare the situation and make a supposedly-related proclamation. (YET: I DO admit that starting from the perspective of neurons IS seemingly certainly NOT THE WAY TO GO; I have made my proposal to General Artificial Intelligence people: see: <https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology>) (That proposal has NO focus on neurons whatsoever -- how would anyone try to think from such a standpoint?? <-- I cannot imagine for myself any reasonable explanation for this -- thus, from the outset, I "took the question" with my own translation (transposition).

Dear L.B.: I disagree with : " remember that what we are conscious about is the state of our body (not the brain) and the state of our interaction with the reality of the world outside our skin and none of that is part of the alleged simulation " -- this is just a proclamation and not an argument. Plus, we very well can be conscious (and even primarily conscious) of the "state of our brain" (thought-state and imagination); we can also be most notably conscious of things "INSIDE the skin" (e.g. hunger). What makes for all these dualities, false discriminations, and proclamations??? (See below.)

Dealing with Western man (with his background philosophical "culture", of firm, set, and skewed or biased "assertitude") is like "shooting fish in a barrel". (I should probably leave you "alone"; nothing seems to do any good with the sort the "defining" and "proclaiming" that goes on so frequently in our "society"; everyone and "all they got" seems to remain the same and the expression of such over and over seems to be of no good for anything -- unless one finds temporary agreement among similarly deluded "souls" . [If you cannot show continuous clear real progress in thinking (and 'seeing'), finding agreement means nothing or close to nothing (mirroring something very similar to the "progress" in psychological "science", throughout its entire history) -- so don't feel so bad about my attitude, personally.]

Dear

You OFTEN simply conceptualize "things" without reference to, or ANY relationship to, good evidence, direct or indirect -- the latter citing the linking empirically verifiable experiences/processes (THAT linking TO the directly observable overt phenomenon). I see no clear overt, directly observable

evidence, well-specified, verifiable, referred to or indicated in any cogent way in many of your statements (such conduct is not reasonable or sensible NOR are its "product(s)"). (This is the very basis of unclear, poor, confusing, non-constructive "communication".) THEN, thus: Some version of this statement is all that is needed as a response. (And, seeing persons who do as just described as "just asserting or proclaiming".)

When I do not have clearly related evidence, the correct response is simply to note the need and perhaps outline a way to get such evidence (all based on things that can be hypothesized AND tested and on things we already know). This is mainly all I do. (This is why I say very little specifically; but, better that, than the "alternative".)

If you cannot "walk this line", I suggest good disciplined study (no philosophers -- most of them do things wrongfully, basically -- in notable parts -- as described above).

Question

Asked in the project [An embodied approach in the study of experience](#)

How can you take or recommend a view or approach that will NEVER have any direct evidence?

How can you take or recommend a view or approach that will NEVER have any direct evidence?

Embodiment has NO direct evidence for it (OR any direct evidence even clearly related to it) **, and never will: it is worse than bad science: it is not even science: see:

https://www.researchgate.net/publication/303890892_The_poverty_of_embodied_cognition

Article The poverty of embodied cognition (full text at: link.springer.com/article/10.3758/s13423-015-0860-1
Add the https:// yourself, so RG does not hijack the link AND DIRECT YOU TO JUST THE ABSTRACT)

See also my Comments below the Project "declaration".

** FOOTNOTE: This is to such an extent, that "embodiment 'theory'" or "enactivism" will technically NEVER be able to present an acceptable [scientific] hypothesis. Good approaches do a LOT of clear hypothesizing.

Dear

Thanks for your sincere feedback; it helps me explicate my views.

You misunderstand my view. To put it simply: I only **posit that there MUST BE some directly observable overt behavior patterns (and environmental aspects) that clearly, in an explainable way (using known principles and processes), are sensibly and reasonably "CONNECTED TO" any phenomenon of interest.** To put it another way: all noteworthy phenomena of interest have their **origin and grounding (often their inception)** IN some directly observable overt behavior patterns that did occur (previously). And also, at least often/usually: the the key aspects of development which come with/from stage shifts (all involving testable hypotheses) continue to be ASPECTS of major behaviors; BUT there is more, **and much without the sort of DIRECT evidence, I just described.** Representing all this is the phrase in my original Question: "... (OR any direct evidence even clearly related to it) "

In short, I do NOT require that all phenomenon of interest themselves correspond -- in a testable (verifiable) manner -- with a particular directly observable overt behavior patterns; **BUT KEY MAJOR shifts, change-in-object(s)-or-'direction', DO** require such a clear direct association with exactly that (--> **THEY ARE THAT <--**). Subsequent to that, those very phenomenon AND other possible phenomenon (that develop/further develop) are **connected via the Memories (and directly associated properties/processes), given their natures, and also connected via associative learning.** Plus, **all needs to be consistent with biological principles** (e.g. homeostasis). But (then), THAT IS IT (until and unless something else must be found. I do assert that my system as-is will work for General Artificial Intelligence -- and that would be one nice related test. P.S. The matter of "emotions", an easier matter because they have to do with responses to TYPES of circumstances, needs to be "added in".)

If you read a lot (or a significant number) of my writings, you will see this is true, that this is what I am saying. I **would guess that to the extent physics does not have understanding in line with what I posit (i.e. "like", similar) , one will have misunderstanding or poor understanding (and come to an impasse).** I seek to be an example, and describe examples, of how empiricism should be (generally) -- **even** if it requires looking for behaviors that **haven't been found (and even ones you may not "believe in"),** given that is associated with **testable hypotheses.** [I speak in terms of BEHAVIOR PATTERNS, not (for example: objects of matter), because I am a psychologist; you may need to replace "behavior" or "behavior patterns" with other terms or other types of terms for your own field.]

Dear

I am vehemently opposed to the unique central/new conceptualizations (and the untestable 'hypotheses') of "embodiment" 'theories' (aka enactivism). My position has NOTHING to do with that, other than recognizing such sorts of things in Piaget's Sensori-motor Period (infancy). Things are largely very different after that Period and my theory has nothing to do with extending BY- BASELESS-ANALOGY such sensor-motor happenings (which is precisely what "embodiment" 'theory' does). My theory is a **theory of representation** and the great developments there, having their

inception with "perceptual shifts" (the bases of the starts of new cognitive-developmental stages/levels).

The basic "new" views and approaches of "embodiment" 'theory' neither can or do think about such things NOR do they "allow" things like I hypothesize (though my hypotheses are all clear testable, verifiable hypotheses, also clearly ultimately founded on, or grounded by, some **observable overt behavior pattern change(s)** -- something 'they' have nothing like); otherwise, from my perspective, seeing change in behavior patterns just through the characteristics (properties and processes) of the Memories, and associative learning (<-- THUS making all notable behavioral change understandable). Their conceptual blocks are to an extent that it is a mindset block, based on near-automatic adherence to false, unjustified and baseless pseudo-'assumptions' that have been in psychology for over a century. These (their) new approaches are basically all wrong for several reasons (including from the outset) and I spell this out in detail in my 328 page BOOK of essays and my major paper ("A Human Ethogram ...") -- both available HERE on RG, through my Profile and Projects.

I, myself, have a sort of EMBEDDEDNESS theory (behavior patterns embedded with the environment _AND_ with behavior patterns and with new behavior patterns as they emerge during ontogeny (read on for a clearer outlook on this); these new major shifts in behavior patterns are in the context of innately-guided PERCEPTUAL SHIFTS **as a vital part of the new developing behavior pattern(s) itself** (and new behavior patterns are in the context of previously such developed behavior patterns (now refined, integrated, and consolidated) _AND_ in the context of other past still active behavior patterns (related to the natures of the Memories and to associative learning that has occurred 'with' these behavior patterns as well) ; AND they will continue to be "in-context" with some important behavior patterns yet to come.) Behavior (best always seen as, and called: behavior patterns) is ALL biological functioning and should be able to be seen that way (e.g. consistent with necessarily applicable biological principles, such as homeostasis).

It is regarding "embodiment" 'theories' that I say (in the original Question): "**Embodiment has NO direct evidence for it (OR any direct evidence even clearly related to it), and never will.**"

Responses to some off-topic Answers (to this Question):

Dear

[I will speak in terms of the most truly empirically grounded science -- don't worry about THAT. Behavioral science, turning so much to neuroscience, is more out of desperation BECAUSE OF their poor approaches to studying behavior, than due to necessity, in reality.]

I do have an extremely well-grounded pure psychology **approach** (to be reminded of "psychology's" general nature, see my Answer, above). It provides directly testable (verifiable) hypotheses involving at least some directly observable overt behavior **as proximate causes AT KEY POINTS** (along with **pertinent aspects of the environment -- the other proximate causes -- for ALL you need for empirically grounding cognitive psychology !**). You do have to read my stuff to learn about it; it is new (**new perspective and approach and new hypotheses**). Your brain studies are fine and good for something, but I believe more clear results will come from behavioral studies such as I first outline and then justify and then specify in some detail (with rather clear statements of specific hypotheses) in the

paper and essays, referred to, below (and I **also explain how the approach is better than current ones and how current approaches are incorrect**). And, for one thing good: the perspective **sees behavioral patterns (all behavior) as BIOLOGICAL FUNCTIONING, obeying the principles of biology and showing progressive biological patterning**.

The fact the we can learn how to get a specific neuron (or even several specific neurons) to fire in response to something simple (and little else firing) does not impress me; significant behavior is associated with MUCH wider brain response, which is not interpretable (even if somewhat distinguishable). **You have to see my perspective and approach to see what I see as a better approach**: Look for the longest paper and the BOOK under my profile: (see links below).

I actually am of the view that you must start with some **directly observable behavioral foundation, BEFORE you do much imagining** (applying ONLY correct assumptions and necessarily applicable biological principles, **BEFORE imagining and LOOKING FOR the key OBSERVABLE (replicable) circumstances and applying your hypotheses IN/ABOUT the behavior, and environment**). AGAIN, you will have seen nothing like this until you see my works (classic ethogram paper, 160 pages (new again, because hypotheses are NOW -- with new eye-tracking technology, etc -- TESTABLE), and see RECENT explications COLLECTED ESSAYS, in a 328 page BOOK (**the perspective and hypotheses are new; I am "parroting" no one**):

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#) and
Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

Dear

As it is the case that psychology has most certainly yet to make a proper connection to Biology, I can state with certainty that (at this point) NO "help" from either physics or mathematics is needed and neither are those sorts of help even possible (see first phrase of this sentence).

Put another way: If you have not identified something (here the biology of behavior) AND THAT is/must be the main and central "case", then IT must be established first. Species-specific and species- typical behavior -- important AND central, general behavior (act. all these are behavior **patterns**) -- ARE all, in every major regard, A MAJOR PART OF a clear sort BIOLOGICAL functioning; and that is what MUST be first specified. You cannot reasonably, much less validly, put it in terms of another science until and unless you DO THAT FIRST (this the case, anyway, UNLESS you want to start Psychology anew -- but THAT is my "job", and yet MY approach is BIOLOGICAL, essential as described). If you wish to start Psychology over, you must do it correctly.

Thanks for your efforts and responses, in any case.

Take my new perspective and approach to psychology, actualize it, verify hypotheses, establish it and THEN you maybe can (EVENTUALLY) look for important applications of physics or math -- not impossible in some long run.

Dear

If what you are attempting to do is insist on ME answering your last Response (Answer?), then I will heartily say: **it does not matter one bit to me, AND never will.** To understand this (my) response in a most-important context (and, thus, to help make it meaningful as you try to imagine): think of behavioral patterning and behavior pattern change in cognitive-developmental terms (with a notable "unfolding"/emergence of some new KEY, CENTRAL aspects during ontogeny). Now, let me define the science of Psychology (as it was defined in the beginning and as it is still defined by the best behavioral scientists now).

I use the classic definition of Psychology : (1) and (2), which follow:

It is the study of (1) **behavior patterns -- in modern times reasonably understood ONLY as BOTH overt and covert** (at least, any time after infancy), but the latter (the covert) is always notably and importantly **founded at first in OVERT behavior patterns AT KEY POINTS in ontogeny**, somehow elicited (and with some behavioral aspects significantly changed) in this inception of any qualitatively new and important behavioral patterning. And, that new behavioral patterning, is in the context of existing behavior patterns AND A VERY PART OF SOME behavior patterning IS the new "behavior", the 'new' is now literally IN some part of (is some part of) the some existing behavior patterns, in this inception of new major patterns (this IS _THE_ new and significant behavioral patterning; and, again, we are talking about a key and pivotal portion being directly observable). THAT and (2) the **same- time-current aspects of the environment to which the behavior patterns are a response**. One must, of course, -- for both (1) and (2) -- consider the huge amount of contextualization/understanding brought forward into the situation by our Memories -- the various types, working together, the final net- product to be affected by this and the other behavior patterning, i.e. ALL that's going on, IN/AS the contents of working memory. [By the way: NONE OF cognitive-developmental ontogeny MAKES ANY SENSE WITHOUT POSITING THE EMERGENCE OF, AND GUIDANCE OF/from, INNATE ACTION PATTERNS (specifically, I believe, perceptual shifts suffice) at the "same time" as, _AND ACTUALLY_ _IN_ /part of, THE NEW BEHAVIOR PATTERNING ITSELF AT THE INCEPTION OF QUALITATIVELY NEW TYPE OF BEHAVIORAL RESPONSES; without this, there simply is no way to reasonably define qualitatively different levels (stages) of cognitive processing (NONE), new and emerging; without innate guidance (**some in EACH qualitatively different stage of child development**), there simply is NO FOUNDATION to the qualitative shifts -- seen as necessary by the vast majority of developmentalists and key as important foundations to Psychology by them, and by all other psychologists with any sense.]

In short, **reasonably contextualized (and, by that, defined) sets of at-some-time-all-current behavior patterns AND corresponding environmental aspects** (i.e. (1)and (2)) ARE BY- THEMSELVES (at least in sufficiently longitudinal studies) sufficient for the content of **a whole, separate (and fully sufficient-onto-itself) NATURAL science** (in major ways, clearly aspects of biology, i.e. being **a subset of biology**: behavior patterns (aka "behaviors") ARE biological functioning, as all MUST admit) . **THIS is a natural science that can continuously be refined and continuously progress** (as happens with all good, real science -- and this, and replicability of circumstances and behavioral change and of sequences of results, IS PROOF OF GOOD, NATURAL SCIENCE).

When stage shifts are NOT going on, all is by associative learning.

How is the concept of "mind" defined/measured?

Dear

Whether one would consider it ("the mind") a mythical/magical idea or not: In any case, it would be too much to define at once (usefully) and you could expect incapacitating skew or bias if you tried -- unfortunately, there is a lot of just such bad conceptualization in Western culture ([from] philosophy). (Another example: "what is 'consciousness'? ".) SOMEWHAT RELATED: There are other bad concepts, where the problem is not that the issue(s)/question(s) are so broad, but due to "blindness" and skew essentially related to total unthinking acceptance of unfounded, unjustified, false pseudo- 'assumptions' in psychology (and in all behavioral science; this also from philosophy, directly and/or indirectly) -- seriously limiting thought and even the consideration of real empirical possibilities (including some LIKELY ones, and some of these with associated TESTABLE hypotheses). Included among psychology's "other" bad concepts of are psychology's current notions and beliefs about "embodied mind" (beliefs is all they are; they are NOT decent hypotheses)

Is any of learning processes beyond associative learning?

Is any of learning processes beyond associative learning?'

I would almost say NO, but with some huge qualifications. STILL: Outside of the innately-guided inceptions of cognitive-developmental stages/levels (which are progressive) (the innate guidance , at least beginning as basic perceptual shifts, this allowing FOR new types of categorization, new learnings -- as the innate guidances are **part of this very learning** -- and related learnings beyond; and, all this, eventually, FOR significant new understandings), there is "little else" other than associative learning.

For conceptualization of [my] reality, for psychology, and for artificial intelligence, little more than the above and associative learning is involved (and associative learning is the type of learning occurring after/with the "perceptual shifts" too -- so associative learning is an aspect of about everything). The "little more" include: emotional reactions (patterned to TYPES of circumstances, some developing and emerging with cognitive developments) and some even simpler learning phenomenon, like habituation,

sensitization. That's all I 'see'.

Read my "A Human Ethogram ..." and my recent BOOK, Collected Essays to understand my system (which I believe to be THE system):

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

P.S. Not understanding the system I describe (or something similar, if there is such a thing) is failure to see behavior (act. behavior patterns) as biological functioning -- and that is not acceptable. [ON THE OTHER HAND: Seeing things wrongfully involves near-automatic, unthinking acceptance of some cultural (philosophical) beliefs as "assumptions" -- actually pseudo-assumptions since they are without evidence, groundless (baseless, foundation-less), and without justification. Unfortunately this is MORE THAN common, which is why I have produced about 600 pages of writing to show you -- and to put some things right (also presenting the better, more-likely-true and good alternative assumptions, in the process of the explication).]

Is the following list the characteristics of the things which are the bases of psychological understandings for General Artificial Intelligence?

Is the following list the characteristics of the things which are the bases of psychological understandings for General Artificial Intelligence?

The material, below, from [https://www.researchgate.net/project/Developing-a-Usable-Empirically- Based- Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology](https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology) "Project Goals (for General Artificial Intelligence and psychological science)" (below, slightly elaborated). (Also, this Project is where you can find additional information and "specs".)

Project Goals (for General Artificial Intelligence and psychological science) Project

strives to be:

- * nothing more than needed, while WELL-ESTABLISHED, BEING ALWAYS clearly-related to the most reliable, strongest scientific findings in psychology (this is, in particular: facts and findings on the Memories)

- * enough to embrace a good part of everything, providing a very likely main overall "container" -- with EVERYTHING addressed, founded on, grounded on, OR clearly "stemming" from: discovery of and direct observation of overt behavior patterns (done by providing clear and likely ways to discover the specific, direct, explicit, observable empirical foundations to qualitative cognitive stages -- something completely lacking in modern psychology otherwise). All hypotheses related to all positions (in THIS LIST and in any References) ARE testable/verifiable (at least now, with eye-tracking technologies and computer assisted analysis).
- * having ALL that is needed AND which is all-concrete (explicit, specified, or FULLY defined-as-used or thusly definable), at the same time: so as to provide for Generalized Artificial Intelligence and good science, otherwise. [There may be one seeming exception to elements being "clearly specified" : the "episodic buffer". And that can be defined "relationally", simply having a state plausibly/possibly inferred from all the [other] more concretely defined elements (with their characteristics and processes).]
- * providing for self-correction and for continuous progress as science (actual psychology) (as real and good science, and good thinking, is) And, not coincidentally, providing for continuous development of the AI "robot" **itself (by itself; of course: experience needed)**.
- * consistent with current major theories to the full extent justified, but contrasted by having a better well-established set of assumptions, thoroughly justified and explicated. An integrative perspective, equally good for appropriate shifts in all theoretical perspectives (in the end, each theory allowing MORE, and being more empirical)
- * proving (by amassing related evidence of) the inadequacy of current perspectives on and approaches to behavioral studies (addressing current psychology-wide pseudo-'assumptions')
- * an approach which ends obviously senseless dualisms, e.g. nature/nurture; continuous/discontinuous, which just impede understanding, discovery, and progress. This is inherent in the "definitions" of elements and processes (all from observations or most-excellent research; and largely inductively inferred) .

It is good for psychology (it IS psychology) and General Artificial Intelligence, as well.

NOTE: (1) **Nothing above should be seen as merely descriptive** (this implies too much tied to certain situation(s) and/or to abstraction(s), always lacking true details; it also probably implies too much related to human judgment).

- 2) Nothing -- no element or constellation of elements -- are operationally (as they actually come together and 'work') as envisioned only by, **or in any way (at all) mainly by**, human conceptualization OR human imagination.
- 3) The Subject is ALL and shall be seen just as it is (at least eventually), and should always be THE guide phenomenologically at all times to move toward that goal.

I believe this is the only way our algorithms will correspond to biology and that AI will really simulate US.

[P.S. I have tried to much more specifically direct people to answers to Questions such as above, FOR BEHAVIORAL SCIENCES in general, in my major papers here on RG (esp. "A Human Ethogram ... ") AND in my many, many essays, now most in a 328-page BOOK, Collected Essays (also on RG). General Artificial Intelligence is, in effect, a behavioral science itself.]

What does the concept of 'information' mean in biology?

PSYCHOLOGY AS BIOLOGY (clearly and always biological functioning)

[I am not sure this will help you with your Question, though it relates to biology and "information" in a field where it is most often not yet well-conceptualized. The clear outline of a solution is given.]

I only **posit that there MUST BE some directly observable overt behavior patterns (and environmental aspects) that clearly, in an explainable way (using known principles and processes), are sensibly and reasonably "CONNECTED TO" any phenomenon of interest.** To put it another way: all noteworthy phenomena of interest have their **origin and grounding (often their inception)** IN some directly observable overt behavior patterns that did occur (previously). And also, at least often/usually: the the key aspects of development which come with/from stage shifts (all involving testable hypotheses) continue to be ASPECTS of major behaviors; BUT there is more, **and much without the sort of DIRECT evidence, I just described.**

In short, I do NOT require that all phenomenon of interest themselves correspond -- in a testable (verifiable) manner -- with a particular directly observable overt behavior patterns; **BUT KEY MAJOR shifts**, change-in-object(s)-or-'direction', **DO** require such a clear direct association with exactly that (--> **THEY ARE THAT <--**). Subsequent to that, those very phenomenon AND other possible phenomenon (that develop/further develop) are **connected via the Memories (and directly associated properties/processes), given their natures, and also connected via associative learning.** Plus, **all needs to be consistent with biological principles** (e.g. homeostasis). But (then), THAT IS IT (until and unless something else must be found. I do assert that my system as-is will work for General Artificial Intelligence -- and that would be one nice related test. P.S. The matter of "emotions", an easier matter because they have to do with responses to TYPES of circumstances, needs to be "added in".)

[For a bit more, see my full and related Answer of today under:

[https://www.researchgate.net/post/How can you take or recommend a view or approach that will NEVER have any direct evidence](https://www.researchgate.net/post/How_can_you_take_or_recommend_a_view_or_approach_that_will_NEVER_have_any_direct_evidence)]

What are the first Questions that should be

asked and answered for Behavioral Science?

What are the first Questions that should be asked and answered for Behavioral Science?

Regarding not only behavioral science, but all sciences (though some of the terms/orientations, below, are of the behavioral sciences, in particular):

No matter how far along one might believe a/their science may be, to properly assess "things" for oneself, one must ask: What are the first Questions that should be, or must have been, asked and answered? [<-- in the sense of: for the foundational first-needed-or-known-positions of/FOR the field, i.e. a would-be (or existing) BASE of phenomenology GROUNDING the entire field with important, testable hypotheses (about directly observable behavior patterns OR that which is simply and clearly connected to such, e.g. by known processes) THAT MUST BE (or must have been) TESTED (and verified, or not, by that testing and, in the latter case, perhaps amended for re-test).

To me, the characteristics of such foundations for behavioral sciences, has already been outlined -
- **in a Question (and Answer) I posted regarding General Artificial Intelligence (in effect, another behavioral science) :**

[https://www.researchgate.net/post/Is the following list the characteristics of the things which are the bases of psychological understandings for General Artificial Intelligence](https://www.researchgate.net/post/Is_the_following_list_the_characteristics_of_the_things_which_are_the_bases_of_psychological_understandings_for_General_Artificial_Intelligence) **ALONG WITH** considerations that come up with:

[https://www.researchgate.net/post/How can you take or recommend a view or approach that will NEVER have any direct evidence](https://www.researchgate.net/post/How_can_you_take_or_recommend_a_view_or_approach_that_will_NEVER_have_any_direct_evidence)

PLUS, YOU MUST SEE: the **4 Answers which follow this Question (above)** (for clarity and clear consideration).

THEN go read:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

and

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

and

see the Project, and its goals, at:

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

Maybe not a short answer here, but an understandable and engage-able type of perspective, and of a sort we should all have to develop (or clearly have developed) (not so hard, when you "get there").

Answers to Questions:

Who is the most relevant philosopher of the 20th century, worldwide?

Dear

May be a "good thing" (as far as some may be concerned) that you did not ask about "... of the 21th century, worldwide". I would have had, with knowledge and in good conscience, to have nominated myself.

See <https://www.researchgate.net/project/Seeing-if-Analytic-Philosophers-can-help-with-bringing-attention-to-Core-Problems-in-Psychology-and-to-Specific-Core-Proposals-for-a-new-Approach> if you are interested.

[P.S. I did start my work with a treatise in 1985 (in the 20th century), but that did not "take hold" and, in one way or another, or for one reason or another, was not enough.]

Dear Group

Let me basically repeat a statement I made in another thread, " Can philosophy help to innovate and develop scientific theory?" (

https://www.researchgate.net/post/Can_philosophy_help_to_innovate_and_develop_scientific_theory?view=5ade91ee6a21ff4d192deaf2).

[First a note on the notation I use: I most often, nowadays, refer to philosophy with the word in quotes ("philosophy"); as I study more and more of it, and about it, it seems clear that "philosophy" (that of the historical, well-known philosophers) has no clear basis to define (or to get it defined) either in its boundaries or its nature. It often (typically) lacks what Popper emphasized as falsifiability , showing clear points open to test, basically **BY OBSERVATION (not "experience")**. Popper's "philosophy", ironically, has this same problem.]

Otherwise, the material below, other than indicating MY approach's falsifiability, is basically a P.S. to my last Answer, above in this thread.

Even though before imparting on developing my perspective/my approach, I had not read (or read about) many philosophers (mainly just Existentialists and the Buddha), now I have studied and read about some more and, indeed, I see "philosophy" (all of it failing to achieve Popper's falsifiability -- seemingly including Popper himself). As such, earlier and prevalent modern "philosophy" just does not cut it. To Popper's position, I would add: having **falsifiability AT EACH POINT (or "step") in the description AND USE of a position (and HOW to do this, "in science", AS science, which it IS inherently, when operating assumptions are justified, clear and procedures used are clear, and all**

is subject to test; science is not "special" -- or separate -- in any other way; this also opens up that which is amenable-to-science, leaving about nothing that is reasonable NOT subject to science).

I did my work without citing or feeling a need to cite a single philosopher. Yet, my work is as much or more philosophy than anyone else's I am familiar with. The key to falsifiability at each "step" is: being clear about your grounding assumptions, which also direct all your efforts to "contain" your thoughts (these assumptions, themselves subject to falsification -- including the possibility of being shown true, of course). (This is the "containment" that makes ones approach and study "circumscribed", to the extent of giving it clear boundaries and a clear nature.) Anyway, with a clear grounding and foundation directing one's approach, one is leaving oneself accountable as one should. Beyond the concrete- orienting, beginning assumptions, there is just: other principles (e.g. of Biology, for behavioral science) which one may cite as necessarily applicable. Then, about all that is left is for one to question your methods proceeding with your actual studies -- GOOD, when they do demonstrably provide reasonable clarity for others to use them **and they and their findings/results-seen, or consequences seen, provide replicability** (these basically being being clearly IN EFFECT (as best as we can, when we communicate at our best) the same as providing falsifiability).

Other reasonably accepted KNOWN, CLEAR EXPLICIT principles also should apply to a theory: One is parsimony. An example in my theory/approach is I ask: "why do we need 'up-front' to posit or try to "define" any sort of learning other than the clear, simple, known associative learning phenomenon, when there is no evidence of the necessity to do this and, otherwise (with my well-justified system), no reason to do this? "

I would maintain that the description of my good system (and my system/theory as it is now) provides **as much GOOD philosophy as you will find**. (Yet, I, for good reason cite NO philosophers, but only blame the "philosophy" of old-time philosophers and prevalent philosophers, whose work immediately became part of behavioral 'science', and, that IS, in the same way, THE MAJOR problem for behavior sciences today -- as they, those **belief-laden views**, are part of our culture.) My approach is a none- limiting, FULLY testible, approach, requiring ONLY adherence to all-ready **accepted principles**, the **logically-necessary** (made explicit) **AND good believable assumptions which you see as at least worthy to try** (and, when tried, will be proven the core of actual good description, as concrete as possible when "unfurled" in use (and **tested at each turn**)).

The basic problem with Psychology today is that it can be undeniably shown to use "**assumptions**", **NOT stated clearly or explicitly stated (or, in a sense, even KNOWN)** AND using these assumptions un-questioningly without them being clear they are being put to any test (which would allow falsification); basically these are near-automatic skews and biases, and that is all (allowing researchers to try to use ridiculous theories, that will NEVER have any direct evidence -- because the constraints of their poor assumptions). THESE common assumptions I just addressed, which I just refer to as pseudo- 'assumptions' or simply as "beliefs" (because that is all they are), I see as they are: **quite possibly FALSE or ARE false: false to biology** (which is then false to behavior, because "behavior" (behavior patterns) IS biological functioning) and these "assumptions", are largely unexamined (because the perspectives are part of our culture, from old-time philosophy), and ungrounded, not well-founded at all, not clear or concrete, and in NO OTHER way justifiable (and not testable or tested). I HAVE ALTERNATE ASSUMPTIONS (often opposite assumptions) which are **more likely** even if just **consistent with biology**, but **also concrete (or "concretized")**, and **"out-in-the-open" with each use**.

My last Answer, above, will give you an entry point to my work.

Dear

I guess the only way to justify my sort of Answer is to note that I am pointing out what a good philosophy (and philosophers) should be like and should not be like (especially since "philosophy", in our culture, has ruined Psychology with its presumptions or implied presumptions through its entire 100-year history).

BUT:

I guess, though (in fact, based on just what I said here above, in this post), the most relevant 20th Century philosopher could be a bad one indeed.

I shall do no more "peddling of my wares" here though. I made any point I wanted to make to the extent I should here.

P.S. There is a somewhat better write-up of this long statement in my new Project (it is also better edited):
<https://www.researchgate.net/project/Seeing-if-Analytic-Philosophers-can-help-with-bringing-attention-to-Core-Problems-in-Psychology-and-to-Specific-Core-Proposals-for-a-new-Approach>

Dear

My recommendation to solve problems of philosophy is by finding and adopting what is actually most central in a really good 'scientific' (I.E. empirical) approach. This is something that is not relative because it involves coming upon and coming to an agreed upon set of "containing" and true assumptions (embracing, always-guiding, or "containing" all else -- all the rest of one's thought on the Subject); and, it is not like a fad because the understanding of, and even the definition of, these core assumptions [which, in a clear way (supposedly) direct all behavioral understanding,] MAY WELL BE REFINED OR CHANGE. [(And realize: It may take time to see/discover, or perhaps devise(?), the core assumptions that are appropriate to use as the "container" of your otherwise "containing" system -- but it must be as empirical and verifiable as possible, well-communicated and agreed upon. (In time, perhaps even rather quickly, these assumptions may even become falsifiable, but they should start verifiable, as just indicated).]

I guess to put it brashly: All good philosophy is done in the way of all fully recognized and understood, good, real science -- and, understanding the latter takes much observation and demonstrations of absolutely clear communications; sometimes it involves experiments (but only when needed, because much observation, which is of an inductive nature, is needed first *). The selection and nature and statement of the core assumptions must be done most carefully (and be given all the time and effort necessary).

Maybe I say it better or expand on this to make it more clear in my most recent Update to my new Project, <https://www.researchgate.net/project/Seeing-if-Analytic-Philosophers-can-help-with-bringing-attention-to-Core-Problems-in-Psychology-and-to-Specific-Core-Proposals-for-a-new-Approach>.

One could say it in a shorter way which may be understood after reading a longer explication, ETC. (see P.S.); that short way would be something like: "Set-up better, and you will do better."

* FOOTNOTE: Experiments and the so-called "scientific method" (experimentation) are NOT the core of science. Experiments are simply needed when some clearer verification is needed (where that is possible). [(Sadly, there are countless college and graduate students who now actually will proclaim that science is this "scientific method". In a way nothing could be further from the truth, and experiments may be the least of it (of Science); what is done to put the Subject in the correct "light" is the most of it.)]

P.S. My "Human Ethogram ..." Project is supposed to be a full instance, beginning, and demonstration of my general perspective and approach: <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> (And, esp. see the top 2 Research Items UNDER my Profile, [Brad Jesness](#)).

Dear

I thank you for your kind responses.

I understand. I have no more to say about my position in this thread. But, I might note (just here, now) that I have shown and argued (in references, indicated) for why my position could be seen as important (which is the Topic, though the Topic involves the 20th Century).

But, as I said earlier, I am going to no further "peddle my wares." You responded to that sort of response from me with an Answer of your own which inspired a return-response.

Both myself and others (no doubt) believe I have done enough of that.

I hope you realize that my position actually requires MORE testability (e.g. minimally, inter-rater reliability at each and every "step") AND requires this of MORE aspects of a good science approach (including the explicit, true assumptions). To imply anything like the opposite is to misunderstand me (your last response seems to contain some of that, just noted, which is mistaken).

My approach is NOT inclusive of " methods of pure thinking and reflection". I do not "go for that" at all; I believe people can think "purely" in anything like that way (i.e. reflectively) typically just for a few seconds, before they "mix in" irrelevant content (often implicit and even unknown) from personal sources -- this conclusion is based on strong findings on the Memories and working memory. (This last statement of a "few seconds" varies : varies with expertise; but, you will find clear empirical grounding, that is, content related directly or "sensibly" indirectly to direct observation of overt behavior patterns at each step in/of the reflection of those who can go more than a few seconds.) In a real sense, all can be science to me.

Perhaps my views on the good aspects of good perspectives and approaches can influence who is

nominated as truly "the most relevant philosophy of the 20th Century".

Dear

I appreciate your kindness and your kind intention.

It may at least at times be that, perhaps [in some sense/way] unfortunately, it seems we must "value the ideas of other human beings". This is something philosophers do all the time ("I'm right and a lot of other people are wrong"); this is something basically typical of anyone securing a new philosophical position. Unfortunately, unintentionally (perhaps out of some necessity, but largely other than for my own needs), I am a philosopher. [I didn't look for trouble but found plenty; it is said: "sometimes you must pick a fight to win a fight" (a quote from a famous, remarkable, deceased politician) and (as implied) some fights are worth picking.]

Hein Retter, I have nothing but high regards for you and I respect you. I know, and agree: " an idea ... needs some time " and that is why have written over 600 pages (all related-stuff) on basically just my perspective (but, while doing that, saying that a WHOLE BUNCH of other people are wrong -- which, again, actually is typical of philosophers).

What follows is addressed to everyone, and not you, personally: It takes time to read 600 pages of my all-related writings; if more time (and thinking/evaluation/discriminations/integrations and/or analysis) is needed, I suspect one's problems may involve over-coming some dualisms, so extremely prevalent in Western society. Just one example, but a "biggie": **nature/nurture <-- you can never, EVER, see these "things" actually spoken about at the same time, with regard simultaneously to the exact same behavior [pattern] (outside of my works)**(researchers and theorists may CLAIM they do, but they do NOT, as I will now briefly describe). I challenge anyone to find a case, other than me* where the two things are addressed, and said/shown to be, OF the same behavior, both shown in the particular behavior, at the same time; those other than me go back-and-forth, back-and-forth over and over between the "2 topics" (AND clearly never truly addressing any particular or particular real type of distinct, discrete [or even distinguishable] behavior [pattern]). **And they absolutely cannot do otherwise. This is something that can be verified for-sure and quite easily** (just attend ANY lecture in any subject area where nature/nurture is to be addressed to see -- I will send you \$100 if you find an exception, and the behavior [pattern] addressed is clearly one distinct and real one -- as shown, say, from inter-rater reliability). The problem is stark and so obvious, I am CERTAIN you will see it. Yet, as you may know: for decades it has been indicated that **BOTH HAVE TO BE TRUE AT THE SAME TIME** (e.g. A. Anastasia, Psychological Review , 65, 197-208 (year: 1958)) -- **and those critics mean what I mean.** (Nature and nurture are should-be-simultaneous aspects of particular, and I would say central, behavior patterns.)

Here is some anti-dualism therapy, for any who may need it (in addition to pondering time): If 2 words do not necessarily have to mean difference(s), AND the only reason they do is OUR/YOUR uncertain definitions** or concepts, it is often useful not only to recognize this but also see how the 2 words can both be involved-with/part-of/have-to do-with/ or [sometimes] are the same thing -- thus being in THAT same category.

*FOOTNOTE: If you want to see nature and nurture, as they can be described as CLEARLY occurring simultaneously in one particular behavior pattern, read me; there are hypotheses involved, BUT THESE hypotheses ARE ALL NOW (in the present, with technology) most clearly, distinctly, and particularly and certainly TESTABLE (see the Collected Essays, for the particular details).

** FOOTNOTE: We , "in our heads", actually shouldn't be defining anything, or barely.

What is wrong with Philosophy/Philosophers?

There is something 'wrong', right?

[Note: I am not finished with my studies of philosophy and may thus be partially ignorant.] But, I have had some repeated impressions, and I have yet to see any "non-violators" (see qualitative characterizations, below -- qualitative characterizations for the qualitative characterizers). AND YET, I do have what I see as a good "out" for some (so they are not "guilty" of the negative characterizations). Let's begin:

What is wrong with Philosophy/Philosophers? There is something 'wrong', right?

Do philosophers always [secretly or unknowingly]: either have some "ax to grind" and/OR do they "trip over" things and try to "grind everything into axes"?

There does seem to be something wrong with their always-partial (<-- both definitions) views or with their skewed "hang ups". (This was easily seen in earlier philosophy, when most also had, or always had to get, "God" in the picture.)

STILL (now): They seem incomplete or "off" with much of what they are trying to accomplish/explain (or elucidate), and/or going "overboard" with next to nothing (over-concluding, overgeneralizing), or/and they may at the same time, or at other times, clearly be ignoring pertinent things. (Any or all that, even if you are willing to subscribe to their system.) They do not seem to be able to stay in their own "universe". ALSO, though: The characterizations they have can also be seen as insufficiently changing, with time, development and learning, and circumstances. Their words are, in fact, presented to always mean basically (and importantly) "the same". YET: It seems they want to talk about more than to what their observations (whatever those were) could well-apply (look for some idea of their **observations**, NOT "experience " -- citing the latter is their big "trick"). ALL THAT, just outlined in this paragraph or a lot of that, with them all ! Anyone see it differently?

I think another way of asking this: Do philosophers ever have any real question(s) well-enough formulated and do they really [bother to] observe as they really should? My answer is NO. BUT: **Shouldn't this be a test for anyone trying to communicate anything well? Why simply accept their "set of objects" (presented), as they try to describe at least some major parts of reality?** (If philosophers are not scientists, they should not be "taken" with any of the same regard or authority as scientists.)

Can anyone show a philosophy as otherwise? Describe a good philosophy so it looks good (so it actually can be seen by all, at least by those with the required faculties) as something important (and then showing philosophy as something worth doing, as much as anything else clearly worth doing).

[Perhaps, ironically, I like the body of thought of my own, which most everyone would see a big part of as "philosophy" -- and I admit that. BUT, that (for example, in my case) will be fine AS LONG AS ANYTHING CLAIMED ALLOWS ONE TO demonstrably, RELIABLY/ACCURATELY/VALIDLY come to know and establish, with the best certainty, more that's good-and-useful (again and again), using the perspective. This is what, I submit, saves me. I am a scientist (yet, you could say: with a philosophy). See: <https://www.researchgate.net/project/Seeing-if-Analytic-Philosophers-can-help-with-bringing-attention-to-Core-Problems-in-Psychology-and-to-Specific-Core-Proposals-for-a-new-Approach>.]

...

Dear

In a notable (and "ok") way I could agree with your characterization. But, what I was hoping to indicate was how they go "beyond"/outside what they are really prepared to talk about (themselves). They seem to lack a way to monitor the boundaries of the Subjects to which their views apply (or to which they apply their views). This is what I have tried to offer: a way to do that.

My most recent Answer to the following question and what references there are for it, may make the position clearer:

https://www.researchgate.net/post/Who_is_the_most_relevant_philosopher_of_the_20th_century_worldwide?view=5ae083651a5e769d35605ee2 (this "last Answer" to this [other] Question posted about 9 am, 04/25 (mountain time)).

Isn't all good philosophy "incarnate" : in the context of a clear empirical (testable) subject matter?

I say yes.

Let me give you an example: myself.

I am a philosopher, as much as there can usefully be such a thing. My works are 100% philosophy, though I do not do the "defining" or go on the basis of anything not otherwise justified AND EMPIRICALLY WELL-GROUNDED/founded.

My thesis, put briefly:

I believe there are "emerging" innate guidances to each of the qualitatively different cognitive stages during development (a long ontogeny of at least 18 years). These innate guidances amount to "perceptual shifts", fundamentally changing where the organism looks and the kind of thing he/she looks for. Each of them are directly observable overt behavior patterning(s) at the inception of a cognitive stage/level. The behavioral shift is totally associated with the "perceptual shift" with clear aspects of the behavioral patterns BEING the expression of that perceptual shift/innate guidance ITSELF (i.e. having at-same-time aspects of otherwise pre-existing patternings, as well). (NOTE: The overt behavior pattern(s) which are directly observable are subtle, requiring the new eye-tracking technology and computer-assisted analysis.) I am a neo-Piagetian and my theoretical view is by far in- the-main totally consistent with that. I simply provided an answer for one thing Piaget himself knew was not finished and ground the theory better, otherwise. I do not take his theory over, but relied upon his observations, and found a bit more empirical grounding on HIS last topic, and overall. At the same time: I am also reasonably consistent with all other major theories (as much as is reasonable). My perspective is integrative of all (but puts a new understanding to everything). See:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

and

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

Let my works themselves argue for me (or nothing). Some seem to believe in "philosophy" as separate from Subject matter; I do not -- and I believe those who do have a problem. I believe I have set an example.

Dear

A short version of my perspective:

When one can detect the "philosophy" in science as defining things AND, thus THAT ITSELF is "guiding" research, then that is bad philosophy and bad science. Good philosophy will have a seamless connection to the Subject AND direct observation (in psychology, for example: of behavioral patterns and the corresponding PRESENT environmental factors). Direct observation must be a notable grounding and foundation for ALL understanding.

Under:

Can philosophy help to innovate and develop

scientific theory?

Philosophy-and-science, babies, for philosophy OF science (and for any useful or even intelligible philosophy):

Isn't all good philosophy "incarnate" : in the context of a clear empirical (testable) subject matter?

A philosopher, as much as there can usefully be such a thing. A writing may be 100% philosophy, but good philosophy does not do the "defining" or go on the basis of anything not otherwise justified AND EMPIRICALLY WELL-GROUNDED/founded. ...

Some seem to believe in "philosophy" as separate from Subject matter; I do not -- and I believe those who do have a problem. (Consider this perspective, linked to below, as an "inoculation" against "alternative facts". And, if you can't have that, what can you have??: no communication, anyway. For example: see the present Question and thread. Do you want an Answer or not ?????)

For more, see:

https://www.researchgate.net/post/Isnt_all_good_philosophy_incarnate_in_the_context_of_a_clear_empirical_testable_subject_matter

Why were the majority of the most downloaded articles from Cognitive Psychology published 40 years ago?

Dear

I agree with all your remarks. **Too many theories** (and, not surprisingly, several popular ones -- enhancement theories and embodiment theories -- are **weird in just the way you described** at the end of the following quote): (quoting): " ... decrease of papers on cognitive psychology may be due to the appearance of neurosciences and also **to the fact that cognition in cognitive psychology appears as disembodied cognition** " (end quote)

I have more than indicated that the reason for all this weirdness (and for theories like those I named, that will NEVER have any direct evidence for their empirical grounding or foundation). **I have cited several basic assumptions (actually : presumptions or pseudo-'assumptions') that are held,**

but are unproven and have no empirical grounding or foundation and are likely FALSE. This results in "new perspectives blindness" and in the "boxing in" of thought so that all the new things **they** can come up with to try to "help" understanding are basically ridiculous; at the same time, understandably (and as indicated), these psychologists (researchers and theorists) **CANNOT SEE THE GOOD IN CERTAIN new, promising, and very well-grounded perspectives and approaches**, even where their grounding and foundation is in **directly observable overt behavior patterns, and other major related or developing behavior patterns can be clearly seen as indirectly related to this core foundation** (with ONLY the simple forms of associative learning needed to tie those with the the behavior patterns that are the foundational grounding). AND, ALL is associated, now in the present, with **testable (verifiable) hypotheses** (testable now, because of the development of eye-tracking technology and computer-assisted analysis).

BUT THIS STASIS (I described) IS A BIG PROBLEM (since it has very long historical/cultural/philosophical roots AND the pseudo-'assumptions' have been in use in all psychology for over a century).

I have one such new, good theory (perspective and approach) in mind (in fact, it is the only one I am really talking about), that has (and is based on) **more biologically consistent/congruent and more likely TRUE (and real/provable) assumptions. These assumptions are, in several cases, the OPPOSITE of the pseudo-'assumptions'/beliefs/presumptions held, and apparently**
__NECESSARILY USED__ in their logic, by the vast majority (if not all) of research (and theoretical) psychologists. All this is spelled-out in my writings. See:

https://www.researchgate.net/profile/Brad_Jesness2

Especially: https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an

Should philosophers just be able to describe, with full conviction and looking for affirmation, the way SOME important things seemingly might be?

No.

Philosophers should not be concerned about what could be without, at some real and abiding "level" (way), being **MORE than concerned with what IS** -- they should **(actually: MUST) discover * the needed FACTS** in the **necessary CONTEXT**.

Contexts including: environments/circumstances, our actual body and responsivenesses, standard behavior patterns, standard hierarchical development (especially, very much realistically understanding ontogeny), necessarily applicable biological principles, and better-known/understood existing FINDINGS.

Without this much science, there is no truly reasonable **_OR_** helpful "philosophy" . [And, without this, the philosophers enforce their "ideals" and their biases (unknown and unknown, explicit and implicit) and actually **IMPEDE SCIENCE**. I would submit it is not possible to sensibly and reasonably argue against this position, just stated. Give it a try if you must, but someone will always find a good way to defeat you.]

* FOOTNOTE: Or, clearly **KNOW** and understand the key and important discoveries of others (i.e. scientists), and effectively be scientists themselves (striving to simply be the best at the science, just **DOING SCIENCE WORK**). IN short, **THEY ARE TO BE SCIENTISTS**, personally or through intimate study of the work **_and_** findings of relevant scientists -- and trying to validly improve perspective or the organization of things.

Is the final answer for understanding behavior in physical terms BRAIN ACTIVITY?

Is the final answer for understanding behavior in physical terms BRAIN ACTIVITY? Perhaps,

eventually, this will indeed be part of a good understanding.

BUT, brain activity DOES NOT (as seen) point clearly, i.e. POINT AT ALL WELL, TOWARDS IMPORTANT BEHAVIORAL PATTERNING (the MOST important) -- that which we want to understand and really need to understand. Yet over and over, people cite neuroscience as not only associated with understanding "behavior", but as the WAY to do so -- and to get to the ultimate physical terms. **It is not.** In fact, it is MUCH, MUCH more arguable that we must discover the patterning OF the most important sorts of responses we have before we can have any decent clue about what these behavior patterns must have correspondences with in terms of brain activity (what related "brain activities" "look like").

Behavior is parallel in ways (many, and very likely different with development) AND the several various faculties which operate (even when sequential) need to be SORTED OUT IN DIRECT OBSERVATIONAL STUDIES OF BEHAVIOR PATTERNS -- not only are they fast, but they are SYSTEMATICALLY VARIABLE. It should be clear that anything significant seen in brain activity related to major (but real, and species-typical or species-specific) behavior patterns IS PRESENTLY necessarily confounded, and the "answer" cannot come from brain science itself -- for that is the very confounded activity I just noted. To argue against this is to essentially argue against any like an experimental-type of investigation, where just one or a few variables are what is being explored.

So, in fact: The real, ultimate, physical understanding IS IN TERMS OF DIRECTLY OBSERVABLE --
> **OVERT** <-- BEHAVIOR PATTERNS. **If only this, which is essentially needed, is possible: ****
THAT ** IS THE ISSUE ! AND,

NOW IT IS POSSIBLE.

I have **outlined in detail in major papers and hundreds of essays HOW it is possible** that the following may well be the case: the **grounding and foundation of all major behavior patterns can be discovered in direct observation of overt behavior patterns.** And,

now with new technologies (eye-tracking, etc.), these can be seen (**discovered**), and it is **all associated with fully testable hypotheses.**

See, especially:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ

and

https://www.researchgate.net/publication/322818578_NOW_the_nearly_complete_collection_of_essays_RIGHT_HERE_BUT_STILL_ALSO_SEE_THE_Comments_1_for_a_copy_of_some_important_more_recent_posts_not_in_the_Collection_include_reading_the_2_Replies_to_the_Comm

Dear

I do not know what "biosignaling systems" are, but I am confident that it is possible (at least with

modern technology) to actually SEE **at least the inception** IN OVERT BEHAVIOR (**thus, grounding and foundation**) OF central, major developing behavior patterns -- related to ALL LEVELS OF REPRESENTATION/ABSTRACTION.

If what I submit is clearly arguable (not only in terms of its **necessity**, but in terms of its **possibility**) , then the **testable hypotheses should damn well be tested**.

Too bad our universities, students and their professors, are unthinking, ignorant, essentially arrogantly- biased and superstitious cowards. <-- I also outline and show this to be true "in spades" in my papers and essays. In short: I both disprove the garbage (or clearly indicate how the 'assumptions' are unproven and LIKELY GARBAGE), explicate the true, biologically consistent alternative assumptions, and outline what behavior patterns in the larger scopes likely look like and HOW TO TEST THESE PROPOSITIONS WITH THE MAJOR HYPOTHESES ALL BASED IN OVERTBEHAVIOR [patterns] (which can now be seen with eye-tracking and associated technologies).

If we could get any of the modern "students" off their damned I-phones, and so they could follow a train of thought as well, there may be hope.

Why is philosophy without science hopeless?

The question I really wanted to "kick off" this thread:

Why would local (times/spaces) -- any number considered singly (or reflected on afterward and/or considered together in ways -- but still as they were, singly) -- ever to be thought to show what we ARE in terms of the Biology of Behavior?

One should not have such poorly contextualized thoughts but, as I will indicate, this is the nature of a lot of recognized and long-standing philosophy. Typical philosophy, not thoroughly guided by science. I shall try to indicate how such normal experience could/should NOT be likely to reveal most-key behavioral development -- the core biological functioning of behavior.

[FOR THIS ESSAY: Think in terms that philosophers most often think in, and a major and central kind of behavior psychologists think about: thinking itself; and, think of that specifically AS IT ADVANCES IN MAJOR WAYS, and thus specially in qualitative shifts leading to significant new ways to imagine and conceptualize.]

The beginning question (at the top of the body of this essay) is basically to ask: can we conjure up the very nature of a major biological system, THAT BEING THE BIOLOGICAL SYSTEM OF OUR OVERT BEHAVIOR PATTERNS (as it unfolds with ontogeny)? Can we do this just by "force of will" or strong intent, finding exactly that which is key in experience (during ontogeny/development) as it emerges? I say, no. That would not be well-adaptive, for one thing; we don't want to rely on OUR precision, but rather our "body's" ability to HAVE precision: somehow "in" developing some CORE (key aspects) of behavior patterns which, specifically, are the core of new qualitative ways of thinking . Such important new aspects are likely possible because of some added precision (true

discriminativeness and realized similarities) "reflected" in some memory capacities, as knowledge develops (or, more accurately, HAS developed). AND, THEN, as we, with our capacities are exposed to "more" , in key important situations/circumstances, those faculties 'see' more (we would say, in today's psychology terms: "more enters working memory").

How have Western philosophers done on such matters? How have they addressed this?

Western philosophy: how could one criticize this? Here's a major general way: A major topic and abiding concern in that field is about thought, esp. thought about thought; but, this and other matters pondered, are characterized by precisely the LIMITED phenomenology of OUR thinking (and just what-all that does), AS DONE, IN EFFECT, "LOCALLY".

But what's the problem? What else do we have? Oh, the woe of those who do not know:

We have good knowledge of the nature of, AND limitations of, some central faculties (the Memories) -- good science data here; considering THAT, we have the ability to compare situations/responses looking for cross-situational/circumstances differences and cross-situational/circumstances similarities WITH THAT KNOWLEDGE AND PERSPECTIVE GUIDING US. This is NOW NOT the phenomenology of raw experience, though it is clearly related to such experience -- and MUST be related to such experiences -- but now to "track" or go "beyond" the phenomenology of local (times/spaces) experience. This gives us a way, and a legitimate way if we are fully empirically grounded (and know how to stay that way), to detect changes, NOT JUST those DUE TO regular ("local") experiences, but others related to, or due to, other behavior pattern changing, indicated by "clues" through/by/with our knowledge.

Why might this be important? Because: what we ARE, in/with our behavior patterns, may well be beyond any particular experiences AS WE ACTUALLY EXPERIENCE THEM -- beyond the regular (ordinary, usual, normal) PARTICULAR local experiences. Sound strange?; it's not. Ask yourself:

Is there any reason we should expect that we are so smart that we can actually see or detect the ultimate mechanisms of the biology of behavior? I think NOT. But, with our abstracting, reflective abilities and good knowledge of major faculties/capacities (and of changes in the content, and in the organization, that occur there), we can get an idea of what species-typical or species-specific qualitative changes might well occur over ontogeny AT KEY POINTS.

That way, we can ask: what sort of changes in behavior patterns (think of: changes in thinking) are in accord with biological principles and consistent with the way biology is (or may be), AS IT COULD OPERATE, and those maybe contributing to aspects of behavior that WE, AS SENTIENT BEINGS, CANNOT DIRECTLY (wholly-as-it-is-relevant) "fully" experience, in our normal ways. YET I assert also, that the biology of behavior CAN be realized INDIRECTLY by making differentiations and comparisons across key circumstances (of thought -- when the topic is cognitive development, as it is here), SOMEHOW using what we do already know (from behavioral science, and often NOT from normal experience). If all is done in a correct way, we will generate the testable empirical hypotheses.

Though the whole phenomenon (that is, all aspects) of qualitative change may not all be something we experience explicitly (or, at least, as something that seems at all notable in thought), we could hypothesize mechanisms of the qualitative change in some of these very aspects of overt behavior .

Again, these not fully obvious or obvious for what-they-are because some key aspects of the qualitative

developments of thinking are not directly obvious that way (in regular experience): these are likely exactly some of (or some aspects of) those behavior patterns AT THE INCEPTION of the "new" which is central to and resulting in NEW developments and new cognitive abilities. THEN, the question should be: what aspects of behavior patterns could be involved which may well be sufficient but not disruptive?; are any of these not only overt, but detectable and in some way measurable, given our present technological prowess? I say yes, yes. Specifically here, I assert: "Perceptual shifts", BEING the innate guidance, as aspects of important learning-related experiences (but not typical learning), may be there and suffice. [These "perceptual shifts" could well be the development of "time-space-capacity availability" (i.e. basically "GAPS" of-a-nature in visual-spatial memory due to development, i.e. with the integrations and consolidations THAT come with development and HAVE ALREADY OCCURRED).]

This would result in "looking" at key aspects/parts and CONTEXTS in new ways (new real concrete 'parts' of situations or combinations of 'parts' of real concrete situations). BUT: "looking at" does not likely or necessarily REQUIRE that this immediately results in "seeing more", but just sets up an orientation, used again (and again) in similar circumstances to see "the more", when there is "the more" to see and we are not too much otherwise occupied to see it. [Here, the "looking at" I am talking about, may seem to be of the scientist who is doing the studying. Though this may be, in some senses, similar, this paragraph is describing the developing Subject, at major points in ontogeny.]

About one engaged in good developmental psychology science: While our new way of thinking about things now can be, in a sense, of a "non-local" nature, the relevant aspects of the environment (circumstances) are never as such, but rather that which is with us (the Subject) and before us (the Subject) in the concrete real world: either as important context OR that important context with newly important content.

[Do not be surprised to see edits to this essay for a while.]

P.S. The above is what I am all about. If you want large papers and hundreds of pages of essay, related to this, see:

Especially: https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ

and

https://www.researchgate.net/publication/322818578_NOW_the_nearly_complete_collection_of_essays_RIGHT_HERE_BUT_STILL_ALSO_SEE_THE_Comments_1_for_a_copy_of_some_important_more_recent_posts_not_in_the_Collection_include_reading_the_2_Replies_to_the_Comm

Dear

Most often (above) you cite assertions not shown and not helpful. Definitions from the past can frequently be this way. There are no answers until you find them (the definitions cited are often just those that have been asserted and not reasonably found to be the case in any acceptable way, BUT then

[also] not notably improved upon, but RATHER, just believed -- by those who follow). To be more

specific:

This is largely ridiculous crap:

<https://www.quora.com/What-is-the-relationship-between-science-and-philosophy> .

If that were true and known, the answer to the Question, "Can philosophy help to innovate and develop scientific theory?", would have been well-answered in the TWO YEARS of that thread. The "answer" would be known. The "answers" given in that article (and quoted by another), in actuality, are merely asserted definitions from a "world of fantasy."

Truth is: Philosophy pays very little attention to Psychology and only in a biased and selective way when it suits the philosophers' purposes otherwise. (I've just read 100s of pages that has AGAIN shown me that.) **Actually, philosophers patently NEGLECT relevant psychology and seem to be very largely ignorant of major, relevant, large portions of the field of Psychology.**

Psychology does not cite the "big debates" of philosophy -- not that I have seen to ANY notable extent and certainly not to ANY meaningful extent. (I know; I "lived" Psychology for decades.) **Philosophy NEVER "frames" the questions for psychology.**

Philosophy and science almost never "work together" and when they do little or nothing is accomplished.

Obviously: **Philosophy simply "thinks" and asserts** what it is, but in NO WAY that is generally accepted.

Returning to my note to Kameswara Rao Chellapilla et al :

Doing what you do, that is adding nothing, or worse: distracting from good developing empirically (direct overt observationally) founded/grounded thought on the Real (as that is approached in various areas -- especially the especially important ones). [Only through GOOD science can you escape "the present" in many regards; otherwise you are, in the main, limited by the limited nature of present phenomenology and concomitant understandings . See the main Question (with Answer), beginning this thread.]

Define nothing; debate nothing; discovery everything (and come to peace). As soon as philosophers define and debate, then they are nothing unless and until they come to knowledge and ways to knowledge -- both from good science (reliable, seen, proven, **and personally assessed/assessible**, and thereby reasonably agreed upon).

Let's not prescribe confusion, which is what you have very much essentially done.

[The fact that much science is limited and "in a box" (much like philosophy) is NOT inherent in science, but is a long-standing departure from real responsibility, "founded" in the culture of philosophy. I have proven this and shown other things, such as indicated in the Question and more -- at least in specific details of specific TESTABLE hypotheses -- in the 600 pages of writing I have available here on researchgate.; see the links in the Question beginning this thread.]

Dear

It is my position that all good "philosophy" is part of science ("in science") -- the part accepting certain principles, including prominently: necessarily applicable principles (and any applicable laws), needed at the beginning of a [new] approach. That, as an outlook on at least a major part of the Subject matter, much as a whole, IS "philosophy" (and this may seem like an important part at the beginning of some science outlooks and approaches). But, **though "in science"** in that way, **PHILOSOPHY IS THE LEAST OF IT** -- because IN outlooks, perspectives, and approaches, **subsequent to this role (and any valid role) of "philosophy", what come are real, related findings, OTHERWISE VERIFIED, with at least some clear grounding or foundation in what is directly, observable and overt (AND _THAT_ IS WHAT IS BY-FAR MOST IMPORTANT)**. Quickly the "philosophical beginnings" of any way of thinking should be nearly completely superseded by empirical findings <-- better, by better defining everything, including beginning assumptions (now more clearly and better defined [further] BY THE SUBJECT MATTER). In any good "going" science": **Philosophy should not "show"**.

There is NO good philosophy outside of this role as "part of science"; all other philosophy simply quickly becomes part of nonsense (for reasons I have well-indicated or explained in other places) -- and there is a LOT of that . ALL [thinking people], realizing this, explains why most modern philosophers say they are analytic philosophers, adding [supposedly] their good thinking to the thinking of others -- and thus maybe doing some "correcting". Unfortunately analytic philosophers mostly fail, or fail to be appreciated (maybe some of each). AND: many do most certainly fall into nonsense. There are, no doubt, some who still both start and end with nonsense.

I AM a philosopher, but I hope this is the least of my work (and becomes less and less). **In fact, I am a philosopher as much as anyone !** I am a post-post-modern philosopher, soon to maybe be a post- apocalyptic philosopher, and I truly believe **I am among the best there is**.

Listen to me and be and live better. Current, existing, good findings in behavioral science bolster my view on limitations on thought, if attempted to be done otherwise (more "all in the head"): such thought quickly is, or quickly becomes, seriously biased or skewed -- basically because we (humans) cannot think about much well that is not found or verified IN OUR ENVIRONMENT and with that as supports in for our present thought (OR, relatedly, with supports from well-based reliable memory (reality-based)).

Biological systems very typically have "containing systems" (integration of system(s) at a more inclusive level) & also for the biology of behavior?

I, of course, say YES. But, also, there is a question of when (where/how, as well) that a containing system needs to be discovered. In the case of the more intangible psychology (like much of psychology, for example: learning with great changes and great variability): I say the "containing" system is important to have NEAR the start of one's studies (e.g. of cognitive development and changes in learning and changes from [somethings called] 'learning' (more likely best thought of as systems of learnings, plural)). This is thus the perspective and approach I have put forward *.

[YET NOTE: the "outer" system MUST BE OF A BIOLOGICAL NATURE -- but, by this, I do NOT mean isomorphic or exactly like any other biological system, BUT in conforming to necessarily applicable principles.]

For my perspective and approach and details of the now-testable hypotheses, see: especially:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ

and

https://www.researchgate.net/publication/322818578_NOW_the_nearly_complete_collection_of_essays_RIGHT_HERE_BUT_STILL_ALSO_SEE_THE_Comments_1_for_a_copy_of_some_important_more_recent_posts_not_in_the_Collection_include_reading_the_2_Replies_to_the_Comments

(now, also, with a collection of more recent essays, attached)

* FOOTNOTE: If you are not doing this kind of "thing", then what are you doing??

Shouldn't we properly contextualize [experience, learning] and keep it all associative?

Yes, babies . [Otherwise what are you doing? ; on what basis? Major confusionS are not apt to "sort themselves out".]

[You cannot just "hack away" at "it" , because you must always refine the "it" you are "hacking away" at .]

I have indicated the way and the central hypotheses are all NOW testable. :_

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ

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<https://www.researchgate.net/publication/322818578> NOW the nearly complete collection of essays RIGHT HERE BUT STILL ALSO SEE THE Comments 1 for a copy of some important more recent posts not in the Collection include reading the 2 Replies to the Comm

There have been several learning theorists now that speak of non-associative influences on learning. Here are some quotes from a few:

(My important Comments follow the quotes, below.)

QUOTES From Three Ways That Non-associative Knowledge May Affect Associative Learning Processes:

"While Mitchell et al. (2012) favored an explanation purely based on conscious reasoning processes, where participants deliberately attend to the cues they believe are important, a viable alternative is that attentional processes are brought under conscious control and thus let non-associative knowledge influence the course of subsequent learning."

"In some circumstances, associative activation of the outcome may form the strongest available evidence about what is going to happen when a cue is presented, or the strongest indicator of how the individual should behave. But under other circumstances, for instance where it is very clear that a deductive reasoning process should be used, associative memory retrieval may play a relatively minor role "

"a viable alternative is that attentional processes are brought under conscious control and thus let non-associative knowledge influence the course of subsequent learning. This source of influence does not necessitate that non-associative expectations fundamentally change the operations of the associative network itself, merely what it receives"

"In addition, if non-associative knowledge can affect the way stimuli are represented then this knowledge may also change the manner in which associative retrieval generalizes from A to AB"

QUOTES From Mackintosh Lecture: Association and Cognition: Two Processes, One System. I.P.L. McLaren et al:

" ... does not shy away from placing associative processes at the very centre of our dual process account, and postulates that propositional processing is built upon associative foundations"

"... we are propositional entities constructed from an associative substrate."

QUOTES From
Moving Beyond the Distinction Between Concrete and Abstract Concepts Barsalou et al

"Conversely, when people generate features of abstract-LIT concepts, they typically generate external elements of the situations to which they apply. "

My IMPORTANT COMMENTS:

Problem for these theorists/researchers is that their "new propositions", "non-associative factors" and "new generalizations" ARE INTRACTABLE. Such phenomenon seem to be inferable, indeed, but they do not have a way to find the source (any empirical grounding). Thus, these theories at present have no empirical referents at major points to "get to go where they want to go".

Well, I actually address the same things: in EFFECT providing for new propositions (used in deductions), new generalizations, and what appear to be non-associative factors. BUT, my theory sees the origin of these effects IN QUALITATIVELY DIFFERENT cognitive stages, and due to "perceptual shifts". BUT, here is the REALLY GOOD NEWS: I indicate an empirical way to discover the "perceptual shifts", using new eye-tracking technology and computer-assisted analysis. I describe what to look for in enough detail to do the eye-tracking studies, during ontogeny -- at key points. Thus, my theory, which provides for the same kind of shifts in learning HAS TESTABLE HYPOTHESES. If the hypotheses of my ethogram theory are verified (and they can be is correct), we will at least have found the concrete directly observable overt behavior patterns associated WITH THE INCEPTION of that which yields the new abilities/phenomenon.

One other thing: Because the proximate cause (outside environmental factors and contextualization from the Memories -- which both can be seen as the other simultaneous proximate causes) IS "perceptual shifts" then nothing is divorced from ASSOCIATIVE LEARNING. This is also the end of the nature/nurture false dualisms. All still involves associative learning -- and no strange "non- associative" stuff.

See:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ

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Also See:

https://www.researchgate.net/publication/324391440_Moving_beyond_the_distinction_between_concrete_and_abstract_concepts/comments

https://www.researchgate.net/publication/311588668_Three_Ways_That_Non-associative_Knowledge_May_Affect_Associative_Learning_Processes

https://www.researchgate.net/publication/322976821_Mackintosh_Lecture_Association_and_Cognition_Two_Processes_One_System

How can there seemingly be more than one kind of learning (or qualitative shifts in learning), YET all learning is associative?

There have been several learning theorists now that speak of non-associative influences on learning. Here are some quotes from a few:

(My important Comments follow the quotes, below.)

QUOTES From "Three Ways That Non-associative Knowledge May Affect Associative Learning Processes" by Thorwart and Livesly:

"While Mitchell et al. (2012) favored an explanation purely based on conscious reasoning processes, where participants deliberately attend to the cues they believe are important, a viable alternative is that attentional processes are brought under conscious control and thus let non-associative knowledge influence the course of subsequent learning."

"In some circumstances, associative activation of the outcome may form the strongest available evidence about what is going to happen when a cue is presented, or the strongest indicator of how the individual should behave. But under other circumstances, for instance where it is very clear that a deductive reasoning process should be used, associative memory retrieval may play a relatively minor role "

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<https://www.researchgate.net/publication/286920820> A Human Ethogram Its Scientific Acceptability and Importance now NEW because new technology allows investigation of the hypotheses an early MUST READ

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Also See:

<https://www.researchgate.net/publication/324391440> Moving beyond the distinction between concrete and abstract concepts/comments

<https://www.researchgate.net/publication/311588668> Three Ways That Non-associative Knowledge May Affect Associative Learning Processes

<https://www.researchgate.net/publication/322976821> Mackintosh Lecture Association and Cognition

n Two Processes One System

Dear

For me, I insist on finding ways to relate the types of learning and not just cite "many forms" based on indirect evidence. We need direct observational evidence of overt behavior patterns initiating (at their inception) the different related kinds of learning -- the many ill-defined "sub-fields" you note certainly notwithstanding.

It is important to realize that almost all findings in brain science are NOT clearly related to behavior (behavior patterns), and certainly we should not be satisfied with "behavior as you simply want to conceive or imagine it" -- which results when one is not clear on the limits to the meaning of neuroscience findings but "uses" them anyway. THUS:

You simply "snip off" pieces of an imaginary "pie" and 'find' "many things". IN CONTRAST: There IS (or can be) a psychology of behavior patterns (ALL key aspects initiated in directly observable overt behavior) and, those as responses to corresponding environmental aspects -- these two types of things being the elements of a self contained, and coherent system, which can be discovered. If you cannot believe that, then you literally are lost. (Though, Psychology began with such a definition, no one has been able to actualize it because they do not insist on seeing behavior patterns as ALWAYS AND CLEARLY AS BIOLOGICAL FUNCTIONING -- YET this IS something that can be done. (I have explained at length the likely-false, unfounded AND UNPROVEN assumptions that keep psychologists from proceeding clearly and directly -- see my large papers and Collected Essays; I have also outlined and described in detail the better way, complete with the clear nature of all the major testable hypotheses --> using the very best empirical evidence: direct observation of overt behavior patterns))

Lack of present clarity OR "complexity" is **no reason or excuse for not starting the field correctly, and keeping fidelity to biology.**

Your response is very much akin to just giving up and hopelessness -- in its real effect (as basically shown again and again in the history of psychology, and as seen in the personal disappointments and sad dissatisfaction of the vast majority of psychologists).

For me, the "time for your way" of doing things IS LONG "up". It has failed: all proceeding in basically very similar ways (essentially, at the core, completely and wrongly constrained and skewed by arrogant presumptions), psychology has repeated failed FOR 100 YEARS; and it can be clearly explained why (I DO SO); the alternative has been outlined and detailed well-enough to start correctly and continue correctly (i.e. I HAVE ALSO PROVIDED THAT). Seek what you know must be true of the **biological functioning known as behavior patterns**: truly related things, self-consistent, and self- contained. And, damn your "models" as they all are today, divorced from any fidelity to biology by your presumptions (false unproven pseudo-'assumptions' (clearly alien from any real connection to the biology of behavior patterns, **the biology of behavior**)).

Any SCIENCE of human behavior (of behavior PATTERNS) should be by biology, of biology, & for biology: Correct? (If no, explain.) Ok?

You can follow my ethology perspective and approach, or (I guess) start anew -- which would be quite foolish. Mine is the only REAL "game" around, that is perfectly clear; YOUR notion that "biology is always 'an aspect' of it" DOES NOT "CUT IT", as clearly shown by how you ACTUALLY deal with "nature/nurture" -- as I have previously detailed, convincingly putting you to shame, and doing so beyond any reasonable doubt. All you have is just YOU bringing "it" (Biology) in where you want (how you want, as YOU imagine -- NOT clearly of the organism and of verifiable organismic systems and defined that way (by the organism and with excellent inter-rater reliability) . You have no real (biological) "systems," as starkly illustrated by few (if any) agreed upon behavior PATTERNS (those themselves, THE systems) -- and you have way too few uses of the term "behavior patterns" (and then certainly, at the core, never used correctly). AND: you are otherwise (i.e. instead) using artificial MODELS (largely just defining things just "much as you like", with obviously an inadequate (unreal)(or nearly non-existent) connection TO biology and flagrantly ignoring biology principles and the biological nature of psychology processes -- it is actually ridiculous; I directly, nor convincingly, see Biology as always integral in YOUR views; yet, if behavior patterns are Biology, those would constantly show the integral nature/connection to real biological phenomenon -- AND, as it would be IF behavior patterns were an area , AS IT IS, of BIOLOGICAL functioning; **therefore it must be that in YOUR VIEW, it is not**).

NOWHERE ELSE but in my view, which IS following the principles of Biology and using the full terminology of classical ethology, reflecting biological processes, as always integral (and present). (AND NOTE to students: **You do not have to wait for any reason to immediately establish Biological foundations (science foundations) -- the largely irrelevant "myths of the 'complex' " NOTWITHSTANDING.** Complexity is never an excuse for not starting correctly.

Any pretending of your own will not even fool a few, AND no one except yourselves or your associates (stooges, henchmen, lackeys under your institutional authoritarian control) can even pretend to believe it and yet, somehow, irrationally they/you do in some way hold to what, at best, are fatally bastardized perspectives (with too much confusion to recover from, not to mention the LACK OF any foundation in direct observation of key behavior PATTERNS -- **a requirement of science, itself.** What you have is largely complete confusion -- and correspondingly SHOWING NO noteworthy (or real) PROGRESS, OR ANY WAY TO PROGRESS. All, at best, slightly helpful for some practical purposes -- that is with the psychology field basically doing normative, marketing research on mere , though "significant" trends. Dead ends and more confusion quickly comes.

Read the Human Ethogram Project (all major papers, and all the hundreds of RECENT Collect Essays). Otherwise, let psychology remain as it has been for 100+ years (100 yr., officially): NON-science (and a lot of nonsense).

Thanks to researchgate, I had to recompose this essay THREE times (otherwise RG had phrases

and paragraphs incomprehensibly moved around and repeated, with other statements missing); there may well have been a better version of this essay, which basically "disappeared".

What about the fake or childish (under-developed) wonderment of psychologists?

What do you think it is when you wonder just when you want to and as you want to?

Is there any foundation to executive and "meta" processes?

Is there any foundation to executive and "meta" processes? OR, are they simply "self-evident" and seen "as measured"??

I can assure all that they are NOT rationally or logically REQUIRED for the behavioral system (a biological system) to work -- I have made this abundantly clear. (Basically, the organism just sees/searches adaptively -- and progressively -- BASED ON MORE fundamental faculties and capacities FOR WHICH THERE _IS_ GOOD EVIDENCE. And, that is all.)

Students who simply accept this garbage are creepy.

"Ditto" for those who "believe in" vague 'embodied' processing, actually AGAIN neglecting MORE fundamental faculties and capacities FOR WHICH THERE _IS_ GOOD EVIDENCE -- and which more than suffice for better explanations.

[Hey college and grad students: Please try to not be as bad or worse than my generation was. As 45+ years ago, your professors are largely, in effect, a pack of idiots **. ** FOOTNOTE: Just ask them about nature/nurture, if you don't believe me; that is one of the "roots" of all "roots" of confusion/misunderstanding; unjustified presumptuous UNPROVEN pseudo-assumptions are another -
- check THOSE out too.]

P.S. For the overly materialistic: Brain science will not save the day: that is "an island". Psychology, as a science of behavior, CAN BE A SCIENCE ITSELF.

Dear

Your articles put together brain science with these "as-if" hypotheticals -- and "as-if" vagaries seem enough to appear to 'relate' to the brain scans which have no clear direct relationships with major behavior patterns (<-- the latter true patterns WHICH, in contrast, ARE the RESPONSE TO THE ENVIRONMENT, ITSELF).

Combining studies does not help (i.e. the meta-analyses) -- apparent trend statistics work more than once: so what?

My statements and their excellent foundation STAND (as an alternative to the weak unclear findings -- and against what is perhaps, and even likely B.S.; PERHAPS MOST NOTABLY: you **exclude what IS there (the functioning Memories)** and **cannot be reasonably excluded for things that will always be only hypothetical to be the "account" instead.**

Certainly you have nothing near-enough to argue against my better integrated and more direct research- based AND parsimonious view -- e.g. AGAIN: the **major strong results on our Memories, and HAVING A PLACE, and their place, in the functioning.**

Directly observable, clearly related and likely discoverable overt phenomenon (STATED IN CLEARLY TESTABLE HYPOTHESES) TRUMP your "brain scans" and hypotheticals, which are not clearly testable but rather, at best, indirect "stuff" -- which shall never be reasonably testable or clarified when of the supposed nature they are.

If only people could more clearly see the best empiricism vs the unacceptable alternatives. You can "heap on" more and more of what things look like BUT ARE NOT ABLE TO BE CLEARLY ESTABLISHED (ever)(**or be built upon**) and it can look like a lot of stuff to people who like **stories** (maybe metaphors or weak analogies to what really is). BUT, inexcusably, at the same time, known faculties and capacities are NOT EVEN CONSIDERED IN THE YOUR "STORY", your accounts -- you are basically ignoring basic established research, directly shown FACTS, for indirect and unprovable hypotheticals. THAT SHOULD NEVER "win" for an empirical scientist.

The sick status quo can find a lot of such studies (such "folks" are in 'power' now and they are authoritarian), but the acceptable quality and testability is not there, so they (however numerous) count for little to nothing.

Psychologists (researchers/theorists) and students see so much empirically unacceptable 'findings', they do not appreciate the actual poorness of the 'junk' they are seeing; they see so very little good stuff. (You shall not be able to over-come me with quantity.)

Against your stuff, I present **ALL of mine** (100s of pages of very, very hard, if not impossible to refute, arguments and good observational descriptions, associated with established basic research). SEE: most recent Update under <https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory> for most of my expositions, perspective, approach, justifications, and arguments.

Re: cognitive-developmental psychology: Is it a

bad sign if one has only done ONE thing in her/his entire lifetime?

Re: cognitive-developmental psychology: Is it a bad sign if one has only done ONE thing in her/his entire lifetime?

This is basically, in part, a confession. If you knew how true the "one thing" was in my life, you would likely consider me lazy and privileged. I can accept both labels and can clearly see it that way (at least from the standpoint of some very good people). Moreover, I have had the ability to have anything and everything I thought I needed -- essentially at all times.

But, perhaps as is the only interpretation imaginable, you suspect I am making such admissions just to further the exposure of my perspective and approach. That is completely true. And, I do contend that (with having all resources), I lived virtually all the years of my life looking for a complete and the best thoroughly empirical perspective. Even in my decades of college teaching (more like 1.5 decades), my courses and presentations had coherence most certainly as a function of my views. THUS, indeed, in fact: I have never done anything else in my life other than that needed to produce the papers, book, essays, etc. that I present here on RG (or make readily available through RG). To have a picture of my life, one should imagine about 30 years of it operating much as a hermit (for all that can be good for -- and I do believe it can be good for something).

I started with a core and moved carefully in adopting any aspect of my perspective (basically starting from the position of just what is possibly at-the-very-least needed, and maintaining extreme parsimony). And, again, I am a most thorough-going empiricist, believing that EVERYTHING has a core foundation of some behavior which, at least at some key point, is both overt (though maybe quite subtle) AND directly observable (and now practically so, via eye-tracking). My entire perspective and approach relies pivotally and mainly on such foundations and otherwise only on the best findings and extremely widely-affirmed processes IN ALL OF PSYCHOLOGY (things showing the very best inter- observer agreement). All this is not any kind of abstract or wide set of things. The other prime objective ("directive") has been to NOT [just] link but PUT behavior (behavior patterns) clearly IN a biological framework -- showing as much as possible the "biology of behavior"; this had the rewarding result of eliminating critical and serious dualisms, esp. nature/nurture.

Assumptions or presumptions (pseudo-assumptions) in Psychology had to be exposed as both unproven and not well-founded. A half dozen central "assumptions" have been replaced in my system BY BASICALLY THE OPPOSITES -- these assumptions being fully consistent with biological principles and more likely true. I also show in my work how to use all the terms of classical ethology, this also allowing or furthering the "biology of behavior".

In short, though this should be to some degree a shameful confession (and many would have to believe that is part of it), my work is MINE (compromising nothing; adhering to principles) -- and it is good

**. Please take some time to explore it, starting at: https://www.researchgate.net/profile/Brad_Jesness2 Thank you.

**** FOOTNOTE:** The perspective and approach is explicit and clear enough for artificial intelligence also -- a good test. BUT: For the great advancements needed in Psychology and major practical utility in AI, we **need DISCOVERIES**, the nature of which are **indicated in testable (verifiable) hypotheses, clear in my writings** -- MUCH awaits those discoveries. **The same discoveries are involved for either field.**

P.S. For 20 years of my hermitage I did have the strong "hobby" (avocation) of JavaScript programming; I never made any money from this. I tell you this just to make sure the portrayal is accurate -- and to in no way mislead. (See <http://mynichecomputing.org> , if you are curious.)

Are there reasons not to be content with ANY modern psychology?

Indeed: They use a bad set of unproven baseless assumptions (both the REALLY-bad guys and the relatively more acceptable -- but still unacceptable).

They conjure up (in their "minds" with unjustified deductive systems) their OWN models -- not all clearly based or based-well in the Subject matter.

They use, rather the eschew, reasoning by analogy. All the by-analogy stuff is "off" and never seems temporary (and in any way excusable).

Ethogram Theory is better than them all (though it, in a way, comes from "outside" the field). It is better in the three ways indicated and in its empiricism (the strictest), the use of the strongest results in psychology, and actually having behavior patterns as a BIOLOGY of behavior -- no mere supposed "linkages".

If you can't "beat that", then you can't [...] . SEE:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ

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P.S. AND, there are DISCOVERIES we (ethogram theorists) need; we don't already know it all and just need to do peculiar experiments !!!

Dear

I guess I meant "content" in the common usage in this context, meaning: finding a theory useful and meaningful and valuable (and allowing for continuous progress; and it being empirical, respectable, agreed-upon (having inter-observer reliability), generating testable hypotheses and showing some sort of validity is also good).

By golly, that would make one who wants to learn about the real world, "content" in about any sense.

Dear

I very much disagree with you about "theories in psychology".

In effect, modern psychology theories HAVE "crystallized into dogma" and they have NEVER EVER been good (not even reasonably good for a time, historically, in any noteworthy sense). I see this: "Big time, big time" (as they say).) [It does not typically -- in important contexts -- matter to me what anyone just thinks EVER (so, if this is philosophy, I "don't care"), unless we can all really know what that thinking is -- and actual good science is the way.]

To speak more broadly (and give fuller context):

I personally do not think an Age of Reason has yet occurred (I never have; it is all pretense and bluster): too much bad social science/societal thinking (and NO evidence of the type of good theory with all the good qualities I described, and more could be said).

I believe humans have yet to do any social science correctly. It has all been that bad <-- so bad that I can say THAT. I do know good "reason" when/if I finally see it (I do have those critical evaluative abilities). (My greatest "contentment" will not come easy and, then, I doubt anytime soon my survival would be at stake.)

P.S. I do find it strange that you seem to clearly indicate there are some "official" [(philosophical)] views on "contentment"; shows the non-sense, I say.

I may well be one of the better/best modern philosophers, but I very largely disavow "philosophy" as it is seen (seen as, and accepted as/when, too much just out of 'thinkers' heads; real Reality is much more actually immersive than THAT).

P.P.S. Of any "place" NOT to show what looks like "contentment" is with theories of psychology. (I hope you are not such a victim.)

Why do philosophers seem to think that EVERY WORD is a concept they can understand itself??

Why do philosophers seem to think that EVERY WORD is a concept they can understand unto/by/as itself??

That is frankly and clearly STUPIDITY beyond belief. It is lack of contact with Reality.

Some of these same concepts are well-understandable, as they are in different specifiable contexts (so, for example, "consciousness" is not a "problem" except for idiotic philosophers, as just described, when the key importance of context is appreciated).

Between believing they can "define" anything, there is rampant "reasoning" by-analogy. More idiocy! Grasp the way real science is and forget philosophy!! Banish the term/'concept' of philosophy itself. Quit with the ARROGANT, presumptuous "defining" (YOUR "defining" is NOT defining). Rather find how you do not think well or clearly - that would be a better task for those who hold themselves as "philosophers"!

These philosophy jokers so much believe deduction is the full heart of thinking/'reasoning', that they have very little appreciation for that which is really most important, BY FAR: induction (and inductive reasoning).

Philosophy is the disgrace of Western 'civilization' and why there has (in fact, actually) not yet been an Age of Reason. To banish the word "philosophy" seems like it may be a 'therapeutic' good start. Philosophers are harbingers of irrationality (THAT, by far, in the main).

Dear

Regarding "Recognition and understanding of an entity, either material or abstract, is subject to the need for its description and definition."

For one thing, see where I say (rightly, properly, and rightfully): " [I am] dead-set against having anything in a theory that does not at least have a clear connection to some directly observable overt behavior (at least at key times). To me this is basic empiricism (and surely you can see it is).

Second: if you cannot see and know the concrete roots of ANY abstraction, then it is just an undefined fiction. (<-- There is NO reason not to have this position, as an empiricist or just as a sensible person.)

P.S. I absolutely completely disapprove when people "define" (in ANY way divorced from the subject matter or from some key directly observables); ONLY THE SUBJECT MATTER SHOULD DEFINE ANYTHING. Doing otherwise is both wrong and unnecessary.

Dear

You are much like the many, who just let "education" be "poured" into their irresponsible, non- reflective 'minds', and insufficiently-active bodies-and-heads. You seem to have memorized much.

Nothing distinguishes us well from other species (except arrogance and extreme exceptional violence (and irrationality)). (There is division of labor, afterall; DO NOT TAKE CREDIT FOR MORE THAN YOU (an individual) does.) Adaptation is the final standard for "intelligence" and we are failing at adaptation (and the sooner we are gone, the better), thus we are not special in a good way (overall, or at all, in my view) -- we are not intelligent. As far as I am concerned you are most likely just regurgitating (parroting) what you have been "taught" as so many do (with such an arrogant statement of superiority

*, so often necessarily HELPING NOBODY WITH ANY UNDERSTANDING. Such statements have been and are of NO USE.

[* FOOTNOTE: this basic same "superiority" stuff also has worked well through history on races, ethnics and women -- nearly always and nearly continuously.]

ANYWAY, you say " **Humans for some as yet not fully understood reason are driven by abstract thoughts unconnected to empiricism**". That statement is a combination of something that makes no sense ("unconnected to empiricism") and something that is a falsehood ("are driven by ..."). " Indeed they (us) may not understand, but they/we also do not need to be "driven" by garbage (here: misunderstood 'abstract thoughts'). And, you say: "**Empiricism alone would not be sufficient for humans to expand their knowledge as by implication it is entirely reactive.**" (Big ?? about those last couple of words.) YET CLEARLY: This statement is JUST A MERE ASSERTION FROM THE IGNORANT AND ARROGANT AND PRETENTIOUS (now, and historically). [You shall likely have few "**fully understood reason[s]**" **given your approach**, which seems more to me like passivity along with the long-established existential irresponsibility.]

Empiricism alone IS just fine. YOU simply just choose the irrational (irresponsibly) and irrationality (and I accept that in no one).

The notion of " ideas that have no 'connection to directly observable overt behavior'" is absolutely just an assertion and could not be demonstrated, much less proven. <-- AND shows: A serious lack of minimal empirical principles for one's thinking/actions and for one's betterment HERE. And, again, it has a perfect resemblance to "regurgitation", e.g. "parroting one's 'teachers'".

You really DO have to "come onboard" and realize the Age of Reason has not yet happened. Otherwise you are just supporting things that need not be true or aren't or cannot be true and, more importantly, (seriously) promoting the continuation of words-and-actions, based on ignorance (and therefore also: delusion): nothing for our knowledge and good adaptation.

P.S. The idea that " empiricism without insight and imagination would be impossible " is likely

primarily true or often true . YOU ARE THE ONE FAILING THIS STANDARD, BADLY (BECAUSE you can't stay empirically "rooted", as indicated above).

The idea that abstract thought is perhaps " not connected to 'concrete roots' " is the most active form of ignorance and delusion. It makes no sense and is NO GOOD. No damned good at all, while likely being false, if this is an empirical world itself. Such a view will impede progress until your ilk is defeated.

Your assertions which relate to nothing that is established will never have any impact on me.

P.S. Ethogram Theory (being thoroughly empirical and testable) has a good chance of fully defeating your presumptions and falsehoods.

Dear

I was addressing no one in particular when I described "folks" as being stupid or idiots or arrogant (<-- all these being meaningful words). Thus, when these words are most apt , it is not reasonable to consider them insulting (even if some common or general problem HAPPENS to fit a given individual -- one is still addressing the whole group with the problem and the problem itself). Those terms just rightly and rightfully express my positions (and the positions of others who are "with me", in this case). If stark terms cannot be used because of political correctness, this is censorship. You do not want to make a "game" of supposed give-and-take opinions, when the matters are gravely serious (and OF that nature I described). We cannot pretend all views are equal, when and if we have many, many significant reasons to consider one perspective better than another.

If we are all "winning" equally, and all is just pleasant supposedly all-things-equal, then if one really has a case, he is just stifling it. (Professors, as authoritarians, do such stifling all the time, so I am not surprised that others would also like to see the stifling.)

[If you can show me where I applied a bad word to one individual (only and in particular), I will apologize and refrain from that. I deleted one response to Barry which could have been construed in such a bad, personal way (though with a couple of other "bad words" involved); still, one might have seen that as over-concluding negatively about Barry and may have seen that now-gone post as insulting. I was provoked by the "stop drinking" remark from Barry, but that is no excuse. (I retaliated and retaliation is often wrong, indeed.)

I apologize to Barry for that post which was there and is now gone. **]

The seriousness of the situation I see in the social sciences (theory and practice) is so major and destructive and maladapted (and not improving) that I am willing to conclude that no "Age of Reason" has yet occurred (the 4 recommended philosophy of psychology books, I have just read, bolster this view). If this is so (as I think and say), we do have big, serious problems which must be taken seriously --and it needs to appear that way, for those seeking understandings or better understandings.

** FOOTNOTE: The " You are much like the many, ..." sentence in the first paragraph of my first

response to Barry, I see as rightful indignation. He grievously insulted the majority of our sentient beings (in ways not generally considered valid OR, at least, in ways one cannot judge these beings). That is now generally considered unjustified and typically makes ordinary people (understandably) express anger (and makes us point to sources of wrong knowledge and ignorance as a cause). (I can accept this rightful anger with others and for others, though perhaps this is showing some retaliation.)

Dear

I have not used the word "killer" to refer to myself; this seems to have started recently with you (and I replied to it, using the word "killer" so I was clearly addressing you). I most certainly "kill" nothing but the no-good-and-destructive positions/approaches/concepts.

Regarding me and how it "seems that you are [(I am)] the only clever guy ": In several contexts I believe this, because I am a stricter empiricist and in a major way (cognitive-developmental) have the only theory with definite, clear, and testable hypotheses for stages. Others remain unsatisfactorily vague, showing disgraceful answers about nature/nurture -- which I have detailed AND CAN DEMONSTRATE. For me, that dualism is totally GONE (really).

The other quotes (of mine) you quote, I stand by (recall that I believe it cannot really be demonstrated that any real "Age of Reason" has occurred -- justifying, or making understandable, the much-repeated and common grave dissatisfaction with philosophers (and social science) I have and like others to know about).

I see myself as a positive influence on any and all things that can decently be considered "intellectual" (NOT a "killer"). The "nothing" behavior you want out of me you will not get (that's for authoritarian professors, in their institutions -- for their students (sound familiar?))

Neuroscience: what brain activity patterns can we look for if we haven't tracked the development of behavior & know nature of true behavior patterns?

I was going to word the question in a longer version:

"Neuroscience madness: what patterns in the brain can we look for if we have not tracked the development of behavior patterns and then know the nature of true behavior patterns and how they function together -- some as proximal causes, along with environmental factors, OF OTHER behavior- pattern development? "

Are we really going to try to otherwise determine (**without even reasonable phenomenology**) what is happening in the brain, as it relates to behavior (BEHAVIOR PATTERNS)?? Please !!!!

You **need** ETHOGRAM THEORY first, obviously, **to know key phenomenon** and then maybe see what activity in the "black box" of the brain may have something to do with **THAT (and eliciting at least key parts of THAT to 'SEE')**.

SEE: [Brad Jesness](#) and mainly:

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>, and mainly THERE:

Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

and

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

Just because you don't know good psychology does not mean I DON'T or that YOU may not come to know it. Pick ETHOGRAM THEORY, a theory which expressly needs answers to hypotheses that involve **directly observable overt behavior patterns** (in key situations, in flux)(testable/verifiable hypotheses) -- these leading to the **real behavior patterns you must know**.

Unlike other psychology theories (the made-up "models"-type, the by-analogy-type, or the skewed basically mythical and untestable type) which pretend to pretty much "**know it all**" **already** (just look and evaluate them to 'see') **and just want more weird variations of hypotheses** answered, **ETHOGRAM THEORY actually puts forth NEW questions, that need answers. REAL DISCOVERY OF NEW AND REAL THINGS**. Actually scientifically open enough to look without presumption, based **ONLY** on Subject behavior [ALL grounded, critically founded on key overt direct observables (and otherwise needing just one's imagination to retain/remember what you find and learn -
- no harder than processing the poor near-useless theories you have)].

P.S. A good psychology theory (when researched and verified) will **ITSELF** provide most of the knowledge (certainly the "lion's share" of knowledge we need from Psychology); truth is, **WE DON'T EVEN NEED NEUROSCIENCE** ! But there are now so many "out there" that need neuroscience for the pretenses and as a 'crutch', thus, I HAD TO ASK THIS PRESENT QUESTION.

Isn't it pure psychoticism to have a fundamental unit of analysis of behavior of AN organism INCLUDE MORE THAN ONE

ORGANISM'S BEHAVIOR necessarily?

Isn't it pure psychoticism to have the most fundamental unit of analysis of a presumed foundational behavior pattern of AN organism INCLUDE MORE THAN ONE ORGANISM'S BEHAVIOR **necessarily (or really AT ALL (ever), FOR THAT MATTER)**? Yes, yes, yes. YET see the following recent papers INSIST ON such an explanation NECESSARILY (as necessary -- i.e. no other "reasonable" way):

Enactive Mechanistic Explanation of Social Cognition and

Mechanistic explanation for enactive sociality

They claim 25 years of such just-pure-speculative (and by-now obviously useless) "conceptualizations".

This embarrassing nonsense is what can happen when you do not know or do not examine or analyze your true base/foundational assumptions YET THOSE ARE very poor, baseless, and UNPROVEN AND MOST-LIKELY NOT TRUE (because of inconsistencies with BIOLOGY, as I have clearly indicated in my essays). [It is desperation for progress with a basic view and approach THAT CANNOT MAKE PROGRESS rationally -- it is desperation in science/"science" .]

Since basically the same criticisms hold for "embodied" 'theories', that should be noted here. The following scathing peer critique holds against both enhancement 'theory' and "Embodied" 'Theories': Article [The poverty of embodied cognition](#)

Isn't the Basic Problem of Psychology: reasonable account of emerging properties (ASPECTS) of behavior patterns can't be well-framed or hypothesized?

Clearly. Yes. AND, this is because of baseless, unjustified, unproven and likely false core/"foundational" pseudo-'assumptions' which unreasonably constrain possibilities for **explanation** (and **outlooks**) TO SAY THE LEAST. I have spelled out these pseudo-'assumptions' AND have offered up alternatives (often opposite) assumptions that are more likely true because they are

biologically consistent, and the types of **problems I just indicated DISAPPEAR** (along with dualisms, like the nature/nurture debate).

Behavior is behavior patterns and is biological functioning, and if you cannot even FRAME your perspective on behaviors thoroughly and completely embraced in this way, **then your Psychology has not even begun**. It is NOT a matter of behavior patterns "linking with" Biology (somehow -- usually just as they imagine and wish) BUT, **RATHER IS A MATTER OF BEHAVIOR BEING BIOLOGICAL in principles, structure, nature and development (ontogeny)**. Then like the functioning of any other biological system, IT WOULD ANOTHER INSTANCE OF BIOLOGY (what they apparently now call "systems biology", as if that were a new thing): see:

<https://www.researchgate.net/publication/311692617>

and <https://www.researchgate.net/publication/311692368>

For the SOLUTION to the major critical (constant) problems of Psychology, see:

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

See especially:

<https://www.researchgate.net/publication/286920820> A Human Ethogram Its Scientific Acceptability and Importance now NEW because new technology allows investigation of the hypotheses an early MUST READ

and

<https://www.researchgate.net/publication/322818578> NOW the nearly complete collection of essays RIGHT HERE BUT STILL ALSO SEE THE Comments 1 for a copy of some important more recent posts not in the Collection include reading the 2 Replies to the Comm

YOUR CHOICE MAY BE THIS OR INSANITY (literally):

https://www.researchgate.net/post/Isnt_it_pure_psychoticism_to_have_a_fundamental_unit_of_analysis_of_behavior_of_AN_organism_INCLUDE_MORE_THAN_ONE_ORGANISMS_BEHAVIOR_necessarily

Does philosophy of religion belong to the class of philosophy of science?

Dear

Not an easy matter, but possibly a worthwhile Question, if you can "get" it.

There have to be restrictions on the nature of the "religion" (it must be rational and realistic) AND the sort of questions dealt with must be clearly progressive (and in a holistic way, with WAY more than one related assertion and/or any small number of hypothesis involved) -- showing changes to the overall science system (thus applying many aspects of the "religion", enough to show it as an instance of such ALSO).

I present one instance of philosophy as science (better said: science-and-philosophy) which may be seen, in a real sense, as having a philosophy of science and of "religion" involved. AND, yet, the relationship between THAT (the rational, realistic "religion") and the new science perspective must still be inferred [in large part because Ways of continuous and continuing personal development ("spiritual" development) must be fully open (in their system) to ANY rational and real, grand, developing perspective in the world; but here, below, they are being applied only to one Instance . (Yet, the rational/realistic parts of both must "line-up", and in a very intimate sense) .] Thus the Isomorphism of an Instance TO a "religion" must be seen AS IT WAS APPLIED TO (actually: **IN**) the science for the new perspective, with many new more-particulars. (If you want to see what I, for years, have seen as such an Instance of the application of rational and realistic Buddhism, read on.)

In such a case of science-and-philosophy (and of religion) one must realize that good philosophy (in general, but HERE philosophy of science and that of the "religion") MUST NOT SHOW but rather MUST BE (of) the integral parts of the new science perspective. Another way of saying that: Any philosophies must be "incarnate" in the new science exposition. If either sort of philosophy show (or ANY philosophy shows) **IN THE ACTUAL EXPOSITION OF THE SCIENCE**, and is not "seamless" with it, then that is both bad science AND bad philosophy.

Below is an instance of a rational/realistic, real science and the rational/realistic philosophy of science (and "religion") by which it was impelled -- and which was infused-in, by clear recognition and clear differentiations of observable, or potentially observable, realities. It is an instance of a significant, new science perspective; see the links, below to finally see it (and the philosophy behind it). You will have to have good inductive inference ability to 'see' the **application** of (the realization of) one into the "other", as **(1)** the philosophy (being really of both sorts indicated, i.e. being philosophies of religion AND of science at the same time) **AND** **(2) the beyond-just-related and beyond-just--isomorphic exposition** of the new big view on science (new and big, but with testable hypotheses). If you want to take a try at finding such a line-up of philosophy(ies) "incarnate" and science, compare:

the content of <https://mynichecomp.com/index.php?subject=12> and the content of Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

Also, same at: <https://mynichecomp.com/index.php?subject=13> (including following the links and reading content once to the linked-pages)

And, see:

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) B...](#)

Dear

Try this for the first paragraph:

For any linking to science: There have to be restrictions on the nature of the "religion" (it must be rational and realistic). AND the sort of questions dealt with that are science questions must be clearly progressive (and in a holistic way, with WAY more than one related assertion and/or any small number of hypothesis involved) -- showing changes to the overall science system (and thus [also] applying many aspects of the "religion", enough to show we have an instance of application-of-the-religion as well). [Added note: Included in what was intended in the last sentence: Philosophy of either/both of the 2 sorts under discussion, may well be seen as that which draws out or draws together basic science assumptions, properly framed. YET, this could be seen as just science itself (by the author, and by others), though it will be as much philosophy as there should be there.]

Perhaps then the rest of my statement, as is, will do.

Has the classic psychology (as [just] the study of "behavior" and related environmental aspects) been largely abandoned?

I am still of the mind that it is possible to have a science of Psychology where the **only things studied are behavior patterns and associated environmental aspects**. AND: Key to this is **finding** and having some most-significant, pivotal, foundational BEHAVIOR PATTERNS (DIRECTLY OBSERVABLE OVERT BEHAVIORAL PATTERNS) -- ones which can be seen at least at key times and, at least, at the INCEPTION of any significant new behavior patterns involved in major shifts in cognition and cognitive development. [(THEN, otherwise, behavior is credibly just altered by simple, relatively easy-to-understand processes -- in particular, the various sorts of associative learning.)]

My perspective and approach describes in great detail how this can be the case and the major necessary hypotheses are directly testable (verifiable), being verified by finding major yet-to-be-discovered DIRECTLY OBSERVABLE OVERT BEHAVIORAL PATTERNS (when you know how and when to look to find them). These major behavior patterns involve **Memories-contextualized "perceptual shifts"**, with subtle but the clear overt behavior patternings as their aspects -- these, along with environmental aspects, BEING **ESSENTIAL PROXIMATE CAUSES** of behavior pattern change (not only with the new behavior patterning, but those also importantly at-times affecting already- existing behavior patterns). The major **NEW inventions that allow for researching this, and having these phenomenon discovered, are the new eye-tracking technology (and computer-assisted analysis)**.

This is the way (not yet tried) to keep Psychology as "the science of behavior" [(the "behaviors" of the various sorts seen as important at one time in the history of Psychology or another and, NOW, ALL BEING "admitted" and seen as aspects of behavior)]. Of course the other (ONLY other) key things involved being the "triggering" (or key facilitating) ENVIRONMENTAL ASPECTS.

Has this definition of Psychology as "the science of behavior" been abandoned or corrupted [with models by-analogy (e.g with information processing as could be done by a machine); OR phenomenon of uncertain relation to actual most-important behavior (e.g. crude neuroscience); OR by using instead elaborate speculative conceptualizations, which could NEVER have any direct evidence supporting them (e.g. "embodiment" 'theories')] ? I say: "YES. PSYCHOLOGY, THE SCIENCE OF BEHAVIOR, has been abandoned and corrupted in at least these three ways."

BUT now, **with a new perspective and with new ways to detect more subtle behavior patterns, we now CAN RETURN to the classic kind of definition** Psychology has had over many decades (with the focus on "behaviors"/environmental factors thought to suffice). My perspective and approach ACTUALIZES this, and in the process eliminates any nature/nurture controversies BY BEING **NOT ONLY PSYCHOLOGY IN THE CLASSIC SENSE BUT, at the same time, being the BIOLOGY OF BEHAVIOR** -- the biological structure and nature seen in just behavior patterns THEMSELVES.

My "biology of behavior" project :

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

See especially:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ

and

https://www.researchgate.net/publication/322818578_NOW_the_nearly_complete_collection_of_essays_RIGHT_HERE_BUT_STILL_ALSO_SEE_THE_Comments_1_for_a_copy_of_some_important_more_recent_posts_not_in_the_Collection_include_reading_the_2_Replies_to_the_Comm

Dear

To ME, to speak of, and to do, all studies in terms of behavior patterns: ALL that is ever rightly referred to is overt behavior AND behavior patterns clearly related to some earlier DIRECTLY OBSERVABLE OVERT BEHAVIOR PATTERNS at some key points in ontogeny. THAT IS ALL. **Nothing else IS behavior** --- and, what I just described is enough. I embrace NO theory whatsoever that is not based on behavior PATTERNS (the behaviors just described). ALSO, it is my view that **NOTHING else but other behavior patterns will correctly define ANY other behavior patterns**. I do not embrace "the innovations"; I think good real behavioral scientists can do better without them, proceeding as I indicate.

Insomuch as neuroscience has given us clues to "understand" behavior [patterns], that (to me) is just the extent of Psychology's desperation; neuroscience does not have known direct brain connections (clear patterns in relations to) most (if not all) **important** behavior patterns.

Information processing analogies are persistent analogies, and all good scientists realize such analogies are not true.

To get a HINT at the problem you seem to have no familiarity with, ask yourself: how often do psychologists (researchers and theorists) use the term 'BEHAVIOR PATTERNS' (including the word 'patterns')? -- it is not often, though it should be something that always should be thought in terms of and spoken in terms of. AND what/who "defines" and circumscribes behavior [patterns] in today's psychology? (Answer: typically: the researcher or theorist)? BUT: Behavior patterns should never be something defined by any researcher or theorist (e.g. based on some model or analogy or baseless imaginative conceptualization) BECAUSE: ONLY THE SUBJECT SHOULD DEFINE BEHAVIOR PATTERNS, and what this IN EFFECT means is that behavior patterns should ONLY BE DESCRIBED (and DEFINED) IN TERMS OF OTHER clearly related (and shown related) BEHAVIOR PATTERNS (classical ethology knew this and showed this AND ACCOMPLISHED THIS, but not since the 70s have we seen this view AND RELATED APPROACH, either understood or adopted). I present such a perspective and approach, here in my many, many essays and my major papers here on researchgate.

In my view, if you cannot see the importance of the disciplined kind of approach I have described, it is understandable: you have simply been "drinking the Kool-aid" for too long (without the perspective I present even brought up). **My writing goes so far as to EXPLAIN how and why this sad situation is so (is the case).**

P.S. I am pro-AI and even have an artificial intelligence Project (here on RG); thus, I do not have as negative a view of "machines" as you suspected. IN fact, AI people may make use of my perspective and approach BEFORE psychologists.

P.S.S. One way we can tell Psychology is not far along in coming to an understanding of its Subject is the great stagnation in General Artificial Intelligence itself. If Psychology had a lot to say, it would be clear that it is ESSENTIAL in AI and we would see such understanding THERE (in AI), guiding the machines !

Dear

It is EASY to present papers that are pro-status quo. This means absolutely nothing to me. Let's deal with each other on one-to-one terms (like me and Simone Di Plinio). Make an argument and clear case to try to oppose my views if you have knowledge enough (and have taken personal responsibility for your thought systems enough) to do so.

I will never pay attention to your links. Attempting to extract what you see as key "things" from that you link to (weak, unclear "arguments"), like those you provided, could be made hundreds of times (and I will never respond to any of that, if only because it is not practical, NOR is it focused).

ALSO: You are HERE on RG to present views, not to provide links to supposedly bolster yourself or some views. Doing what you did would be seen by most on RG as unacceptable.

Dear

As you say, I said: "**Behavior patterns should never be something defined by any researcher or theorist** " AND "**behavior patterns should ONLY BE DESCRIBED (and DEFINED) IN TERMS OF OTHER clearly-related (and shown-related) BEHAVIOR PATTERNS** ". Those 2 statements are EXACTLY what I meant and are NOT contradictory at all - if you can know what I mean . Let me paraphrase to see if that would help: [The following simply puts statements (1) and (2) (above) in different words.] :

(1) Psychologist researchers and theorists should not, by their thinking and logic (premises put together "in their 'mind' ") and/or from just-partial observations ALONE decide how to delimit (or define) the nature of a behavior [pattern] (e.g. when, where, why, and how). <-- AND, **this is true in ALL sciences**. In psychology, the reason is: THAT bad way of proceeding (just described) is a **non- biologically-consistent** way to "define" things and **IT SIMPLY HAS NOT BEEN DEMONSTRATED WE HAVE TO RESORT TO SUCH A LOW STANDARD**. On sentence (2): **Like in ALL other sciences, ONLY the other existing or surrounding behaviors/phenomena should have anything to do with delimiting (circumscribing) another phenomenon-of-interest OF ITS SUBJECT (subject matter)**. In psychology, that clearly means that only existing or surrounding behavior patterns should define OTHER behavior patterns -- **that is the only way to have the Subject ALONE doing "the job", as it should (and does) in all real science**. (So: What I submit is all that

makes sense **if you want anything to be a science, like other sciences** -- with the basic characteristics of science I just described.) It is **ALSO the only way to keep behavioral understanding uncontaminated by biases AND CONSISTENT WITH BIOLOGY. Behavior [patterns] ARE biological functioning** and thus explanations **must be consistent with biological principles** (for examples: activity/behavioral coordinations and homeostasis). Plus, this sort of explanation, I have clearly indicated suffices -- **if one has a true understanding of development (ontogeny)** (see my extensive writings).

Frankly, I do not like hearing from people in neuroscience about behavior patterns. You are all so overly-optimistic about what results in your field mean (their implications) and this is largely because you have very little other, independent knowledge of behavior patterns and the history of psychology AND thus you lack any good perspective. Neuroscience has provided SOME knowledge (clues as support, is the way I view it) of/for some basic behaviors-and-the-brain, but this (I submit) is VERY MINOR (and MUCH more could be accomplished by a **study of behavior patterns (and aspects of environmental context) per se approach -- the classic nature and intention of the original definitions of psychology !!**). If you look at the history of psychology, what you will mainly see is an **astonishing LACK of progress** (by any reasonable standard). I say psychology's failure is simply because they **have not figured out HOW to do what they want to do** (no doubt in good part due to the limitations (and apparent limitations) of "the lab"). [What you call " behaviorology" is a word I have never heard of. I tried to look it up to get a quick impression. Perhaps it supports the very nature of the definitions of psychology throughout its history (when considered also with their INTENT) -- it is hard to tell; it may also be an approach that jumps to 'applying' "the science" too soon, since I have seen signs of that too. If the latter is true, that defeats the science.]

By the way, I may very well present "accurate arguments" . Have you read the 600 pages of my major papers and Collected Essays?? If not, you are **speaking in ignorance** -- which does NOT well-serve science, to say the least. Please read substantial portions of my writing before trying to address my perspective and approach again.

Dear

What I am interested in is the study of (1) **ONLY behavior patterns, with at least SOME _MAJOR_ foundation(s) in/of OVERT, directly-observable behavior patterns, at least at key points in development (ontogeny) and at least at the INCEPTION of the new behavior pattern, _and_ other behavior patterns that retain clear OVERT aspects _AND_ (2) corresponding aspects of the environment** (related to either or both of those sorts of behavior patterns). THOSE 2 TYPES OF THINGS (behavior patterns, as just defined, and corresponding environmental aspects) AND relatively LITTLE ELSE, **as basically the entire field of study -- BUT with such "pieces" as those 2 aspects of proximate causation credibly further connected or changed ONLY by simpler processes**. I see the forms of **associative learning** as the simpler processes totally (otherwise) providing the links for behavior pattern connections or for additional behavior pattern change. ****_NOW_**, THAT IS ALL; and, that is the only way to hold the field of study together and is absolutely necessary to avoid confusion _and_ to keep things clearly in terms of the sole and individual primary unit** (the single human) -- the only way to have a **science like other sciences** (which is not only more than desirable, but absolutely necessary).

As soon as anything not directly in the category of such well-grounded and well-founded behavior

patterns and their corresponding environmental aspects (and simple associative learning) is "added in", by citing ANY [supposedly] more indirectly-related OTHER kinds of [supposed] behavior- related evidence, **NOT CLEARLY DIRECTLY RELATED TO the products of THE PROXIMATE CAUSES (above) AND/or simple associative learning, I see the field as then corrupted** (examples of other things not clearly related include some neuroscience "findings" and "social learning" <-- which is ALSO not completely founded and grounded in the individual Subject, as I say is REQUIRED (above)).

If you perchance meant what I mean by "[just] the study of "behavior" and related environmental aspects" (as I just described), then we are on the "same page". Otherwise we are not.

If my **requirements for science are not met**, here particularly in the case of Psychology: you should see that the **classic sort of psychology (as [just] the study of behavior patterns and related environmental aspects) HAS largely been abandoned.**

I am not trying to be argumentative, but just trying to be clear on my position on a **science** of behavior (aka Psychology).

Dear

Eye-tracking data, which indicates towards-what a Subject is gazing, or attending to, or evaluating is also **DIRECTLY OBSERVABLE OVERT BEHAVIOR PATTERNS -- _PLUS_ the context is** much more clear.

I DISAGREE with all of the following you say (quoting): " I believe integrating directly observable physiological changes (e.g pupil dilation) and physiological differences between groups or individuals (e.g. Fos expression) with directly observable behavior gives a more accurate picture of what is really going on. Any science that ignored physiological evidence would be, in my mind, incomplete. "

That is just an old-time perspective which is less direct and likely less valuable (and certainly not original). You are not integrating directly observable BEHAVIOR PATTERNS with those other things -- which are clearly much more indirect indicators.

Dear

You say: " ... supporters of radical behaviorism ..., who define who define psychology as the acquisition of information useful to the control of behavior must admit that such acquisition is impossible without exploring the physiological and biological processes that underlie cognitive functions and behaviors". This appears to be the perspective you take. I disagree as strongly as possible (OR disagree just in part **IFF BIOLOGICAL PROCESSES were understood as: ALL BIOLOGICAL PROCESSES POSSIBLE AND REASONABLY LIKELY (including significant innate-guidance aspects to behavior pattern change THROUGHOUT ONTOGENY (0 - 18 years old) -- a view presented**

rarely and, to some notable extent, only in References I provide)). The view you present (and, as understood when first stated) is an OLD view, which both needs to be **greatly improved-upon and to some degree countered completely and replaced.** See my Profile and the References there to see something I firmly believe "does the job" -- 100% testable (verifiable/falsifiable) hypotheses, reasonably based, and centrally involving looking for and discovering certain DIRECTLY OBSERVABLE OVERT BEHAVIORS (there is NO higher standard for empiricism than that you will find in those References).

Most nowadays see Skinner et al as extremists who were extremely misguided, in several irrational ways (I most certainly see them that way). Check out the false pseudo-'assumptions' I cite as core presumptions of such old-time Psychology AND see the more likely alternatives I expressly cite and state (often the opposite of old-time presumptions). AND see (read about, in detail) the ramifications of those more biologically consistent (and more likely true) assumptions for psychology/biology/science and good research.

Dear

It is fine to find EEG patterns, and perhaps a bit useful. But ALL, bit-by-bit, step-by-step, must be related to directly observable overt behavior patterns (pivotaly)-- clearly, at least sometime in ontogeny (minimally at the inception of **whatever behavior** you are looking at) -- and I am talking about **ALL the behavior you want to see as related or relevant**, coming up to this standard. **No exceptions**; attempts at exceptions on this divorce one from empiricism (and from true reality).

I have no problem with you calling EEG patterns 'behavior', but the absolute standard of empiricism (I just stated) must be satisfied. [**These same remarks can be made about EVERYTHING in neuroscience -- and all this is just the way it is, like it or not.** This is the ONLY way to maintain a proper, or for that matter a **communicable**, perspective -- so absolutely vital to science itself (the ability to truly share observations, inter-rater reliability, is central and **the key characteristic of all science** (and CERTAINLY that cannot be said for experimentation)). If the real perspective (from, by, and for the organism, AS OBSERVED) were kept, then possibly Psychology could actually significantly progress.]

[Otherwise, you could say "I found all theses great patterns", but what else could you do? People might well want to tie those great patterns in with more overt or established behavior patterns, when and as possible and appropriate -- but one cannot just guess. "Ditto" for ALL of neuroscience !!]

Dear

I have read a bit about James Gibson, but never his own words. I did listen to his wife's (Eleanor Gibson's) presentations in a seminar in the 1990s (for about 1hr/day for one week). Affordances was not a major topic.

In fact, I do not like the concept of affordances as is: it smacks of dualism. I believe during major qualitative behavior pattern changes (during ontogeny) BOTH "learning" (it is: associative learnings)

and innate guidances occur IN EFFECT, and for us phenomenologically, AT THE VERY SAME TIME (literally BOTH as aspects of any ongoing behavior pattern, **totally admixed and effective literally at the same time**). Any indication of first one then the other, or some view of some "dynamic" alternation of the two is false dualism to me. Not only unlikely but inconceivable; it is just plain both bad and false thinking.

One should not recommend an alternative to my 600 pages unless one has both read and understood them. In one way and/or another you are "not quite there". (The perspective and approach is empirical and concrete enough to be a clear basis -- via the major findings on the Memories -- of General Artificial Intelligence and its major, central, core algorithms. <-- **THIS WOULD BE TRUE OF A TRULY FULLY EMPIRICAL PSYCHOLOGY**, which only I offer (and thus such is **FINALLY** available). Instead of AI and cognitive psychology "modeling" information-processing and its theory, it is time for AI (and "models") to be based on the phenomenon of real discoverable behavior patterns (and regular, species-typical patterns of patterns).)

P.S. I have never liked anything supposedly "ecological" (it is very largely a mostly in-the-head (intuitive) set of [combining] ideas). Similarly, I have eschewed philosophy for decades, hating any thinking not put together ONLY bit-by-bit BY 'seeing'/discovering and understanding the real phenomenology of behavior patterns. YET, ironically I have come to realize that happenstantially I am a major philosopher myself -- but in a major way hoping "no one will notice" (read some of my essays on philosophy (its roles: 1 big (and appropriately "hidden") and 1 little) to understand).

Is there basically only ONE WAY for a true SCIENCE of behavior patterns (a true science of psychology)?

Psychology AS A SCIENCE (as good as ANY other "natural" science) is the study of (1) **ONLY behavior patterns, with at least SOME _MAJOR_ foundation(s) in/of OVERT, directly- observable behavior patterns, at least at key points in development (ontogeny) and at least at the INCEPTION of the new behavior pattern, _and_ other behavior patterns that retain clear OVERT aspects _AND_ (2) corresponding aspects of the environment** (related to either or both of those sorts of behavior patterns). THOSE 2 TYPES OF THINGS (behavior patterns, as just defined, and corresponding environmental aspects) AND relatively LITTLE ELSE, **as basically the entire field of study -- BUT with such "pieces" as those 2 aspects of proximate causation credibly further connected or changed ONLY by simpler processes**. I see the forms of **associative learning** as the simpler processes totally (otherwise) providing the links for behavior pattern connections or for

additional behavior pattern change. ****_NOW_**, THAT IS ALL; and, that is the only way to hold the field of study together and is absolutely necessary to avoid confusion _and_ to keep things clearly in terms of the sole and individual primary unit** (the single human) -- the only way to have a science like other sciences (which is not only more than desirable, but absolutely necessary).

As soon as **anything not directly in the category of such well-grounded and well-founded behavior patterns and their corresponding environmental aspects** (and simple associative learning) is "added in", by citing **ANY [supposedly] more indirectly-related OTHER kinds of [supposed] behavior- related evidence, NOT CLEARLY DIRECTLY RELATED TO the products of THE PROXIMATE CAUSES (above) AND/or simple associative learning, I see the field as then corrupted** (examples of other things not clearly related include some **neuroscience "findings"** and **"social learning"** <-- which is ALSO not completely founded and grounded in the individual Subject, as I say is REQUIRED (above)).

If my **requirements for science are not met**, here particularly in the case of Psychology: you should see that the **classic sort of psychology (as [just] the study of behavior patterns and related environmental aspects) HAS largely been abandoned.**

The "Human Ethogram" Project description is similarly amended with this clear (short) statement (all of the above).: [https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram- Theory](https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory)

Dear

Unfortunately, to understand the perspective which I am "coming from" involves reading a great deal of my other writings (all available on RG). I do not know if I could practically, or with any reasonable ease, summarize my overall perspective and approach in any short way.

It may simply be necessary to read my main stuff: the "Human Ethogram" paper (Article [A Human Ethogram: Its Scientific Acceptability and Importanc...](#)

) and the "Collected Essays" (

Book [NOW the nearly complete collection of essays \(RIGHT HERE\) _B...](#)
)

THEN, it would likely be helpful to read my Artificial Intelligence Project

([https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human- Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology](https://www.researchgate.net/project/Developing-a-Usable-Empirically-Based-Outline-of-Human-Behavior-for-FULL-Artificial-Intelligence-and-for-Psychology)) .

Why are the Major theories in Psychology the same as more than 45 years ago?

I have recently obtained most-'reputable' textbooks in General Psychology, Personality Psychology, Developmental Psychology and Cognitive Science and I have seen:

The ONLY theories represented among those in the "major theories" chapters ARE EXACTLY THE SAME THEORIES AS I SAW IN TEXTS ON THE SAME Subjects and TOPICS IN 1971.

This basically means that **NO theory developed in the second half of the history of Psychology is seen as "MAJOR"**. Is this modesty? I say "no, not modesty", but rather fear of putting forth what they cannot have true confidence in AS A MAJOR CONTRIBUTION TO Psychology -- at least 'they' have that much good sense. To put it in a meaner way: they cannot be reasonably confident that any new theory is either "general" and/or that it may not clearly contain "crap". By the way, for a theory to be "general" does not mean that it has to explain everything, but just that the associated findings APPLY TO much or most everything (as a main aspect(s) ("parts") of behaviors) OR, in other words, are a **major part of all that can be considered the science of psychology. **THUS NOTE: I don't want you to think there is an easy answer to this extreme mess.**** (Of course, no theory covers everything, though some may be seen as describing major parts of most everything: I personally do believe in "containing" theories -- where they have aspects applying to most all major behavioral patterns, providing a sort of "outline" of most major behavior patterns and behavior patterning overall -- and it's kind of good to have this outlook if you want a science.)

This situation (of now new Major theories) should most certainly be noted and its meaning and repercussions/ramifications and effects evaluated (I have done detailed evaluations for you in my writings -- thus, that is one place where you can look for the assessment).

Let me put forth Ethogram Theory as a significant (major) and significantly new theory -- a nominee for the Major Theories chapters. See:

<https://www.researchgate.net/project/Human-Ethology-and-Development-Ethogram-Theory>

Dear

I do partially see the point you are trying to make in your first paragraph, though a glaring exception is Einstein and no doubt there are other exceptions in other natural sciences (another possible example: the results of understanding genes much better in biology). (Can you even see Psychology AS a "natural science? -- if not, that is a huge sign of extreme problems.)

Regarding your second paragraph: All the theories you mention are notably flawed; Anderson's theory, which I provide a total critique of, is among the lesser or least flawed -- yet it is, in essential ways, fatally flawed (for ANY complete explanation)(an inherent limitation of continuing to try to simply "reason by-analogy"). I know the old version ACT* very well, that being the version I provide a full critique of -- in a larger paper, here on RG.

Newer perspectives, the socio-cultural and neuropsychology perspectives, are much flawed in their core and basic 'methods' of "interpretation". Notably: both areas fall routinely (nearly always) into using wrong and an artificial units of analysis -- in supposedly providing "understanding" of/for psychology from the other field (or sub-field) . Comparative psychology spends most of its time critiquing itself.

You are completely mistaken when it comes to the statement regarding, "foundation for our modern advances in Big Data and Artificial Intelligence ". **Most in artificial intelligence see that field as having progressed VERY little in its history (and what progress there is comes largely from the capacity for Big Data) -- "read up" a little in that field to see.** If we are not to use a double standard, I think the almost total lack of progress in general artificial intelligence illustrates how VERY, VERY little help **psychology** has been and how progress has been gravely lacking THERE.

50 years of lack of significant progress is quite a lot for a new "science", Psychology, in particular. That is half its entire history.

Finally, to me, your final statement that " Students learning these contributions from their introductory classes is a step in our progress toward a fuller understanding of mental processes and behavior" is largely not true. After such "learning" they are as much egg-heads and knot-heads as they almost ever were, coming closer to rightly understanding little more -- and not enough to make any clear progress, anyway.

Science people make notable progress with new-understanding SYSTEMS (aka theories), with notable progress not occurring just in "steps". "Steps", "complexity", and "we cannot do that [(whatever)] yet" all have become non-plausible reasons for Psychology's failures and VERY slow (at best) progress (and, it is more than conceivable that some "multi-discipline" and "multi-level" views/"approaches" actually confuse things and impede progress).

Do analytic philosophers ever do a "big job", like evaluating a whole theory?

NOTE: when I ask this question I am asking if analytic philosophers ever analyze a **whole theory in/of a separate, independent field of study** (and not a "philosophical theory"; **another NOTE:** here I am referring to a **science theory or a theory attempting to be, or presenting itself as, science.**) With all that understood: Again, then:

Do analytic philosophers ever do a big "job": evaluating a whole theory? If "yes", examples would be appreciated.

[P.S. If "yes" : I do have a related Project: <https://www.researchgate.net/project/Seeing-if-Analytic-Philosophers-can-help-with-bringing-attention-to-Core-Problems-in-Psychology-and-to-Specific-Core-Proposals-for-a-new-Approach> -- which seems worthy and which has been overlooked or neglected.]

Can/should Memories capacities & capabilities (types in a set, the whole set or any subset always operative) be seen separate from experience itself?

It seems to me that working memory (involving the episodic buffer AND some -- to all the types -- of the Memories) is constantly at work and is **our very experience itself**.

Thus, I cannot see how the Memories (with at least some of them always active, determining and "recording" experience -- which most prominently and significantly active, dependent on circumstances) can be considered something **separate** from our knowledge OR our knowing OR our awareness OR our conscious being (all those: inclusively), i.e. **as ANYTHING ever considerable as separate from experience itself**.

Correct? Seems to me such a dualism would be a most-major problem. (This may be the biggest and perhaps primary dualism of them all, in reality (phenomenologically), though the nature/nurture dualism may seem worse -- but the latter may be somehow related to the former and even may have to be somehow related.)

Yet, we do seem to talk about "them" (the Memories, usually called "memory") at times as just one aspect of who we are (we seeing ourselves somehow as more than that "one 'aspect'")(and "memory" as sometimes something to consider, and other times not), don't we? (BUT: Wouldn't this be delusion "incarnate"?)

In short, we never "just are" (nor are we in any other way): these mechanisms having capacities and capabilities are ALWAYS at "work" since we ARE biological beings, in every way (like other animals) and at all times.

The Memories are central to good psychology understanding (or progress) and to good science in this "realm". The other major consideration (to have any generally good understanding of our reality/animal reality) is innate-guidance of behavioral development (especially throughout ontogeny); and, the question becomes : how does the innate-guidance aspects of behavior emerge along with (or, actually:

"in") our other behavior patterns?; the fact of the always-present Memories can be an indication of the "acceptable" integral nature of emerging innate-guidance and why "perceptual shifts" become by far the likely candidates for what they (innately-guided behavioral aspects), along with other relevant behavior patterns, look like and ARE (<- including the "automatic" nature of our reality due to the past developments of the Memories and those "bringing forward" the very nature of what a good part of our reality looks like and IS).

Dear

I completely disagree with all of you. It **basically by-definition of the ACTIVE** episodic memory buffer, ACTIVE working memory, and the other types of Memory **which are ACTIVE, that it CANNOT BE OTHER THAN WHAT I SAY** -- which, **because of true research-based definitions, is BEYOND A simple CLAIM**. Let's see ANY OF YOU can present evidence and cogent arguments YOURSELVES (since YOU _are_ responsible for your own thinking): that active Memories (all the types of Memory, currently active) are NOT experience itself. You will not be able to. I believe the only thing you actually present evidence for is that **you are dualists** (in another one of the BAD senses) and are irrational dualists -- as most dualists are (if not all of those typically called "dualists"). I am not such a dualist.

If you think you can argue against my position, go ahead and try, but realize way the various sorts of Memories are defined by the research and how they (and "things") MUST BE, when they (whatever portion, **BUT ALWAYS SOME PORTION**) are ACTIVE. I believe your sort of argument cannot be based on definitions and any true understandings of the Memories, thus you are doomed to failure to argue against my position. **Active types of Memories ARE experience, itself. (I do not CARE how you "like to think", I care only about reasonable and necessary accounts of phenomenology, INCLUDING _ALL_ OF EXPERIENCE (itself, always).)**

General P.S. to ALL : Please do all your own arguments, as you ARE responsible for them and the fact-based data (actual data) they are "based" on (as "seen" by you -- though dualists may try to argue that THAT is something separate from themselves (even as seen and interpreted)).

P.S. for Micah Sadigh : While I can fully appreciate **your** statement, "**we can say that memory cannot be fully appreciated without understanding the context in which it was formed.**" BUT: The statement from the Article you recommend that " If associative information is encoded and stored in memory traces, the same associative information can be self-generated and used to guide memory searches, even if physical cues are not provided at test" is BOTH **patently false and ridiculous**; obviously the authors have no real appreciation for "cues" as **factors in/of the nature of active Memories**. Those authors **make other similar extreme and unsupportable assertions** (of the "if this, it can't be THAT sort). The article is mainly a display of "Western man's" huge biases (and dualisms), with **NONE** of the claims made being **necessarily true ****. (NOTE: [(and **HERE is where any actual more-legitimate confusions arise**)]: It IS true at times, and to a notable extent, that new aspects of at least special/important environments must BE SOMEHOW MORE [extra, i.e. more-than-otherwise-expected] **SALIENT**: And, Ethogram Theory provides the nature for/of the account for JUST THAT SORT OF THING. See under myProfile.)

I think (and it is noteworthy) that: Any chance of providing a complete framework for General Artificial Intelligence, **RELIES ON MY VIEW**; it seems clear to me that opposing my view is to

make General Artificial Intelligence IMPOSSIBLE FROM THE "PERSPECTIVE OF PSYCHOLOGY". I hope you all do agree we need a system in general Psychology which is (or can be) implemented by artificial intelligence; I would argue that THAT is the nature of an understanding which is clear _and_ true -- such can be "mechanized", given sufficient resources (<-- the fact of which almost "goes without saying" nowadays).

P.S. Just for Jin-Hui Wang : I pay no attention to arguments that try to connect behavior to neuroscience in ANY indirect way (as is often true -- related to the strong impulse humans often have to overgeneralize). I have written a LOT on how neuroscience is "over-valued" to "over-explain" (meaning: over-generalizing).

** Footnote to P.S. to Micah Sadigh: (Perhaps it could also be asked: what did people, like your authors, know back in 2001? -- though I, myself, do not much favor such arguments, "things" being older can possibly at times at least partly explain poor understandings. In any case, I shall not speak in the "language" of nonsense.)

Dear

I "rave" with complete consistency and good logic and based on either established facts or related to discoveries that could be made from the most reasonable, fully testable (verifiable/falsifiable) hypotheses, which are also the best empirical and well-specified hypotheses **. If that is the bases for one's position, one should "rave" on (but let's rather say: "continue to express their positions and approaches" (vs. "rave")).

Other kinds of positions allow for "carrying on" indefinitely and in a useless, endless, non-constructive manner: because they are based just on what someone has been told, what someone has read, or otherwise on mere unestablished "personal opinion" or presumptions -- all positions where one may well not know what he/she is talking about. (<-- This is all very typical of those in psychology, who take too little responsibility for assessing concepts; this is likely common in "philosophy" as well, where 'folks' don't even understand their own field.)

**FOOTNOTE: specifically describing what directly observable overt behaviors one should see

Dear

It seems that "scholarly arguments" have gotten Psychology VERY close to nowhere, **in its entire history**. (About the Article you cite: the one position of theirs I quoted **was -- for anyone with decent knowledge/perspective -- both FALSE and RIDICULOUS**. AND: I **could cite at least 2-3 more** that are clearly that way (and that makes most of the Article false and ridiculous, as I said). **This IS a scholarly matter**.

P.S.

Let me present just one more BIG piece of the "working hypotheses" crap your authors (of your cited Article) engage in:

One other notable irrational and often importantly false "hypothesis" or claim your authors (of the Article you recommended) make over and over shows a skewed or limited idea of WHAT CONCEPTUAL LEARNING MAY BE (and at perhaps especially important times/developmental learning points). Statements of theirs I present, below, indicate a lack of appreciation for the necessary fact that conceptual learning can **validly PUT MORE information (internal AND external) together**. Most readers will recognize that this often is not only very much the case, but IS CERTAINLY the case in some of the most important conceptual developments. YET, THEY WAY over-generalized and always put CONCEPTUAL DEVELOPMENT IN OPPOSITION TO THE current environmental factors. **Your authors ONLY say things like that quoted below: (this, they present, not as part of "the story", but as the only notable way things are/can be) (the following is quoting them):**

"Conceptual thought, according to this theory, is accomplished by an effortful suppression of one's processing of the ambient environment. Therefore, when memory retrieval is guided by interitem associations or by mental reinstatement of nonambient environmental cues (i.e., thinking about places other than one's current environment), such conceptually guided retrieval causes suppression of the environment in which retrieval takes place."

Your authors basically say this over and over AND **NEVER mentioning any mental (cognitive) processing that does not occur this way**. Here is another one of those "choice" statements your authors make: (again, quoting):

"In accordance with Glenberg's (1997) idea that the environment must be suppressed for conceptual processing to occur, we propose that one's default policy is to encode immediate environmental contextual features in memory traces and probes." AND:

"...Given some effort, the environment CAN [(← capitalization added by me)] be **suppressed to allow better conceptual processing** [(bold added)]. Thus, if subjects engage in extra [(??)] conceptual processing during learning to encode interitem associations, it MAY [(← capitalization added by me)] result in little or no encoding of the environmental context." AND:

"Conceptual processing at the time of learning CAN [(← capitalization added by me)] cause environmental suppression, limiting the degree of contextual encoding in critical memory traces, and thereby diminishing the effectiveness of reinstated context cues."

Somewhat on a "positive note" but STILL using only their ONE 'hypothesis' in this sort of situation, too, they say:

"The reinstatement of context cues, which are encoded by default [(see relevant quote from them, above)] in memory traces and probes, should benefit memory for information learned in the reinstated environment."

I would ask: If Subjects are simply "reinstating" the context of what once was their "present

environment", then WHAT THE HELL ARE THEY "LEARNING"?? AGAIN

(quoting):

"mental reinstatement of nonambient contexts at either learning or test CAN [(← capitalization added by me)] diminish the effects of ambient context cues, the mental reinstatement hypothesis." **One could now, also ask, IF THIS IS THE ONLY POSSIBILITY MENTIONED, then why do they seem to implicitly limit their claims in their statements to a "CAN" or "MAY" (i.e. maybe)-type situation???** Always, a similar statement qualify things, while mentioning NO NOTEWORTHY ALTERNATIVES (this occurs in **several of quotes of these authors, saying "can" or "may"** -- see quoted statements, ABOVE and below): Here it is AGAIN:

"contexts at either learning or test CAN [(← capitalization added by me)] diminish the effects of ambient context cues".

Here is a couple more times they make their only type of assertion (having ONLY the one "hypothesis") in other explanations:

"if associative processing at input causes suppression of the environment, little or no environmental context will be encoded and stored in episodic memories, which is consistent with the overshadowing hypothesis" **Almost ANYONE can validly imagine things being different than this !**

Here's another one, repeating their skewed one-size-fits-all, often preposterous "hypothesis": (quoting them again):

"If learning contexts are mentally reinstated by subjects even when they are tested in new environments, then context effects should be diminished or eliminated." THIS IS AN ASSERTION DIRECTLY IN OPPOSITION TO THE IMPORTANT TYPE OF CONCEPTUAL LEARNING I DESCRIBED (involving 'seeing' more and an important putting-more-together)(ABOVE).

Plus (relatedly) they go on to say what many ordinary clear-thinking, logical, aware people will find preposterous (a least at certain distinct times ; and, recall, this "way-it-is" is the ONLY possibility these authors believe deserves taking note of):

"Recognition tests should therefore show even less context dependence."

(Well, bullshit !) AND, in the same vein (but "going on"), they support previous "research" and say:

"memory cues provided by recognition tests MAY [(← capitalization added by me)] encourage subjects to mentally reinstate the learning context (see, e.g., Bjork& Richardson-Klavehn, 1988). The limited cues provided by free recall tests, on the other hand, MAY [(← capitalization added by me)] be less likely to encourage mental contextual reinstatement." (!!! ???) **People often rightly know this is at least often not the case.**

Have you had enough??? Now let me tell you why 'researchers' and 'theorists' have such problems (my "Collected Essay cite MANY other related problems): The cause of their problem is clear to me: The authors are basing their understanding on **underlying likely-false, unproven pseudo-**

'assumptions' (PRESUMPTIONS) about human nature, which I discuss at length in my "Collected Essays". One pertinent presumption involved is their/the BELIEF (and that is all it is : an unproven _BELIEF_) THAT: there are NO innate-guidance factors/aspects in behavior patterning for conceptual development any time after infancy IN ALL OF later ONTOGENY (2 - 18 years old). And, thus, then also, this would continue to be "true of adults" -- since we often use what behavior patterns we have developed throughout life. Obviously, and more biologically consistent and more likely, I believe the OPPOSITE, re: innate-guidances (factors/aspects IN behavior patterns).

Have I done, now, a sufficient "scholarly" job???

[Sorry my editing of this essay went on for at least 2 hours.] It is time

for your "scholarly" retort!

Dear

FIRST, I believe, that Psychology has to have a true connection to Biology (more accurately, it **must BE: Psychology AS Biology** -- since behavior (act. behavior patterns) **MUST BE AND ARE BIOLOGICAL FUNCTIONING**).

This has to be the case **before ANY interpretable OR meaningful "bridges"** to physics, or even to biochemistry, can be made. (Kuhn recognized the need for such "bridges".)

To put it another way: the quantum or physics "stuff", and even the biochemistry "stuff", are presently so uninterpretable (because of a total LACK of clear connections to behavior patterns) as to have the status of speculation (at best: speculation about SOME "type" of future connections with biochemistry and with physics).

[I have 600 pages+ of large papers and essays (all related), here on RG, explicating and explaining many aspects and particulars of my perspective and approach -- INCLUDING hypotheses which are as clear and empirical as possible and testable (verifiable/falsifiable).) **THIS is the was to have FULL consistency of principles between Psychology and Biology** -- instead of the crazy dualisms we have today.

My writings are ONLY about Psychology, with a classic sort of definition (all being about ONLY behavior patterns and enviromental aspects -- new behavior patterns being affected BY BOTH, as proximate causes).]

Dear

You say: "[we have] no valid idea of the mechanism behind memory ". Fine (as an assessment so far; but now it is time for Psychology's real history to begin).

The processes as well as the becoming-extant "structures" and skills have ALL to be purely discoveries IN HOW THE MEMORIES WORK (and what thus must also be); you may "want" more, but you do NOT NEED "more". You need to have more appreciation for the possibilities of discovery (PERIOD). That's all. We MUST BE "phenomenological", even if we coined the term (no special privilege for "coining"). 'Western' "wants" for "definitions" are often both invalid and misleading.

Is what is taught in colleges/universities skewed (often implicitly) toward what people (incl. professors) just believe or what they want to believe?

I say a big "Yes" (big time, big time). And there is VERY LITTLE TO NOTHING to counter MOST of this phenomenon **at all** [(but, then again, you do have me)]. (For example (with some humor): Perhaps we "kan't" live without Kant because that sort of outlook is all we are given (several other philosophers' names could substitute in this statement, but then we lose the pun).)

The institutions are truly institutions in some of the **very worst ways**/senses. Always, and it really seems like this will be the way it is FOREVER ; e.g. look at Psychology and the history (and philosophy) OF Psychology -- a loser as any sort of science; **we have not even clearly seen behavior patterns as biological functioning, which, of course they must be and ARE (<-- doing this is probably one of the very first steps in Psychology becoming anything like a real science** (which I BELIEVE IT COULD !); and note: I HAVE done this for my perspective/approach -- I see the/a way for Psychology as a natural science).

Now, if the problem is so clear (at least as I see it): ask yourselves: why is there no concern for a solution?

Dear

Sometimes a consistent observation (consistent, repeated observations) comes before any research.

My real motive: I am glad to answer this. What I am really concerned with is whether professors (and, in particular -- since it is my area -- psychology professors) **HAVE PERSONALLY PROCESSED WHAT THEY TEACH**, so SUCH-AS-THAT is what they are teaching students. I have personally seen and assessed quite a few cases where there was really **NO SIGN that Ph.D. level college/university instructors had TRULY, THEMSELVES, processed major topics/issues in their subject area** (as I just indicated, and see below) -- and this was over the period of many, many interactions, with several such teachers. I guess **THAT is the key observations**. This cannot be interpreted as "fake news" in any way.

In short, really and clearly, it is an issue of existential responsibility.

I see such professors as **ROBBING THEIR STUDENTS _AND_** they tend to be **very unhappy persons** as well (**a true level of existential responsibility seems to be necessary for personal happiness, thus they also seem to have "robbed" themselves**).

I believe I have now pretty well "spelled-out" the general/common core of the problem. AND: I think that **personal responsibility** for one's subject matter is something those **hiring people for college/university teaching COULD ASSESS _AND_** this is NOT limited to just an area(s) where the candidate has done new/special research -- where interviewers can be "fooled" -- but involves big things (like: how do you view the ontogeny of behavior?). I believe this is one **SIGNIFICANT, REAL, KEY [FACTOR] for progress in a field.**

This very issue I raise IS definitely related to the "trustworthiness" of the material presented and the quality of instruction (it is the essence of transmitting an ability to learn HOW to learn).

I truly hope you, Paul Ernest, can see my point. I hope you are good and are happy.

P.S. to all: If there is any doubt of whether you (as a professor) have thoroughly fulfilled this existential (ethical) responsibility, the answer may well be: "no". In short, inasmuch as the phenomenon I describe is the case, arguing against it would be arguing against basic, fundamental ethics.

Dear

I often do provide an answer to my own questions. I use the RG Q-and-A facility to present several essays (and many are not so much Questions -- esp. when I start a thread (i.e. with a Question)).

In this thread:

I am generalizing from my experience, but it is not a very limited experience and it is not (knowingly) any sort of select experience (though no randomization is involved). To present several issues, this is the way one has to do it.

As long as one is presenting what is true or may be true in one's general experience (and that experience is not ridiculously limited or counter to certain Realities), but presented as just what it is, there is nothing wrong with it. And, again, that may be the only way to go. **AND: Many things yet have to be presented that way for other reasons : even formal scientific things when the field is skewed away from what must be (or would very-much most likely is) true _AND_ from doing anything that would find this out.**

After-the-fact some of my presentations may be "truisms" BUT I believe they are still things not thought enough about or recognized enough or not clearly or completely thought about enough. Some of these influence a lot of Psychology (so these things must be examined). People often fail to stay true to reality or possibilities -- many which are important. The fact that realities ARE realities still often must be recognized or ... (Ignorant neglect of issues -- even of key issues -- to the point of delusion is not that uncommon, in my view.)

You fund that research you talk about and I will find some good people to take responsibility for it. Otherwise, you have nothing to complain about.

Dear

And, with regard to many other fields, I do not really have as strong (and critical) a view; in fact, if asked about certain other fields, I would likely say I have no opinion; yet, problems in academia in general do not seem totally unlikely, so I am comfortable with the way I asked the Question (and answered it). Still, it is true that with Psychology and social sciences, my view seems to be most relevant. I do KNOW, as much as possible to now know, there are grave problems in Psychology (many would likely hold for other social sciences).

Your disagreement with me does not bother me and is in no way discounted.

P.S. About Psychology: I would be willing to say the problems exist in all Western countries (at least): this is based on my assessment of the REASONS for the problems, prominently including Western philosophy.

Dear

I like what you said, but with the exception of "choosing the model". I believe **no truly fully empirical scientist, or as fully-as-possible empirical scientist, should DEFINE anything OR choose a MODEL**. That all must be done (in a VERY real sense) by the Subject, itself: i.e. **both definitions and models come from direct observation of overt behavior patterns (and/or related behavior patterns, clearly grounded and founded on observation of KEY, determining overt behavior patterns)**. Thus, as a result, behavior patterns are only defined by their context : clearly related to other behavior patterns, i.e. behavior patterns are defined by **other (and JUST IN TERMS OF OTHER) concurrent or existing behavior patterns** (e.g. surrounding behaviors).

As far as models go, I simply do not like them UNLESS they are clearly and only descriptive of the behavior patterns of organisms (the Subjects) and are seen as **of the nature and form of biological phenomena** (i.e. consistent with biological principles, where the organism SHOWS behavior **PATTERNS**, and those show or clearly indicate biological principles, such as homeostasis).

I not only firmly believe that outlined above, but believe it to be a **LOGICAL and realistic necessity** in the world-and-experience-as-it-is : Anything else (other than that described above) is corrupt and bound to stay that way or become more corrupt; but that is exactly where Psychology (all of it) is today (the following outlines "why"):. Unfortunately to accomplish what I just described: Psychologists (theorists and researchers) **MUST EXAMINE THEIR 'ASSUMPTIONS'**; **several** of these, when examined, turn out to be incredibly presumptive, poor-founded, poor-grounded, unjustified AND **UNPROVEN (and likely FALSE)** -- **_AND_ they are fatally destructive of any reasonable, reality-based perspective (or model)**. In my many hundreds of pages of essays on RG (several places in there), you will find these presumptions (pseudo-'assumptions') clearly noted, "spelled-out" and delineated/delimited; AND in my RG essays you will find the distinctly more **biologically-consistent (and more likely-true) alternative REAL**

assumptions (all these also made clear). From that: the "MUST" behind seeing behavior patterns and the defining of all behavior patterns in terms of other concurrent or pre-existing behavior patterns; and, **you will see how** behavior does show the nature and form of biological functioning *, and well- conceptualizing and noting that, a **real model** of human behavior can develop. (Hypothetico-deductive systems are to be used when you are FORCED TO, and NEVER (except for small predictions) JUST USED AS YOU WANT TO. This is a principle contradicted by our culture -- our philosophical views, their history and history-in-culture.)

FOOTNOTE: As you must know: behavior is a aspect of biological functioning (no dualism). It is very hard to see or know this from any current Psychology or their models. So, it is simply time for good Psychology to begin.

Dear

I believe my answer, above to Olena Kalantarova , addresses what you need to hear. Professors **must** have the necessary principles (and well-founded assumptions) to see **HOW to discover**. This is where my certainty is: only with logical necessity, realistic necessary, and necessary consistency with Biology.

It is, no matter what the cause, WRONG to not examine explicitly and expressly: presumptive, poor- founded, poor-grounded, unjustified AND **UNPROVEN** 'assumptions' that are actually MUCH-used (and "at play") AND NOT TO CONSIDER THE BETTER ALTERNATIVES. Yes, I have absolute certainty about that and that the true real (and likely sufficient) FOUNDATION of all understanding of behavior is in terms of behavior patterns/patterning and ultimately ALL in terms of **directly observable overt behavior patterns (and/or related behavior patterns, clearly grounded and founded on observation of KEY, determining overt behavior patterns)** . These are **my absolute certainties** (that including the necessity of personal conviction, immersion, and responsibility (**existential and ethical responsibility**) to DO just that).

P.S. Orlando Lourenco, You addressing me and noting what I have said, you say (quoting): "You say, that the institutions are truly institutions in some of the **very worst ways**/senses. Are you not overgeneralizing?" **No, not with respect to Psychology.** [(But, with respect to other fields, perhaps [at least to some extent] "yes". But, my views are likely the case for all social sciences.)) I believe my detailed characterization of Psychology is **ubiquitously true**: that which bolsters of ALL modern Psychology IS WRONG. And, on certainty : I believe I have addressed this (what I am certain of -- really, just what is necessary to be an actual empiricist and scientist) above and in my extensive many (and many pages of) essays available here on RG.

So many "diverse" perspectives & 'approaches'

to Psychology, some supposedly with research: isn't it hard to believe central & important can be found?

I believe we need standards to look at psychology and "psychology" to not get confused or misled or falsely enamored, and to have standards to see what Psychology views and approaches **have good standards themselves -- when and as properly evaluated.** Thus, we may see some of the better perspectives and approaches (so evaluated) and "pick up" from there.

Otherwise the amount of confusion and imaginative misleading (or self-misleading) that can go on may very well be great -- and the morass and confusion will only remain and likely get even worse.

I would be happy to see some presentation of such standards for evaluation/empiricism. **I know I provide some empirical standards expressly, explicitly, and clearly.** Do others value such systems- of-evaluation?: do you find some, or know of some and use them, and/or perhaps possibly present some? (Clue: a very strong commitment to the very best possible empiricism should be involved -- including **always**, for all phenomenon addressed, **some clear connection to some key directly observable overt behavior patterns** AT SOME POINT IN THE DEVELOPMENT OF ALL THEIR MAJOR BEHAVIOR PATTERNS (**THAT cited**) and (likely) other lesser processes in behavior change (as hypothesized) made explicit -- that aiding in maintaining all behavior pattern change 'seen' (and connections) explicit and as at least close to being "all clear"; WITH ALL, noted above, making it possible to understand all that is noteworthy the same way and with great consensus: seeing the basic major species-typical results, in the same way -- this is known as inter-rater or inter-observer reliability -- really MUCH more important than statistics. (I think it is fair to say: THIS, much more than the one mere technique of experimentation, IS SCIENCE; this will at least soon, or eventually, involve validly DISCOVERING and thereby finding true assumptions and principles, which is central to all good thinking , and certainly to all good science.) This would be good, wouldn't it? Is it too much to ask, especially in Psychology's problem situation?; I do know most thoughtful psychologists do see a problem situation in research and/or theory (and do not see "things" getting better).

If only I do much of this or am one of the few that do it well, you really should read me (I provide some major papers and a large Collection of Essays and more, totally over 600 all-related pages, all available through RG).

It is getting so bad, that **some good justification of a view/approach should ITSELF, in its own presentation, take the time (with each presentation), showing that it is amenable to such evaluation (as described above)** -- given the situation, this is not asking too much, but likely just asking for what is required.

Help yourselves (and maybe let me help you., too) AS INDICATED -- it is really an existential responsibility (maybe an existential method), and should be done.

Dear

I see the peer-reviewed stuff as limited and skewed (and enforcing some authoritarian positions). Correspondingly, much GOOD (that exists) CANNOT BE FOUND IN THOSE JOURNALS; and, it seems more-and-more of what is there IN THOSE JOURNALS IS not only select and limited, but also terrible "crap" , ACTUALLY DEFICIENT ITSELF -- especially perspective/theory development, foundation, justification, the "principles", grounding and explication, of "things" -- ALL OFTEN (if not typically) never well done. (I do understand that the journals are major sources of pride for researchers and some theorists, and you have few others; but you could be much better existentialists, and take more responsibility to do better, yourselves: See my "Question" post, beginning this thread. AND: Certainly, you realize that one cannot count on what that exists to make things right - - and, for many reasons, THAT is extremely true in Psychology. All my related writings (i.e. **all my writings, available through RG** will , if you read them, MAKE THIS CLEAR.)

Another major problem with what you say is in your statement, " There is no a prior validation or exclusive experimental evaluation ". I only wish there were no a priori "validation" but I see the entire field of psychology 'automatically' and thoughtlessly, and in a way unknowingly: using presumptions as pseudo-'assumptions' from the "culture" (esp. old-time philosophers) AND requiring all working in the field with them (BIG e.g. students) to NOT evaluate, but use these these poorly founded, very poorly grounded, AND UNPROVEN pseudo-assumptions. I write about this at GREAT LENGTH explicitly and present (also explicitly) alternatives, which are more-likely- true principles assumptions (totally consistent with Biology).

I also must say that experimentation in reality is **greatly too much favored (with what to have to experiment on not at all reasonably set up** -- i.e. understood in other, more-important AND NECESSARY ways first).

I am mystified at this (yet another attempt) to indicate "all is okay", when it seems (to me) the VAST MAJORITY of good Psychology theorists and researchers seem to THINK HAT ALL IS NOT OK. Thank goodness, that in responding to you, I again can note huge problems with the status quo. Basically the same things I said about "peer-reviewed" journals (the "peer-reviewing, being NO type of real safeguard) can be said about conferences, ETC. (which you also noted). I do see you (as you present yourself here) as an illustration of "part of the problem."

P.S. Is your " an inter-subjective process " something special and other than "cooperation"/communication; it seems you see it as some magic "process" that confers something more, and better, on the "process". [(The "process" is more like authoritarian autocracy than any as you present it.)]

P.P.S. Next time I want to hear "the party line", I will consult an encyclopedia -- with very little concern about how old it is. (The way professors and students are operating, this will be true maybe for another 100 years.)

[I am now away for a few days, so if any responses from me are needed, it will have to wait a few days.]

Overall Assessment Gen Psych/Developmental Psych THEORY: Is it a way to clearly definABLE 'Structures' & Processes Allowing Explanation of Prodigy?

While a new theory with its **Memories' capacities/natures/capabilities, _AND_ WITH realist innate guidance aspects coming into behavior patterns** throughout ontogeny, may well be easiest to find and show true with species-typical expressions of cognitive developments and abilities: this does not mean these same factors and the same progressions and the same essential [(essential for the theory)] **progressive behavior patterns (structures and functions) VIA appropriately developed (consolidated and integrated) Memories could not set-up and thus allow-for the SAME innate- guidance factors: FOR their emergence _AND_ that being the KEY EMERGENCE OF what's [also] needed (in/for new behavior patterns) _AS_ NEEDED * : ALL VERY LIKELY may potentially be found in the same sensible, discovered and defined SEQUENCES for explaining the behavior patterns of prodigies** (as that of normal people; and, thus that which is true for all members of the species in a distinct demonstrable, fully empirical and scientific way).

Only ONE THEORY of human cognitive development does this: ETHOGRAM THEORY. Thus the **rest of them, all of them**, however hypothetical in/with their constructs (of processes and the some- how development of stable, central points of knowledge and skills) AND even allowing that they OFTEN have both no direct evidence **and NO** direct empirical grounding (I.E., are without clear foundation EVER, none at all [<-- which is totally empirically/scientifically unacceptable]) in direct observation of overt behavior patterns, **STILL**, with **all those allowances (and all that, thus allowing "cheating")** VERY SERIOUSLY are **no-fit complete losers**. If you find enough reason and see enough reality, and have any appreciation for discovery and consistency with Biology, you will KNOW BEYOND ANY REASONABLE DOUBT THAT THIS IS TRUE.

* FOOTNOTE: At least the new key aspects of behavior patternings showing in directly observable overt behavior -- **AT LEAST** AT THE INCEPTION OF EACH NEW BEHAVIORAL PATTERNING.

P.S. Any more "theory" or "model" is too much not only for Reality, but also for the development of General Artificial Intelligence -- 2 "things" much-related, to say the least. I'll let you think about what I mean be "too much" -- you'll "get it" !

Quote of the day: Surely less is not always more, but very often LESS [IS ENOUGH] AND ALLOWS FOR MORE.

Why and how is great toleration for, and [in fact
**, often] great pleasure for, and satisfaction
with, great "complexity" worse than
masturbation?**

Why and how is great toleration for, and [in fact , often] great pleasure for, and satisfaction with, great "complexity" worse than masturbation?

OFTEN, though we really can or [maybe even] could never understand, much less imagine, real complexity -- **EXCEPT (in some way) if rightfully, SYSTEMATICALLY, EMPIRICALLY- BOLSTERED BIT-BY-BIT** -- it is still **cited as the "wonderful" reason we cannot now (and maybe never) understand things**. Keeps us **going with "the best we can do" (even if empiricism is abandoned and seemingly for no good reason -- as so often HAS happened/DOES happen)**.

Our "theories" **still fill our minds** and do part of the job and provide **vague, marginally-at-best 'testable'** hypotheses (really, at best, for just [temporary] utilitarian purposes OR for ourselves or our ilk), AND certainly not so much (if any) to discover some "big pieces" in the nature of Reality or discover more, BUT **JUST TO "EXTEND" our "theory(ies)" or the application thereof**.

Basically equivalent to "pleasuring oneself", though clearly worse.

One could also be an idiot, ignorant, or insane (any or all 3) and perhaps have something very much like this view : and, be filled with the complexity one goes to again and again in one's mind (or with one's mind). **Let's get our mind OR any mind integral in seeing such "complexity" OUT OF IT.**

[One could also be an idiot, ignorant, or insane (any or all 3) and NOT be limited by needless complexity (to be fair to the good handicapped, as indeed is appropriate).]

Truth is: much "complexity" (to be most generous) is a way to handle, cope with, and [often] enjoy CONFUSION (perhaps arrogantly and pretentiously). There is inherently some element(s) of ignorance and even delusion in such a view which always accepts or must accept "complexity". The view (if the word is used or understood wrongly) LIMITS ONE GREATLY. Yet THIS is SO VERY COMMON.

Let's spot them. Let's stomp them out. If we are not making the progress we rightfully seek, let's quit being immersed in such "complexity".

[note: this is a Psychology question] : Will the Crow become Extinct ?

If Ethogram Theory is correct and so MANY others have been so VERY wrong for so VERY LONG (and they will actually seem to have been quite stupid): Will there be enough crows on Earth for all the wrong-believers, wrong-teachers, and wrong-doers to "eat crow" ?

("Eat crow" is an expression whose meaning can be found at:

<https://www.google.com/search?q=eat+crow&ie=utf-8&oe=utf-8&client=firefox-b-1> .) [The counter argument to Ethogram Theory -- and perhaps even its serious examination -- is so long in coming, I thought this "provocation" might now inspire the consideration needed. (I could add: Analytical philosophers: what's wrong?, are you "yellow"?) My apologies, but I have nothing more to "put on the table".]

ETHOGRAM THEORY (a core theory for general psychology and developmental psychology [and for personality theory and psychology]) (i.e. a core theory for Psychology in-general, as a whole or in any major "part"): This may be the route to real empiricism and to Psychology as a natural science; consider it _OR_ "suffer on" with unintelligible fragmentation and no real continuous progress, and other serious SCIENCE failings which presently -- as the case in the entire history of General Psychology -- indicate a LACK OF SCIENCE, i.e. lack of good, real assumptions and overall empiricism (true empiricism essentially being something yielding a type of self-monitoring and self- control needed to maintain communication and veracity and overcome ignorance -- and even delusion); the empiricism NECESSARY is described in the Project and its major papers and the collected essays -

- read ALL to fully understand and to "get to" and understand the KEY hypotheses. :_

<https://www.researchgate.net/project/Human-Ethology-and-Development->

And, see especially:

https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses_an_early_MUST_READ

and

https://www.researchgate.net/publication/322818578_NOW_the_nearly_complete_collection_of_essays_RIGHT_HERE_BUT_STILL_ALSO_SEE_THE_Comments_1_for_a_copy_of_some_important_more_recent_posts_not_in_the_Collection_include_reading_the_2_Replies_to_the_Comm

Is psychology now a good science, and if not, how might it become one?

Some say "scientific psychology is not an infant discipline". With this, one misses the clear specifics of what is wrong: (1) theories of development (and personality) are not expressly of a **biological nature, where they show** abidance with **biological PRINCIPLES** -- that is one thing that should be considered STEP ONE to having a decent (or mature) theory of behavior; (2) psychologists continue to falsely dicotomize **nature and nurture** when the best minds have said this is **NOT the way** it should be considered (for decades) -- so this is another feature of poor/immature theory (in particular, today's typical psychologists have **NO conceptualization of innate factors and learning happening at exactly the same time (SIMULTANEOUSLY)**, when that may be precisely what's needed -- AND psychology provides no way NOT to rule out this likely truism, though psychology has **only the support of philosophy and NOT the support of research** for its beliefs); (3) there is still a **presumption that all innate factors in behavior are present in infancy** (and there is absolutely **NO evidence that this is true**) -- failing to do any reasonable investigations to prove or disprove this assertion, makes psychology a crude and immature discipline. (4) There is the **baseless assertion that the more "advanced" an organism, the LESS innate guidance** -- again, there is absolutely **no reason to believe this** (and until put to the test, and this **limits conceptualizations and TESTS of modern "theories"**).

In short, psychology is a "victim" of **presumptions and false assumptions** (and actually **often accepting CONCLUSIONS as basic assumptions**), as fully shown in "A Human Ethogram ..." (source of paper, indicated below) . NO perspective of this nature could be considered other than poor and in an "infant state" . Another clue: researchers and good theorists do NOT do the defining; **the subject matter , well-observed, provides your definitions (just as in other sciences)**. This should count as **MAJOR start-off failure (5)!** Thinking ONE must predetermine so much makes me think : old-time philosopher, NOT A SCIENTIST (start with some **good inductive work and forget about hypothetico-deductive systems UNTIL CLEARLY NEEDED.**)

In summary, psychology has **bi-passed basic tests of its foundational beliefs** (I shall not even dignify with calling these assumptions -- because there really has been **NO REASONABLE TRY** to find and set well-founded assumptions and no tests show that the presumptions adopted are correct (or otherwise); **WHERE THE "ASSUMPTIONS" CAME FROM IS WRONG**).

Re: In what sense, if any, can psychology be a good science?

You can surely try to do psychology in a completely empirical way, and likely reliably and validly discover the systems -- that is science. To start: Recognize behavior as biological (like the functioning of the lungs, etc.); have a system that expressly has biological assumptions as a foundation. Then, try to see all that might be **most relevant** to get a valid (real) broad outline of the phenomenon of human behavior (**the major "containing behaviors" -- to which other behaviors appear to certainly relate**).

I propose here looking for the foundations of qualitative change (cognitive developmental stages) in perceptual (perceptual/attentional) shifts (that is all that is needed as they "come up" in an already adaptive behavioral complex/context). Do this in an absolutely empirical way by looking in eye-tracking data for the real bases of each major qualitatively different sort of categorization/conceptualization that we do; recognize that the ultimate bases of **everything that develops, including our most prized abstract conceptual abilities, are very likely and potentially observable, i.e. concrete (in their inception)**, using the new eye-tracking technology. Maintain the highest inter-rater reliabilities for what you see/find.

Abandon all useless or unsupported dualisms like nature/nurture and stages vs. continuous development: abandon them for looking to see!! Know that it is indeed possible for learning and innate guidance to occur (in effect) **simultaneously -- this has been argued for by the best thinkers for 40 years**. Recognize that there are qualitative changes (or shifts) and do not get "hung up" on whether they appear rather abruptly (stages) or seem part of **some** continuous process. [I would like to add: **avoid unsupported presumptions**. A big example here is the idea that the more "advanced" an organism is, the more learning there is **AND** the **less innate guidance -- the last part of this "belief" has no basis in any good science**. There is **no such thing as "pure learning", NONE !**]

Look, look, look. You have the technology to see and to find patterns (its called "eye-tracking" technology and "computer programs", respectively). If you do not try what I have outlined, then you have NOT tried and may very well never have good science or real science (that could well be your consequence). Are you an empiricist or not?; this will determine if you are a scientist. Try empiricism! I have outlined the WAY for you.: See the paper, https://www.researchgate.net/publication/286920820_A_Human_Ethogram_Its_Scientific_Acceptability_and_Importance_now_NEW_because_new_technology_allows_investigation_of_the_hypotheses?ev=project , and see the "Human Ethology and Development" Project, <https://www.researchgate.net/project/Human-Ethology-and-Development>

(Reading the essays underneath this "Human Ethology and Development" Project will give you any further needed perspective (e.g. on memory capacities) -- see advice in the latest Log entry of this Project.)

AN ETHOLOGICAL THEORY OF HUMAN LEARNING

A MODERN THEORY OF LEARNING, a cognitive-developmental, neo-Piagetian, ethological theory -- based on the methods of classical ethology

The perspective below is to orient one to basic cognitive-developmental human ethology and provide a research outlook for studies in that area.

This outlook, I believe, allows for continuous growth of knowledge in some basic areas of psychology. The heart or essence of it is "defining each behavior of interest in terms of the behaviors of the same organism surrounding it." This gives one a self-correcting mechanism in ones approach to understanding -- the most important contribution of classical ethology. Add to it the basic knowledge we have of emotions and emotional development and you can have an outline of a meaningful perspective on learning and meaningful concept of "learning" -- brad jesness

An Ethological Conceptualization of Learning:
Learning in terms of the interrelated development of basic capacities.

Every significant behavior change is now thought to involve learning. Learning and innate aspects of behavioral change are now conceived of as partners in the developmental and adaptational process (Gould and Marler, 1987). They are not even thought to be clearly separable at this point in our understanding of human behavior (Anastasi). Their partnership usually occurs in such an intimate and close time frame that they cannot be contrasted. With regard to the most significant behavior changes, such as stage shifts in cognitive abilities, one cannot see the great extent to which each is involved, and it is impossible to say which is most important: Is whatever "pre-wiring" we have most important or is it what's acquired -- that which involves interaction with the environment and at the same time between our basic "capacities" -- that's most prominent? These are serious questions. And so are the more detailed questions: What is the initial expression of the most important innate action patterns? When do innate action patterns appear? If they are not all present at birth (AND I BELIEVE THEY ARE NOT), how do they manifest themselves as they emerge during ontogeny? AND: What are the basic capacities (if any) that have relatively constant characteristics or similar interrelationships across development? Which types of capabilities most reflect that which is accrued via experience and with development and what is the nature of the changes undergone?

Learning, like other topics in psychology, concerns behaviors that have innate and species-specific characteristics. Learning is frequently said to be "constrained by innate factors," but as far as developmental questions are concerned, it is IN FACT DEFINED in large part by such factors (Johnston, 1981). And, as such, it is involved in all the most significant behavioral changes. Learning as a topic involves the most "microscopic" look at behaviors, in the wider discussion of processes of significant behavior change. Learning may be the most important topic by far, for environmentally-induced behavioral change certainly seems to be key to quality adaptation in all areas of responding.

Learning may be defined as changes in those adaptational processes susceptible to experience and due to changes in these processes occurring singly and/or in an interactive manner. There is no pure acquisition (reality does not just progressively impinge itself) and there are no arbitrary acquisitions. Acquisitions must be retained. Clearly there are innate and species-typical processes involved, and fortunately for the human behavioral sciences, general laws to be found.

It should not be surprising to find that it is impossible to discuss learning in any detail or with any generality without asking what basic processes are involved in the bit-by-bit behavioral acquisitions which characterize learning. How many types of processes are there and what are their basic natures? I will try to outline what I

see as the basic types of processes, their basic character, and which aspects of the processes remain relatively constant and which change systematically, reflecting what in fact has been accrued.

First, the organism always has perceptual biases and response biases. These are interrelated and both change significantly during development.* These related processes precede [other] cognition and cognitive processes, including the major aspect of cognitive processing -- representation (to be discussed soon). The proper understanding of these processes (perception and response biases) can come only with proper definition. And, objective definition is obtained only when the environmental *and behavioral context* in which the important features of these processes occur have been specified. Behaviors (OF THE SAME ORGANISM) preceding and those following a behavior of concern must be identified. This will become more and more important with ontogeny and will be true of the other processes to be discussed as well.

In addition to having perceptual biases and response biases, in general, we have memory. Memory at first seems to be of the immediate and may thus be said to have just a short-term aspect. But with experience, the organism interacting in consistent manners with the environment will begin to respond to structure and systematic change in the environment. This shows recognition memory, and soon recall, both characteristics of long-term memory. This capacity, like short-term memory, is limited, BUT INDEPENDENTLY (Brainerd and Kingma, 1985). After some point, "processing space" for short-term memory little influences the processing characteristics of long-term memory, though it is also limited *at any given stage of development* (the matter of stages to be discussed soon).

This is not all that happens. New response characteristics emerge. As structures and occurrences are recognized, new aspects of stimuli are related or are related more consistently (i.e. reacted to in a "different way"). This is not arbitrary. This may be best viewed as determined by new "perceptual biases" and related response biases. The most significant perceptual shifts, I believe, are the first occurrence in, and that which sets into motion, a new developmental stage. Yet this kind of perceptual shift occurs only every so often with regard to any given set of related stimuli to which we respond (Fischer and Pipp, 1984). There are possibly as few as five stages of development in major response areas (Freud, 1965; Ginsburg and Oppen, 1978; Jesness, 1985).** How are acquired behavioral adaptations guided in the mean time?

At this point we could type different sets of behavior and note the characteristics of their changes, BUT this would violate the standards we have set for objective definition of a behavior-of-concern. We will be better off considering the basic processes we already have and look for further features of these that determine behavior change. One factor has to do with the fact that development of long-term memory takes time. And, the way it develops may show phases. Most important: There are aspects of what we recall that are *worth keeping conscious*. Consciousness requires response time and uses the scarce resources of short-term memory and much affects other responding. I would say this phenomenon of consciousness occurs for either of two reasons: (1) Further stimuli which are novel or of different varieties must be noted (and possibly, eventually recalled) and these are related to things already remembered (recognized or recalled) OR (2) things to be remembered *in much the same WAY* as past experiences (already remembered) will be encountered (i.e. similar environmental structures will be encountered (Griffin, 1981)). (Some of (1) and (2) is probably related to the fact that some stimuli impinge on us via less salient sensory modalities or through less salient combinations of modalities. These aspects of stimulation could become conscious later yet may still be related to some basically similar type of relationship we know (and can remember) when it has been found through other modalities.) The aspect of long-term memory of which we are at times able to be conscious is a good broad definition of *representation*. The nature of representation will change much during development and some of that of which one is conscious as a child will become aspects of awareness or totally automatic in the older child or adult. We still must include these aspects in our understanding of representation. We now need to ask what phases there may be in the development of representation, this important aspect of long-term memory and the most important capacity in significant behavioral change involving experience.

First: *In a given type of circumstance* (or "set of circumstances") it may take time to usefully retain and represent all the necessary static and dynamic aspects of the situation. To say this in more reductionistic

terms: It will take time for all the stimuli of different salience to occur a sufficient number of times, given our perceptual/response biases, and time for them to be *responded to consistently* . An entire phase of development within every stage could be related to such developments AND, as indicated before, such may well vary in timing somewhat based on the salience of sets of stimuli involved in *different* circumstances. Second: Next, one's attending (and responding) selectively to certain aspects of immediate situations (ultimately related to perceptual/response biases) eventually may allow one to relate new things separated in space and time. This is another characteristic of memory and retention and eventually of representation. The latter may show two aspects: (1) an ability to imagine *sequences* of occurrences (the more important ones often involving your own behaviors or potential behaviors) and (2) an ability to see similarities across circumstances (Lucariello and Nelson, 1985). These two reciprocal aspects of memory development and representation can result in there being a second phase during each major stage of cognitive development. This too, for adaptive reasons (and for adaptive purposes), takes time. I do not have the space to speculate on the details here. In any case, all changes in representation will be manifested by systematic alterations in perceptual/response characteristics.

Now, finally, I believe one must discuss stages. The processes of memory and perception and the response biases and differences in stimulus salience, all already discussed, cannot (I believe) account for the progressive, *hierarchical* nature of development (Bowlby, 1982). Development has some invariant stages (descriptively speaking) in which some problems involving representation cannot be understood or cannot be understood reliably. Furthermore, it is just such reliability or consistency which is necessary for the further development of long-term memory processes, including representation. How does one get such consistency, adaptively, AND what is the parsimonious outlook? My answer is that we have stages, defined by new perceptual/response biases, emerging during ontogeny. Such perceptual shifts within an adaptive behavioral complex can have powerful effects indeed, and especially so when it is proposed that the changes in learning also involve progressive memory developments (with phases). The perceptual biases, as indicated before, may differ from one set of related stimuli to another and thus the timing of stages may vary to a degree for different types of responses. It would also seem appropriate to look at this in terms of the timing of aspects of stages. Although what the "sets of related objects" are has not been well delineated and how the timing of developments may vary between them is not clear, there are indications of some common synchronies and some general (overall) stages seem to be defined by these (Corrigan, 1983). In any case, the perceptual biases trigger a series of effects, given some of the more consistent characteristics of memory, and these result in a new level of representation and consciousness of new problems. All this allows for another series of developmental changes, such as already described. It should be clear from the outline of ontogeny given above that a general principle applies to learning: Behavioral development involves selective adaptation and eventually consistency of response. A variety of experiences will, in the normal course of adaptation, all be encountered even as consistencies are found.

I believe one can point to two aspects of behavior (broadly speaking), spoken of above, that change most in their characteristics during development: (1) the set of perceptual/response biases operative and (2) the elaborateness and precision found in representation. The changes in these capacities are systematically related. A MAJOR CONSISTENCY throughout development seems to exist with respect to short-term memory. While this type of memory *may* vary with development by 20-30% in quantitative capacity in terms of the number of "chunks" that can be dealt with "deliberately" (increasing with development), this change does not seem tremendously significant (Case et al., 1982; Dempster, 1981). It is clearly not much that's most salient that we can process at one time even late in development. This is especially startling given the large quantitative differences over development in the detail we respond to and in the length of sequences of responses we exhibit. "Quantitative capacity" may be *roughly* synonymous with what's often viewed as "working memory", if this is defined as that that we are conscious of in a given situation and at a given moment. But this has little to do with information processing overall. There is always awareness beyond consciousness (in the narrow sense) in significant situations and much processing of long-term memory (some of this related to representation) occurs outside normal awareness.***

Other characteristics of memory change in a manner adaptively congruent with changes in perceptual/response biases and with the changing nature of representation during each stage or phase. These

changes should have less specific effects on significant learning and should be of a less radical nature. These changes will be definable in terms of the effects they have on responding.

FOOTNOTES:

* I would say at the outset that I use an unconventional definition of "perceptual biases", but this would be misleading because I believe that modern conceptualizations of the field of perception are arbitrarily (unsystematically) constrained.

**With reference to Piaget's theory, I should note that I consider his 2 phases of the Preoperational Period to be stages in the same significant sense as the S-M Period, the C-O Period and the F-O Period are stages.

***Of course psychologists may develop awareness and consciousness of things not normally subject to such through unique and sustained observations. Obviously, much of this will be awareness, etc. of things as they are for the child during development and how this fits into the "bigger picture".

REFERENCES:

Anastasia, A. Heredity, environment, and the question "How?" *Psychological Review* , 65, 197-208.

Bowlby, John (1982). *Attachment* , 2nd ed. New York: Basic Books.

Brainerd, C.J. and Kingma, J. (1985). On the Independence of Short-Term Memory and Working Memory in Cognitive Development. *Cognitive Psychology* , 17, 210-247.

Case, R., Kurland, D.M., and Goldberg, J. (1982). Operational efficiency and the growth of short-term memory span. *Jour. of Experimental Child Psychology* , 33, 386-404.

Corrigan, R. (1983). The Development of Representational Skills. *New Directions for Child Development* , 21,51-64.

Dempster, F.N. (1981). Sources of Memory Span Differences. *Psychological Bulletin* , 89, 63-100.

Fischer, Kurt W. and Pipp, Sandra (1984). Processes of Cognitive Development: Optimal Level and Skill Acquisition. In: R. Sternberg, (Ed.), *Mechanisms of Cognitive Development* . New York: W.H. Freeman & Co.

Freud, Sigmund (1965). *Three Essays on the Theory of Sexuality*. New York: Avon Books.

Ginsburg, H. and Oppen, S. (1978). *Piaget's theory of Intellectual development* , 2nd ed., Englewood Cliffs, N.J.: Prentice-Hall.

Gould, James L. and Marler, P. (1987). Learning by Instinct. *Scientific American* , January.

Griffin, Donald R. (1981). *The Question of Animal Awareness* . New York: Rockefeller Press.

Jesness, B. (1985). *A Human Ethogram ...* , Key Chapters and Sections. Indexed in Resources in Education, Nov.
Jesness, B. (1986). *Info.-Processing Theories and Perspectives on development ...* . Indexed in Resources in Education, May.

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Review of I. Eibl-Eibesfeldt's Human Ethology (1989)

Published in Human Ethology Newsletter 1990 No. 13

Review of I. Eibl-Eibesfeldt's

Human Ethology.

New York: Aldine de Gruyter, 1989. £50. ISBN 0-202-020304.

pp. xv + 848. By Iremus Eibl-Eibesfeldt.

Reviewed by Bradley Jesness.

I commend and congratulate Professor Dr. Eibl-Eibesfeldt on what seems to be another great work. It is in many ways an appropriate sequel and extension of his other great work,

Ethology, the Biology of Behavior. The new text promises to be a classic, invaluable text on human social behaviors and adaptations.

But, as is true among psychologists, there seem to be those with interests in social behavior and those interested in cognitive processes and cognitive development and these seem to be fundamentally different (or at least separate) perspectives on Man. E-E is the master of human social ethology, in my view.

He is a great classical ethologist, but he (like American psychologists) is only of one of the two fundamental persuasions. I, in contrast, take the other basic perspective.

Of course humans, while most highly social, must still understand things and function by an large for themselves. True, our social relationships allow us to specialize and do just one type of work or another, but with that we have our own separate representations of the world and our own thoughts. These, like social behaviors, are rooted in, innate action patterns. Cognitive processes, moreover, no doubt accrue more and more rooted in and based on further (emerging) innate perceptual/response biases during ontogeny. It is likely for this reason most cognitive developmental psychologists can see stages (during development) as real, and do not view them as arbitrarily specified for convenience. As I have indicated in my papers (e.g. "An Ethological Conceptualization of Learning", in the Newsletter,

Sept. 1987), this outlook on stages fits well with the growing understanding of human memory. This brings me to my point. Those doing basic research, like those investigating memory (work largely done by "information-processing" researchers now) and those looking for signs of cognitive developments and trying to define the nature of such things would profit greatly from using a classical ethological approach. Unfortunately this is not encouraged as much as it should be by E-E's text. The great professor seems to pretend his book is more than it is. With

the title, his introduction, and the beginning chapters he indicates his text is a comprehensive introduction to human ethology. I see it as very skewed. Those doing basic research in developmental psychology, noted above, are likely to continue in the same way they have and the progress of these groups is likely to slow due to an over-emphasis on a hypothetic-deductive (vs an

inductive) approach (as is common in psychology in general).

Unfortunately, an understanding of the essentials of ethology is very, very rare indeed among psychologists (in my experience, non-existent). Those who claim to understand this science do little different in the way they define factors or variables of interest, showing with that no real understanding. Ethology, when truly applied to human behavior, results in such a fundamental shift in methods and defining variables that it

amounts to a scientific revolution (what Kuhn has called a paradigm shift). E-E is a major figure in this revolution. He and some others have shed much light on social behaviors and emotion and their work promises more and more.

Unfortunately, little is available in way of a transiation (or transposition)

of the terms of classical ethology for the purposes of investigating cognitive developments and few ideas on how ethology might specifically be applied to this area Now, with the way E-E begins his new text and then with an examination of the contents of the chapters that follow, we get the idea that ethology is largely for understanding babies, social life, and social phenomenon. I would have entitled the new text *Human*

Ethology, Volume 1: Social Adaptation. Volume 2, on the ontogeny of basic capacities would, hopefully, still be forthcoming.

Central in this would be the development of representation, basic cognitive ethology. This gives a basis for more refmed social relations and adaptation as the organism matures and generally would show how the biological unit takes care of itself. Needless to say, I do not think E-E's tiny section on behavioral development (ontogeny) suffices.

At least in U.S., I know of no ethologist who is also a cognitive developmental psychologist. It seems psychologists are not ethologists *and* as far as much major basic research is concerned ethologists are not psychologists. Among those most notable doing basic developmental research are the cognitive developmentalists. Arguably, the richest data and most basic, detailed yet central fmdings are associated with the work of Jean Piaget and those who followed him. These are both the most robust and general findings in all developmental psychology and have many implications. *With ethology* this approach would provide endless opportunities for the advancement of our knowledge of the basics of development and the myriad ramifications.

Already modern neo-Piagetians have embraced the findings on short-term memory and long-term memory and

have examined the nature of "working memory." (These findings may well be the other major set of robust, significant central data in developmental psychology.) For rapid, sustained and continuous progress, I am confident that all that is needed in basic cognitive developmental research is ethology. In my view it is absolutely necessary to have a merging of the two perspectives. I wish professor Eibl-Eibesfeldt had done much

more to encourage this. I believe that while encouraging classical, ethological research in some major areas of psychology, progress in understanding all aspects of human behavior will be slower *than it might have been*, if E-E was clearer about the extent of his work and more mindful of psychology in general.

Many view questions about human representation and cognition as central and see the need for the highest quality research

in this area.

THE FOLLOWING MATERIAL IS ESPECIALLY FOR GENERAL ARTIFICIAL INTELLIGENCE:

I tried to find all my researchgate essays in Questions and Answers that I see as having to do with memory.

There may be some redundancy. I hope I found all the posts (if I did the material below may well summarize all I presently know about memory).

Regards, Brad

When it comes to thinking, the deliberate (clear, conscious) parts of working memory are essentially the same (quantity-wise) as that of short-term memory: 7 + or - 2 "chunks". Now, there are major memory capacities providing a LOT of CONTEXT for working memory -- this gives you a lot of the "environment" you are working in/thinking in, but beyond yielding their "triggering" through selective attention, these contextualizing aspects of our experience are not much under our control -- though they may change, even quite quickly, with processing (but this is basically just selective attention/perception at work again).

Consciousness exists for 2 reasons: (1) when you need to know something in a given circumstance, such material triggered from the types of memory I shall note in a second comes up (a lot of this people believe much of this is unconscious, and some may effectively be, but it is at least often better to consider this non-conscious material from episodic and personal, visual-spatial, declarative, and procedural memory, as PRE-conscious: you could likely be aware of at least much of it, if sufficiently and properly prompted and primed). (2) There is the consciousness of deliberation (this is often called working memory) and though it is contextualized by a great amount of the stuff already mentioned (the sorts of memory already listed -- as triggered by each aspect affecting others, and as it is also, of course, dependent on current actual context of what's in your environment) and the limited number of things on which you can expressly deliberate on (7 + -2). It is also depending on what gets through the episodic buffer, and inhibition processes to allow proper focus on the proper things are also involved (and this uses some of that limited capacity). YET often the most important thing about this type of consciousness is indeed the 7 + or - 2 "chunks" you can manipulate clearly to deliberately think about "however" -- and wherever it comes from. (Fortunately, There are also automatic rehearsal loops that get involved for stuff you need to know, including, for example, the phonological loop for language aspects but also for spatial and numerical stuff). And, ways of dealing with information you have over-learned and proceduralized also aids and expands the processing of which you are capable (but this is not so deliberate) and this and "old chunks" of declarative (conceptual) memory (much of this which is not deliberate) can be re-worked IN the deliberation process (including the new content there) to create somewhat different "chunks" and this allowing for the contents of this consciousness changing; activities you do in the present circumstances also 'help' this and make for change. This is basically my understanding.

In addition to "contextualizing", long-term memory also provides access to well-developed procedural and declarative memory. Also there are some helpful automatic rehearsal "loops". And, "mirror neurons" that facilitate learning sequences. LTM includes episodic memory (including personal memory) and spatial memory. Some kind of sequencing facilitator (which may be considered part of episodic) includes the marking of time and basis of number understanding. There are also very important response inhibition capabilities at work.

The episodic memory is a buffer to what is recalled and activated from long-term memory (i.e. declarative and procedural memory and the other capacities). There is also the first brief aspect of memory, known as "sensory store" (holds a lot but very briefly).

Here's one you probably have seen:

(1) There are basic memory processes that have notable constant features (e.g. working/active memory and short-term memory). Other aspects of memory (long-term memory, including the contextualizing background effects to working memory) do always change (sometimes even in big ways -- in stages -- qualitatively) with learning/development, but they do retain and have distinct types of characteristics. Thus we have a couple clear definables and other capacities which have more-or-less definable natures plus definable qualitative changes.

(2) What leads to the qualitative changes in the content-mutable aspects of memory (in particular long-term memory aspects) are the very factors (perceptual/attentional) that cause shifts in stages and that work hand-in-hand with all major conceptual learning (literally occurring at the same time). At first, these "embedded" aspects of perception/attention and some new major learnings are only sensorimotor, that is in the first year of so of life. Other stage-shifts involve perceptual (or perceptual/attentional) shifts and there are about 4 more of these but they are not just sensorimotor, as now conceptualized. These would be definable through eye-tracking research (just now possible) and would be expected to occur at approximately 2 yr., 4 yr., 7 yr. and 12 years of age. These perceptual/attention shifts not only intimately affect learning (occurring simultaneously with new, most-significant learning) but they [also (correspondingly)] alter the nature of the most-mutable LTM (e.g. episodic memory and spatial memory).

These things, and somehow working in emotional patterns (less complex), would allow for an operational AI system to be much like a human (that is what is meant by AI, afterall).

NOW, more of what you may not have seen:

This is pieced together from about a dozen replies to questions, where just parts of this grand perspective were presented at a time. I now try to piece them together to give you the full perspective: (Most of this was originally presented to artificial intelligence people, and you can see that in some of the writing.):

If I was to try to make an AI human, which at its core involves a complete understanding of REPRESENTATION and its development, part of what I would model is all the basic capacities: basically all of the several types of memory, at their most developed levels and at their lower levels, but call upon their use only at the level of conceptualization where they are needed or MAY be active. Specifically, the basic cognitive-related capacities of the human -- other than the emotions (which are simpler and easier to model, and not addressed here) are: (1) short-term memory (STM)(pretty much limited to thinking about 7 + or - 2 "chunks"); (2) working/active memory (expressly used, i.e. deliberate): this is pretty much the same thing as STM, but with the background/context of the thought coming from long-term memory: being imagery, etc. (the context which is not deliberate) including human spacial representation, episodic representation, personal memory (sub-part of episodic), sequencing facilitator (which may be considered part of episodic, and includes the marking of time and basis of number understanding), declarative memory, procedural memory and auto-rehearsal loops (e.g. a major one for rehearsing language to remember). The episodic memory is also a buffer to what is recalled and activated from long-term memory (i.e. declarative and procedural memory and the other capacities). There is also the first brief aspect of memory, known as "sensory store" (holds a lot but very briefly). [I will leave AI programmers to look up all the terms, like episodic declarative and procedural, since decent definitions exist. Model all these, in their proper relationship (which is not hard because they become active as appropriately triggered).] Do NOT use any of the "meta" concepts in the literature (meta-cognition, central executive, executive functioning/processing, "mind reading", "future seeing" (aka "time travel" aka special forward thinking), theory of mind, etc.), since these are both artificial and unnecessary concepts (and basically involve a 'homunculus' -- i.e. a man within the man). More regarding the "metas": It is not necessary to postulate such things and they can easily be explained by "more of the same". Let me tell you what I mean by "more of the same": once you understand the thinking (conceptual/representation/memory) process <-- just more of that, with more "information-seeking" as a result, accounts for all the supposed products of these metas, etc.

This does not mean we do not occasionally talk to ourselves or that we do not occasionally think about our thinking -- just that this is no kind of over-arching control system needed or likely.

Again, all those meta-type concepts are basically a 'homunculus' (a man within the man) and thus clearly a fiction. Let me make a Buddhist-type statement from which you might find a bit of inspiration, here: "To know that you know things is simply part of knowing things; to control what you do is simply part of doing." This kills the 'homunculus'.

The main thing that is left is understanding the basic and similar nature of the objects of perception (and attention) which are the foundations for each of the 5 levels of conceptualization (aka representation AKA abstraction): each which is more than what was before AND uses the well-established memory (LTM) of the key or core of the previous stage of conceptual development as its units. (The first stage of conceptual development has a totally sensori-motor basis.) The nice thing about these stages (and the associated levels of conceptualization) is that all of them continue to be able to operate, even after the more abstract levels have developed (e.g. it has even been recently shown that physics professors when under great mental load irrationally fall back on earlier types of representation just like lay-people, which results in errors). (Levels of representation, levels of concepts, and levels of abstraction are pretty much the same thing.) The upshot of this is that you can try an instantiation of a higher level of conceptualization and, if that is not appropriate or does not work, fall down to the next lowest, or the next lowest again ... etc. Also it might be good to have your AI machine work up from each low stage to the next higher, etc. to see what is most properly applied.

Noting a limited capacity is very important; except for the very significant "background" contextualizing memory stuff: working/active memory is limited to 7 + or - 2 "chunks" (in that way, much like short term memory (STM)).

The one big thing I have yet not told you is the differential nature of the beginning of each level of concepts created -- from the perceptual (perceptual/attentional) shifts, which are innate action patterns, as are the emotions. The differential nature of the 5 levels of things (concepts, "chunks") created are outlined in my paper, "A Human Ethogram ..." (available on researchgate.net). The contents of the "capacities" develop with these.

Active consciousness is using deliberation and deliberateness on that of which one is aware, all ultimately grounded -- for its activation or responding -- in the environment (and related to environment, past and/or present). Consciousness otherwise is just awareness (with what one is aware of having the same nature): the processing or response here may not be clear; perhaps it is just rehearsal for memory (strengthening what they call declarative or procedural memory or episodic or personal memory or sequences or automatically rehearsing sound patterns or spacial information). Yet, again, all this awareness (that of which one is aware) is related to the environment (like consciousness, acted upon).

We are self-aware necessarily in our interactions with others (for cooperation, functional reasons). Otherwise we are just aware of what we need to consider to take better action (including review of our own representations of things, which not infrequently also includes comparisons of our

representations to that imagined of others). But this is all functional (hopefully), though many people inordinately mix the first type of instance with the second type of self-awareness I described (and this is sometimes helpful and sometimes likely not). In any case: Like any other sentient organism we are self-aware (in either type of instance) because it is an adaptive response to the environment (or the best we can do). No other sort of "self-awareness" need be posited.

One thing I have been tempted to say often is that there is, in reality, no difference between 'conceptualization' (using all the various aspects or our memory facilities (spacial, episodic, sequential, declarative, procedural, ... which we do use)) AND 'abstraction' -- except the latter seems loaded with artificial (and even fictional, imaginary) pretense.

You ask: What is consciousness? What is its nature and origin?

Well, I will address what it is for; that will indicate its nature and imply its origin. Consciousness exists for 2 reasons: (1) when you need to know something in a given circumstance, such material triggered from the types of memory I shall note in a second comes up (a lot of this people believe much of this is unconscious, and some may effectively be, but it is at least often better to consider this non-conscious material from episodic and personal, visual-spacial, declarative, and procedural memory, as PRE-conscious: you could likely be aware of at least much of it, if sufficiently and properly prompted and primed). (2) There is the consciousness of deliberation (this is often called working memory) and though it is contextualized by a great amount of the stuff already mentioned (the sorts of memory already listed -- as triggered by each aspect affecting others, and as it is also, of course, dependent on current actual context of what's in your environment) and the limited number of things on which you can expressly deliberate on (7 + -2). It is also depending on what gets through the episodic buffer, and inhibition processes to allow proper focus on the proper things are also involved (and this uses some of that limited capacity). YET often the most important thing about this type of consciousness is indeed the 7 + or - 2 "chunks" you can manipulate clearly to deliberately think about "however" -- and wherever it comes from. (Fortunately, There are also automatic rehearsal loops that get involved for stuff you need to know, including, for example, the phonological loop for language aspects but also for spacial and numerical stuff). And, ways of dealing with information you have over-learned and proceduralized also aids and expands the processing of which you are capable (but this is not so deliberate) and this and "old chunks" of declarative (conceptual) memory (much of this which is not deliberate) can be re-worked IN the deliberation process (including the new content there) to create somewhat different "chunks" and this allowing for the contents of this consciousness changing; activities you do in the present circumstances also 'help' this and make for change. This is basically my understanding

Unless a researcher establishes the use of guiding innate action patterns during a number of stages of coming-to-be AND realizes and implements learning associated with past OR past and present innate guiding patterns, they will be doomed to failure. Knowledge of the basic memory processes is not hard to get and is very necessary (these are the basic capacities which are tools the developments I just described use -- and which develop "to different 'levels'" BASED ON such stages and standard learning). Several of the aspects of learning are aided by simple, basic functional (helping) features of these basic memory capacities (e.g. auto-repetition loops), and while they are always operating in similar ways, their content (developing "chunks") are qualitatively different at each stage.

Outside of the 2 unique characteristics of my view and my view of the basic capacities (very much shared with others), I posit then: within those contexts only associative (/dissociative) learning -- basically the type of learning seen for decades by behaviorists, but experimented with foolishly BY them (looking for general patterns and laws based on on their "rewards", given the organism (as they imagined him to be), and given their "schedules of reinforcement" -- thought to be meaningful per se).

P.S. The in-stages "perceptual shifts" (perceptual/attentional) are discovered longitudinally using the new eye-tracking technology. You can see how this is just finding things as they are -- pure discovery, very much inductive. And, the changes to the basic capacities and the learning that occurs also are not presupposed in any way, but also discovered as they are (again, clearly a primarily inductive, naturalistic observational process).

P.P.S. Some in efforts to model the human, demand a good working definition of consciousness.

Active consciousness is using deliberation and deliberateness on that of which one is aware, all ultimately grounded -- for its activation or responding -- in the environment (and related to environment, past and/or present). Consciousness otherwise is just awareness (with what one is aware of having the same nature): the processing or response here may not be clear; perhaps it is just rehearsal for memory (strengthening what they call declarative or procedural memory or episodic or personal memory or sequences or automatically rehearsing sound patterns or spacial information). Yet, again, all this awareness (that of which one is aware) is related to the environment (like consciousness, acted upon).

If it is impossible to rationally/realistically describe consciousness as any "more" than this, then AI will be able to show consciousness. Again, many would say: what of emotions? These are just patterns of reaction to qualitative types of things in the environment (or to the representation (and awareness) thereof), the basic ones: quick and often automatic (for adaptation). Basic emotions are not very complex; the more interesting emotions develop following (or with) [other] cognitive developments (and may be much less quick or automatic). Thus, these too would not inherently limit AI.

"Consciousness" , at least any particular instances of it, need not be ill-defined.

Epilogue

The core science assumptions for cognitive behavior, as for all behavior, MUST (a) be BIOLOGICAL principles (behavior is biological, at its very roots) and (b) one must discover definitions and better definitions by inducing (inductive reasoning) from raw complete-enough naturalist observations of the organisms itself. No unfounded analogies and no presumptions based on pre-conclusions of one's ad hoc hypothetical-deductive lines of thinking (and over- quick concluding, which especially goes on with deductive systems, by their definition -- and, in these cases, their premature definition).

My system of develop in "A Human Ethogram ..." is BIOLOGICALLY based and correspondingly all the most major behavioral developments are defined in the terms of classical ethology (using the full set of the terms of this science).

Some say: "... behavior analysts are not interested in cognitive phenomena. This is not because they reject the existence of private events, but because they argue that cognitive events cannot be observed; only its behavioral outcomes." We must over-come such an outlook.:

In a MAJOR WAY I say this is not likely true. I believe they reject wrongfully and shortsightedly and, really, their objection is not on objective (empirical) grounds. While you cannot see all aspects of cognition you CAN see each new major aspect as it develops with ontogeny (this is a VERY reasonable argument). These may well "show" in only subtle perceptual (perceptual/attentional) shifts, but with modern eye-tracking technology, they can be discovered. If longitudinal studies are done, after finding all the "bits" of conceptual representation related to clear perceptual shifts (and taking the very reasonable assumptions in my human ethogram paper), then you can basically know all of the nature of the covert cognition (even of an adult).

I am totally in agreement with the view that "the conscious human being that perceives, thinks, creates and acts does so according to its immediate environment" -- even if a person is sitting, doing nothing, and yet doing a lot of thinking. Once we better understand conceptual development (representation) and the results, we can have some idea of the possibility of his thoughts, knowing the type of concepts possible/likely. We will also find that though the immediate environment is a trigger, that past experiences, especially past experiences very close in time are involved (because of the humans very good conceptual and memory capabilities).

It may be hard to see how particulars could be in themselves the bases of conceptual development, but we must recall much representation/memory comes into the environment with the perceiver. Presently there is a misconception that thoughts can be "purely abstract" and that stages of abstraction (conceptual) abilities cannot be grounded in simply new particulars in the present environment. There is absolutely no reason to believe this and it is counter to being an empiricist. We can imagine literally seeing new particular aspects of our environment and thus begin the development of a new level of conceptualization.

Whether we have things that look like stages or they develop smoothly from one to another -- either way we have STAGES of development. The idea (any idea) of "pure' learning" is preposterous. We can totally eliminate the nature/nurture debates by realistically accepting that in great likelihood any significant learning involves innate guidance, whether new or whether well internalized as patterns in our responding (and likely usually both). This is the only empirical stance.

Do read all 3 of my papers in the "Human Ethology and Development" Project, starting with the shortest (summary), then "A Human Ethogram", and then finally, "Information Processing Theories and Perspectives on Development". (Actually, if you read this present paper, you can skip the short summary paper and proceed directly to reading "A Human Ethogram" .)

To find out more of what is accomplished with this perspective I have presented, see the Project Goals of my "Human Ethology and Development" Project and any information (additions) in the timeline (updates) of that Project.

All explanatory perspectives must conform to the established limitations of working memory (and have conscious and deliberate development occur there, by its increments). Outside of the episodic memory context and other well established contexts/procedures, working memory basically is like short-term memory, limited to 7 + or - 2 "chunks". AND, in an important way: All that has to be done has to be done there; if too much is necessary and is new one can expect some innate guidance, which (in my view) can be as minimal as perceptual biases (conceived broadly and conforming to major necessary patterns 'seen').

Only my developmental psychology theory (ethology) credibly integrates 'innate factors' & 'learning' so BOTH simultaneously have effect (see all

my writings available via researchgate.net). The BEST other dev. psyc. theories do is talk about 'learning' involved & talk about 'innate' involved & do so separately, back & forth repeatedly. PLUS: My ethological cognitive-developmental psyc. THEORY (innate/learned) does it with absolutely the most empirical (grounded-in-observable) approach possible. It only recently has become totally possible to verify the hypotheses.

I do not think there are good definitions of meta-cognition and executive processes; they appeared (historically) and appear now when the people trying to model cognition need something like this for their model (in good part, given the nature and constraints of the model); it has little to do with the actual behavior at hand. No particular clear, general behavior is behind the generation of the concept and it does not appear to be necessary in an account of behavior; it is quiet conceivable that just better assessment of the subject's knowledge, representation, memory, and experience could show the needed imagery or consciousness to yield the [(let's call it ->)] the further thinking [(<- to leave it more open)] of the subject.

P.S. The 'needed imagery or consciousness' involved (in the last sentence of my last reply) would involve some sort of additional information-seeking (broadly conceived), including more use of perceptual processes or of memory - ALL ultimately based in present or past experience and development (including identified, or yet-to-be-identified species-typical perception/categorization -- all, too, at some time related to overt behavior). This, friends, is the ultimate empiricism of ethology (where there is much inductive work involved before one develops their hypothetical-deductive systems). Also, we can fully end the dualism of 'innate' and 'learned', with all significant behavior always very, very likely involving BOTH, AT THE SAME TIME (if we just get 'real' about things).

One "upshot" of what I am talking about here (in this present post), would be the total realization of an empiricist and scientist that there's nothing "abstract" in way often imagined - rather ALL skills are developed with/via key overt behavioral aspects. (Unfortunately, meta-cognition and executive processes involve a disconnect with the organism totally consistent with a view of a sort of truly arbitrary abstraction and a kind of abstraction which is fictional -- and, actually, the 'hypothesized' executive

Another quick P.S.: All explanatory perspectives must conform to the established limitations of working memory (and have conscious and deliberate development occur there, by its increments). Outside of the episodic memory context and other well established contexts/procedures, working memory basically is like short-term memory, limited to 7 + or - 2 "chunks". AND, in an important way: All that has to be done has to be done there; if too much is necessary and is new one can expect some innate guidance, which (in my view) can be as minimal as perceptual biases (conceived broadly and conforming to major necessary patterns 'seen').

In addition to the abilities to acquire and apply knowledge (structured information) (basically a matter of memory ("the mind") AND things that are newly developing, perhaps in an easy manner), there is also the matter of inhibiting action to "consider what to do" and thus have a new view (learned/developed) and perhaps a new overt response. Thus, much doing appears to be not doing (at least not doing other things that would be and have been readily available in one's repertoire). This kind of ability to inhibit [normal OR other alternative] actions must be "part of the story" and thus somehow explained. Inhibition of at least certain types is much related to intelligence.

Unless you conceived of some actions as not-doing, which is fine and good (properly contextualized and properly motivated), this may be something that may need more prominence in your theory.

Inhibition helps bring the questions of WHAT is motivated (a least with respect to some new, different or complex things) into focus (and HOW that has come to happen) -- matters of big interest (new motivated discriminations, so you do not respond as usual and DO 'see' new things or things anew).

"Thinking" (formally: cognition/cognitive processes) likely includes all the relevant automatic or near-automatic contextualization of content that goes on supporting (and that goes "into") working memory, <--where significant changes are made. The contextualization includes both long-term Memories (as relevant) (i.e. both declarative and procedural) AND often significant visual-spatial memory AND the episodic buffer (as an initial major filter for contextualization, changing dynamically, as WM needs to change, and then "drawing on" the other major Memories again). (Some automatic rehearsal loops and some 'time' (timing) mechanisms should also be considered involved in "thinking".)

Thinking as so conceived is quite dynamic in all regards mentioned, as working memory is, and it is largely to subserve working memory. (Of course, working memory adds content or arranges content and/or sees patterns, including sequences -- all yet to be integrated and coordinated into the well-developed knowledge, understanding and skills we have or will have.)

P.S. No reason to distinguish, functionally, STM from working memory. And, all the "meta"-this and "meta"-that _AND_ the [other] "executive processes" do not exist, as presently conceptualized; they are the homunculus (man-within-the-man) fiction, for the most part

"Consciousness" , at least any particular instance of it, need not be ill-defined. I do hear how consciousness is "poorly defined", but I think this is another instance of people "biting off more than they can chew".

Note: There would be a lot for people to gain if they explored my more recent Questions and Answers, pertaining to AI (go to my researchgate.net Profile, then look under Contributions and then look under Questions and look under Answers). A lot of justification for the view and explication of the veiw can be found there.

Dear

I did a first reading of your expanded AI paper (the one you told me about this morning).

I still fear that memory is not central enough in your conceptualizations. One thing I see implied is the EXTERNALIZATION OF THINGS, which actually really very much involves the individual organism AND the 'internals' of his memory (AND memory changes over development). Especially: (1) "perceiving percepts" (these are NOT in the environment, but through interaction with the environment OR the triggering of internal thought by aspects of the environment (few necessarily present). (2) "Rules", these are both understood progressively and agreed upon progressively AS THE INDIVIDUAL ORGANISM DEVELOPS AND INTERNALIZES SOME ASPECTS. You cannot substitute external stimuli for these (for one reason, much is not THERE; rather, much is brought forth by memories).

Now, when I (and psychologists) talk about memory we are really talking about EVERYTHING (and this is true even of the poorer psychologists who do not understand development). Literally, nothing of any significance is not mediated by memory and developed as the structure of memory develops, BOTH. I believe not only to capture the human nature of relations to others and his relationship to the environment, but just to come to understanding of the necessary and sufficient triggers for conceptualization, YOU NEED MEMORY. (Again, what is used is NOT all present at any current moment in the environment -- except for infants or toddlers.)

Skills, knowledge, and thought are very largely OF memory (only partially triggered environmentally -- and less and less directly connected to the environment as the organism develops -- and eventually the aspects have multiple meanings, depending ...). Memory is never just memory, but is MEMORY USED. All of the following are uninterpretable without the role of memory: (Do NOT think just of causal memory, but memory in the largest sense, in the largest possible role -- which indeed is the sense it has in reality.) Greatly also involve in/with:

foresight
perceive percepts
Knowledge Representation and Reasoning
forecasting of the development of the environment
imagination
change its parameters
under the influence of the environment and due to internal processes
learned concept of group interest
planning
priorities
collective rules
"distance of possible interaction" with ... signal generation available to them and their
perception
frequency of expressing support

ALL THOUGHT SYSTEMS ARE developed (and heirarchical -- AS I HAVE PREVIOUSLY DESCRIBED) and this cannot occur without memory (to give both much content and CONTEXT").

Simple recognition (of all various sorts and complexities -- they are developed using memory as "the medium") .

In short, memory is NEVER just an add-on and can never be fully understood or instantiated by an given, present environment (except for infancy and some of toddlerhood).

Memory is always significantly involved as are "all the forms" thought and conceptualization takes, worrking along with it.

Working memory literally refers to the total WHAT you are thinking about at any given time. The fact that it has limits similar on the order to short-term-memory (memory of new stuff at any given moment: 7 +- 2 "chunks") INDICATES THE STARTLINGLY IMPORTANT ROLES the memory capacities have (the contextualizing and active, on-the-spot "chunking" ARE HUGE).

I will say again: this is not a hard matter. It is simply being thorough. To do human things, you must simulate human memories (all major sorts). I do not think it will be hard for you to learn all you need, just from the one book I told you about. [It is more interesting (very interesting) than it is hard.]

Right now, while you greatly and very well describe what I see as "surface forms" -- and that is very necessary and completely necessary (and I see you as having done a great job). These are necessary FORMS thought and behavior must take. BUT there are left the major "internals" (the sorts of memory) which must be mimicked -- there are no environmental aspects that can substitute; even if environmental aspects can all be retained and known, the perspective on a given set of aspects used OR the sets of aspects 'seen' as important cannot be predicted without what the organism (the machine) brings forward: the types of memory.

Regards, Brad

Dear

There ARE several sorts of memory, likely both good for efficiency and for being human. Some simpler animals do a LOT with spacial (mapping) and/or episodic memory. WE humans do a lot with declarative memory (that is the structure of 'static' knowledge itself); and, we have a lot of procedural memory (this is all the over-learned 'dynamic' stuff, much VERY skilled, which we do almost automatically).

AND, the 7 + or - 2 limitation on what we can deliberate OR retained briefly, as the case may be, is VERY important. Relatedly, what we can clearly 'manipulate in the mind' IS VERY MUCH CONTENTUALIZED BY ALL THOSE SORTS OF MEMORY I JUST CITED. If you want a human, you want all that. Furthermore, in addition, we are aided by loops (rehearsal loops to help us learn important things) and by an ability to due sequencing . (A part of each memory TOGETHER (those in this paragraph and the other), as needed, may become just ONE of the 7 +- chunks in working memory or short-term memory <-- the 2 being similar, but different in their contextualization (and the involvement of well procedural memory and well-learned declarative memory *). The basic memory processes (BEHAVIORS) associated with each type of memory is important -- and part and partial for understanding each sort of memory. A good part of this is THINKING. [If you want a simulated human, you must have the 7 + - 2 "chunks" at a time AND you must have all the sorts of memory.]

Meta concepts being "out" is a most excellent decision!!!

I was quite certain I indicated fairly clearly the nature of consciousness -- go back and look again. I do think it is important (overall) for you to have a grasp of that and of its possibilities .

You know memory is important. Do not slack off on this. I will (in a few days) start reading what is agreed-upon as the BEST textbook on memory -- and I will get back to you when I learn more. (It is not a thing that is so much hard as it is thorough -- and it is all necessary for YOU to be thorough. I do think it is better to try to simulate a human, than to think you can do better otherwise.)

* FOOTNOTE: Both declarative and procedural memories are most important parts of KNOWLEDGE.

ALSO have a good appreciation for "chunks" and "chunking" and how they change dramatically over the course of development. "CHUNKS" are the units of the 7 + - 2

Regards, Brad

One VERY important P.S. (to the response I just sent):

Inhibitory processes are VERY, VERY important in the human, that is: NOT doing something that you OTHERWISE might/could do to discovery something NEW you can do. It is unfortunate that I left this out in my last response, since it is so very important.

Dear

One thing that is becoming clear in the first quarter of my more-indepth study of memory is that the nature of attention must be flushed out (elaborated and become known). This is what will eliminate the need for a "central executive" (which is really a man-within-the-man, thus a poor concept). Another reason one must replace any 'need' for a "central executive" is that these are intimately related to the unproductive (and false) "meta" concepts (metacognition, metamemory, etc.). Note that I am talking about the nature of attention (something that could change with developments and ontogeny) AND I AM NOT TALKING ABOUT ** ANYTHING ** CONTROLLING ATTENTION, ** except ** core basic built in perception and perceptual changes <-- address, in part, in my "A Human Ethogram"

Regards, Brad

Dear

A bit more perspective and an editorial correction:

About the only thing that distinguishes short term memory from working memory is working memory's various relations with long-term memory that STM does not have THAT MUCH of (otherwise there is barely if any reason to think they are not the same thing). Basically (in effect) prominent aspects of working memory (no doubt more relating it to long-term memory) are: the episodic buffer, visual-spacial representation system (aka the visual-spacial sketchpad") and the phonological loop (there may also be some keep-track-of sequencing thing in operation as well)*. The often noted inhibition processes necessary to do something new instead of doing some same old thing also basically seem to have ATTENTION involved with these 'helper' sub-processes of working memory along with interaction with the environment.

*Footnote: STM is also (kind of like WM) considered to have a notable verbal aspect AND to have some visual-spatial aspect, though there are visual and the spatial aspects that are also seen to have somewhat separate characteristics; some characteristics of audio processing also seem to be distinct to some extent from those of the visual. Characteristics of objects that are found together, are seen together (and not put together), i.e. seen as the "whole" (no need for active process to "put them together").

About human brain and animal brain: memory types have much in common and we basically have the same core emotions. Reptiles: have just mainly life-sustaining brain stem (and then only what more is clearly necessary.

P.S. : editorial correction of last Message:

"<-- address, in part, in ...: should have read "<-- addressed, in part, in ..."

Regards, Brad

P.S. Although there is no central executive, there is reason to believe humans can recognize (and attend to) the major. real sub-aspects of short-

term memory and of working memory; this can allow some expected generalization of learnings. (Example: ADHD kids using a computer game to improve their performance generalized the performance enhancements in other areas.)

Dear

My way of defining terms is just by how and where (/when) they are used. Put them as the names of things or likely placeholders, where appropriate. (Do find all those places with corresponding processes and functions.) Definitions done that way (just described) will be clear to all and we need not use our abstract minds to try for overall complete definitions outside of contexts -- a very bad Western civilization 'habit' and which are NEVER clear. (This way I just prescribed is how we "stick to" operational definitions -- for inter-rater reliabilities.)

About animals (mammals and birds anyway): they do great visual-spatial mapping and they have excellent recall of behaviors they performed in those mapped areas. Plus, they show contingency planning well in advance and AND to adjust future behaviors dependent on circumstances. Many animals use tools by any definition yet formulated. Some have great episodic memories and fully understand social hierarchies as well as a human. Not unrelatedly: when it comes to apes, I believe that they almost "have it all" but language and the correspondingly large amount of division of labor we have (BUT: Also know: WE get language from special built-in stuff, primarily, so we really cannot claim that as an accomplishment). Apes seem to have 3 to 4 or 4 1/2 of our 5 stages of cognitive development in all its basic (essential) aspects.

If you feel the need to have some further insight into the incredible abilities of birds, mammals, and apes see, especially:

https://www.amazon.com/Are-Smart-Enough-Know-Animals/dp/0393246183/ref=sr_1_1?s=books&ie=UTF8&qid=1497454993&sr=1-1&keywords=smart+enough+to+understand+animal

Knowledge, well-developed involves (1) much of the declarative (semantic, "explicit", conscious) largely static networks of information (see: connectionist models, e.g. John Anderson ACT models) that we have in long-term memory (and draw from/on) AND (2) the procedural knowledge (over-learned -- and sometimes just pre-conscious -- SKILLS and auto-primings; much of it aka "implicit knowledge") from long-term memory (this second type is the more active (action responses oriented) (also in Anderson's models). [Recall that BOTH types of LTM are ALSO involved in contextualizations (and progressive contextualizations , involving re-chunkings), of working memory (i.e. of our realities).] Concept is the unit at many places and of many qualitatively different natures whenever we have and USE imaginings ideas or constructs of any sort): again, this is too broad to really provide a meaningful general definition.

Regards, Brad

P.S. Episodic memory is often just seen as a type of declarative LTM, though I think special processing (rehearsals, clear sequencing and maybe more) go into the formation of such memory. (OTHERWISE it is basically like declarative (semantic, explicit) knowledge.) But to put it all most briefly (and perhaps appropriately for summary) we have:

- (1) STM/WM (two states of basically the same thing)
- (2) Long term DECLARATIVE memory ("explicit", connected, much conscious) -- supposedly including episodic memory AND
- (3) Long-term Procedural (skill) knowledge.

BUT: I believe there is SPECIAL PROCESSING which yields special sub-sub-types of LTM (like episodic memory, and sequencing knowledge /time / math / ordering knowledge); and these processes must be in an AI model . AND, it is important to model the nature of visual-spacial memory (likely developing with ontogeny) AND the phonological loop (for verbal rehearsal). ALSO: There does seem to be a need for an episodic buffer -- which I have yet to learn more about, and will know more within a week. (I'll get back to you on this.)

Outside of ALL the processes indicated in the last two Messages (including this one), there are additionally just: (1) the factors of attention/perception (changing no doubt, with development, more and more dependent on contextualizing of WM with LTM stuff AND subject to innately-based perceptual shifts)*. And, (2) (as indicated in "A Human Ethogram ..."), the basic types of associative learning (which can all be seen as very similar).

With just these addition things indicated added to your good system (which now allows for qualitatively different kinds of conceptualization and thinking) you might well have it all

*FOOTNOTE: STM is also contextualized but more passively (automatically) and with no (or much less) consciousness (aka deliberation). STM starts out as seemingly just a set of different things [(though ones you maybe should come to know -- and chunk and rechunk), but this, of course, becomes LTM as needed].

Regards, Brad

P.P.S. Dear

I actually criticize and critique John Anderson ACT* model in my "Information-Processing and Perspective on Development ..." paper, so that should tell you what NOT to do that connectionist models do (when you try to model 2 of the main memories).

Sorry, P.P.P.S.

There are also "mirror neurons" which keep sequences in mind and may aid rehearsal and/or retention (this is something of a more general nature than the phonological loop -- as related to rehearsal). I need to learn a bit more about this. I may get back to you on this.

Hopefully, though I have now at least named everything which might be worth looking into to model. Obviously, with the outlook I have on

attention AS CENTRAL for each bit of progress (a view I hope you share!) , with parameters, there are no other limits to self-learning (even of an AI machine): essentially what people call "no limits to learning".

Dear

About the episodic buffer: It appears to be what you must know to "take"/"get" soon-to-be-cognizant material "into" STM or WM : It is basically, pertinent key elements of several of the various sorts of well-established LTM, involved early because, apparently, it is not seen as sufficient to have LTM start functioning only after clear content is in STM/WM, but rather some LTM is stimulated by the content itself before that content is recognized and conscious material at all (but, of course that basic LTM stuff is related TO that very material nonetheless, in fact, very basically). At some point of initial recognition then content is then considered "in" STM/WM. It can be considered some basic needed early contextualization of the contents you are VERY soon to be cognizant of in STM/WM.

Dear

A P.S. to my last note on the "episodic buffer":

UNLIKE episodic memory, often seen as of a more explicit semantic (declarative) nature, it is clear that the episodic buffer involves aspects of both the explicit declarative aspect of LTM _and_ the procedural (skills/auto-skills and what has at least become "implicit" knowledge) aspect of LTM. (In short, one should not over-connect the two terms, episodic memory and episodic buffer, because they are not much similar at all in nature.)

Regards, Brad

Dear

One thing I will need to provide you with is information on what determines likelihoods of the activation (recall and/or recognition) of various categories, concepts, names, and features. This all has to do with the semantic memory (aka declarative memory aka explicit memory) aspect of LTM.

I am trying to collect a list of the basics (properties) for the organization that corresponds to centrality or importance in/of the functional use of these categories, ETC. (related to familiarity and frequency BUT also to many other things). IN other words: "centrality" and "importance" , including 'relatedness' AND some other things need functional operational definitions.

Regards, Brad

Dear

Re: my previous Messages of today:

FACTORS IN SEMANTIC MEMORY (recall and/or recognition): [a first try of mine at getting at some (many?) of the basics of 'things' represented]:

recency/importance of a concept activated

familiarity and relatedness AND typicality _AND_, as related to other "nodes" (<-- THAT IS : as related to other "close" or typical 'things' or to otherwise relevant and important things/features/concepts or related activities). <-- If ALL this is equal, PLUS if concepts are equal in importance _and_ for normal human cognitive development and for levels of expertise, then raw frequency may finally be a factor differentiating 'things' (that is, their level of accessibility).

Have multiple representations as needed -- think multiple related connectionist models (of connected nodes) EACH showing some hierarchical relationship (EACH hierarchy being of a different sort) as appropriate (these are multiple, likely at least 4):. One hierarchy may be mainly verbal meaning (but this usually in actual recall never works well alone); another mainly related to prototypes and/or typicality (this usually more important than just verbal meaning); others related to common usages or important usages OR to levels of abstraction. Of course, there would likely be connections between elements and elements or higher level 'elements' of the 'things' of different hierarchies (between basic elements and other elements or 'parts'/(levels) of different hierarchies). The time it takes to think about a concept is related to how many levels you have to think "up" a heirararchy to "get to it" (but these time differences often disappear if concepts are equally familiar). Thinking of one thing makes thinking of other things in the same or certain related different hierarchies HAPPEN due to what is metaphorically known as "spread of activation" (this may well be represented literally somehow, rather than metaphorically in a machine). Visual/spacial aspects that a representation may have will facilitate better recognition/recall.

basic ideas/concepts more important: they often provide more information and also have more distinctiveness -- and these are most often used so these must have some preferred accessibility *BUT*, consideration of usefulness IN CONTEXT must be taken into account (including the ISSUE of experts vs novices on some concepts), yielding some notable exceptions. All this is part of the issue of IMPORTANCE.

Items in semantic memory involves space and time differentially; one class involves space and time a LOT, that being episodic memory, which includes some personal memory

Both environment context and ANY likely priming (of the thing(s) to think about) needs to be taken into consideration.

This is just a first attempt (I need to review and make sure I recall everything).

Regards, Brad

Dear

I think I am getting close to having conveyed everything I see involved in human behavior to you (because it is "parameter-controlled", and I have clearly outlined at least a large majority of those defining parameters). Actions, new or well-established OR skilled, are obviously and sensibly (and even necessarily) triggered by circumstances: present or recent environment factors AND the huge recall/recognition of relevant representations (and auto-skills) brought forward or triggered BY/FROM our memories. Thus, I shall not have any separate system needed by the procedural (often implicit) active "skills" aspect of LTM. It will be clear what responses are required to the content BY the content. (This is why I (we) are about done with the real, full and essential concrete outline and will even be able know the dynamic aspects, all and as needed). The nature of STM/WM has already been defined and the other factors, operating as they would, define its content. (There is the innately guided "forms" of our perception/attention and cognition and related simple associative learning, meaningful in only such contexts as have been described.)

There no doubt are other "finer" details of semantic memory, but that would become apparent in a system already operational (as well as from additional decent research literature). I think we are also at the point where any conceptual errors would be interpretable (and therefore could be fixed).

I really dislike things being complex, and believe that science has a LOT to do with clearing up complexities (and it really does). Unfortunately, the problem of simulating human behavior will remain quite complex -- BUT NOT to the point of not being able to define all the clear parameters (and basic guidances and capacities) AND thus not impossible.

Continuously learning (continuous, but directed) is continuous not by having no parameters, but by having clear parameters AND some of these vital to representation and action being SHIFTING (not static, but surely of a definable nature) -- otherwise there would not be so-called "unlimited learning". (There would also be no sensible learning without some definition from parameters.)

The idea that a machine cannot do it makes no sense to me at this point; those that think otherwise seem to be biased by old-time philosophical "stereotypes" -- which are pathetically lacking, empirically.

Regards, Brad

Dear

RE: "Prospective Memory" : a warning (though hopefully one you do not need):

"Prospective Memory" is literally an oxymoron; but it is still thought of as a separate topic by many memory researchers (it refers to what is commonly referred to as planning or "thinking ahead"). This is a concept linked up with "executive processes", "central control processes", and all the various "meta's:", which you already know better than to use !!! ("Prospective Memory" is a man-within-the-man sort of concept.)

Other than ever thinking in the false-conceptual terms of "Prospective Memory", rather think in terms of adaptive and adapted (and learned) and appropriately (and necessarily) cued PATTERNED responses -- no matter what the stimulus (trigger) may be.

(In some real sense, thinking "ahead" is NOT thinking ahead, but a developed sort of responding --involving highly developed cues and perhaps highly developed (high level) concepts OR 'seeing' in such terms.)

Dear

This is part 1 (of about three sets) of additional notes on memory. This one regards STM.

First, the phonological loop and visual/spacial memories are considered aspects of short term memory (STM). The the phonological loop is considered to have both short-term memory and long-term memory aspects. Auditory material more strongly and reliably triggers the phonological loop (though use of it is NOT limited to this -- but, other applications are more deliberate and more interruptible).

ALSO: visual and spacial information are to some extent distinct, though must certainly, to some extent, be rather fully used and coordinated for some human behaviors. "Visual span" (things noticeable, if changed) has a much greater capacity than memory of [new] spacial changes (in particular and especially if not augmented by verbal rehearsal) . [Visual STM can in some circumstances have a capacity as little as 4-5 thing-changed-and-that-noticed (such as in spacial memory tasks, non-aided with strategies), though visual LTM has a VERY large capacity.] Some visual memory has clear long-term memory aspects; and, some aspects of visual processing-things-together (called binding) -- which is some of visual memory -- is automatic; this latter is perhaps related to LTM aspects (perhaps related to developments in early childhood).

Long-term memory aspects (vs short-term aspects) have a longer encoding time (processing time, before usable), say: 3 to 5 to 10 seconds; short-term type memories can be encoded in a fraction of a second.

Also IN (i.e. part of) STM: there is evidence of a separate mechanism for serial order (which I have likely noted as such before).

Never forget possibilities for "chunking" in the application of short-term memory.

Regards, Brad

Dear

The rest of the "working memory"-additional-notes, I promised:

"Working memory" (active STM) does "bring up" some important special-type capacities. For one, the phonological loop (mentioned before, in this thread of our dialog) is considered part of working memory. This loop allows additional special rehearsal of verbal or verbalizable (and verbalized) material. AND, there is also a visual-spacial capacity, a visual-spacial sketchpad (<-- that's the term) which we can use to process a lot more visual and spacial information than we could with any "chunks" otherwise conceived (i.e. inconceivable without another special capacity) -- there are also experiments which tease out this v-s sketchpad as a distinct aspect. The spacial aspect is predominant vs the visual elements. But, there are memories most aided and much aided by what is basically visualization (in general). Thus, this capacity (v-s sketchpad) is considered the 2 "working together"; it helps in verbal recall (thus is a big help to the phonological loop). And the v-s sketchpad and phonological loop can work together to enhance performance (and no doubt LTM, as well). (Each aspect of the v-s sketchpad, the visual and the spacial, can be suppressed independently by different conflicting activities -- the spacial by concurrent spacial (place-to-place) tapping and the visual by interrupting the phonological loop (articulatory suppression).)

The episodic buffer which I previously have described as operational during memory usage (basically: during consciousness) is considered a part of working memory (you can imagine it "at the front" of working memory, its processes (with LTM "at the back" of WM)). The episodic buffer contents have a range of sources: (1) select contents of working memory (otherwise) (like a select copy of some of those contents), (2) perception, and (3) key aspects of the types (declarative and some procedural) of long-term memory (I would add: most certainly not necessarily in that order). (These sources each have a "different code" but combine in this multidimensional buffer.) Also: the visual-spacial sketchpad and phonological loop are also involved, as the buffer operates. (Both the v-s sketchpad and phonological loop have special and particular types of links to long-term memory.) Although the episodic buffer may have some special link to episodic long-term memories ("episodic memory", for short), this episodic LTM is very different and much more sparse and less active (episodic memory is considered to be of the "declarative" type of LTM, more available to consciousness but also more static).

Though some very major theorists (esp. Baddeley) add "executive processes" as a fourth component of working memory, OTHERS (e.g. Cohen) avoid this concept (as I do) and (like me) cite attentional focus and attentional control ONLY.

Working memory span (as opposed to simple STM span) is about 4 "chunks" (though these may well be complex) as opposed to the 7 + or - 2 "chunks" of the most simple STM (which still is technically also WM, if we are doing anything at all). This complex WM span reflects rehearsal and/or intermittently focusing attention on these elements of WM, so they continue to "be there". Still, some major theorists make the assumption that attention is still on a single item at a time (the other elements maintained, in the mean time, by the existence of a memory trace for them). [(I am sure programmers are happy to have one thing at a time.)]

There is good evidence (from brain injury cases) that simple STM differs, is something different, from a GENERAL WM deficit: a patient may have terrible simple STM (2 item "span", aka 2-item "ability to remember" right away) and yet no apparent general (overall) working memory deficit (as shown by ability to do complex cognitive activities, reasoning and comprehension). The low capacity of more complex WM is quite a bit "made up for" by attentional switching, even up to the point of task-switching (which we are all familiar with) -- apparently thanks to very complex memory traces.

Regards, Brad

P.S.

The visual-spacial sketchpad and the phonological loop are very largely automatic (kind of like the 'binding' of characteristics of objects (e.g. shape-and-color), noted earlier). The fact that they occur automatically is another thing that takes "load" off of WM

P.P.S. The attentionally-based control system of WM tends to be strongly involved in complex tasks, with a SMALLER contribution from the two components, the phonological loop and the visual-spacial sketchpad (described in other posts ON WM, above).

Another P.S. (sorry)

Also in the context of Working Memory, one MUST bring up the 2 types of inhibitory control necessary to have and maintain the correct WM contents:

(1) ability to resist interference within memory (including: of what "gets to" WM)

and

(2) ability to resist an alternative response to WM contents ("what we are thinking about") -- something other than we want to do now.

Dear

I shall have only one more set of more detailed notes on memories -- this last one on Episodic Memory. The reason I am providing what I see as

the needed (and established) details of all the various memories is because experience and learning are aided or constrained PLUS "contained" and "bounded by" the nature of these memory capacities. There is NO valid concept of "pure learning" (or at least none otherwise). One cannot validly construe the nature of learning (or experience) without having it in the context of memory, BUT ALSO with the stage-developmental factors of the sort outlined in "A Human Ethogram ..." also well in mind. I hope you do not feel I am giving you more than necessary; I believe I am providing minimally what I must (but also, hopefully it is sufficient).

The set of detailed notes on Episodic Memory should be done today (or tomorrow, at the latest).

Hopefully, all is close enough to being in operational terms that you can actualize it.

Regards, Brad

Dear

Here it is, the last set of elaborations:

Episodic Memory: a kind of specific memories, in particular: RECALL of that which occurred at a specific point in time. Though this has been seen as different than semantic memory (memories based on meaning, i.e. declarative memory), there is a tendency (over time) for one to influence the other: in time, semantics influence one's actual recall of (and, perhaps, bias) episodic memory. Events themselves might also relate and consolidate to form semantic memories (basically: memories of the way our world is). Healthy people have both episodic and semantic components of a recent memory. While important memories may initially be quite episodic, good students separate important information from the event and it becomes part of declarative LTM.

Relatedly, memories for stories (episodic) become both shorter and more coherent and are influenced (and, not infrequently, are distorted) by a person's point of view. Recounting (recalling) memories reconstructs them (often a bit differently each time) -- a reconstruction may become more strongly stored.

Repetition alone can work, but invariably works better if the contents are meaningfully related to anything. What SEEMS like something most like an exception to this (but in a BIG way is not) is aspects of language learning (this is greatly facilitated by the very-often automatic phonological loop, plus by the automatically active processing of phonemes, the basic sounds found in all languages). Language structures noted then can subsequently be used to give "meaning" to even nonsense syllables. (When repetition alone "works", it is often related to the first element in the sequence (primacy effect) or to the temporal context, but simple chaining of arbitrary things seemingly by itself can work in the long run (AKA "long-term serial recall") -- even here, though, experts find a meaning-way of making "chunks". Experts elaborately "chunk" blocks of things one would not ordinarily see as "chunkable" at all.) Material that can meaningfully chunked (re-chunked) and which is somehow organizable is remembered better -- especially if the organizational structure is hierarchical. "Deep encoding" which is good involves either (and hopefully both) connecting the new learned thing (or behavior) to an old one(s) AND appropriately elaborating new learning via what is already known which is called elaboration (linking appropriately to all that is adaptively 'linkable'). [("Deep" effectively MEANS: MEANINGFUL.)]

Using visual imagery (no doubt often visual/spacial) powerfully (positively) influences how well something (even a word) is remembered. There are 2 routes (which may both be used) for the retrieval of "imageable" words: visual and verbal.

Now let me re-address what I have not re-addressed in the "three sets" of more-detailed notes (sent over the last few days). The big thing is: long-term memory.

Long term memory is of 2 basic sorts:

Declarative (aka "explicit memory" AKA "semantic memory"): it is the more static, fact-memory which is organized by meaning INCLUDING any hierarchical structure to the terms or points of meaning. The appropriate aspects are made active and come into STM or working memory by the stimulation of one or more nodes in the meaning structure and by the SPREAD OF ACTIVATION (<-- a real term) to "linked" other nodes (related "things"). As one's knowledge of this sort of memory becomes active, it is much more likely to be conscious (and subject to deliberation) in STM/WM. (Episodic memory is largely of this sort.)

Procedural memory (or implicit or skill memory): memory that affects things one thinks about (and "manipulates") and/or what one does -- much of this one may not need to be conscious of, and thus, one is not conscious of much of this. It too, when active, is in STM/WM -- but may create very little "load".

Undoubtedly, there are highly important mixed cases of declarative-and-procedural memory, for example: unique ways in which you have come to idiosyncratically categorize things. (These cases became/become "mixed" as they come into working memory).

Long-term memory is active only in STM/WM and is changed only through STM/WM -- by definition.

Finally, conditions for good recall (RETRIEVAL) are VERY similar to the conditions for good encoding (of things that are later recalled). I have dealt with very many of the factors of good encoding (so one recalls) and thus what cues will be good for retrieval are close to being apparent, because they are often at least very similar to those used in good encoding [into LTM].

Regards, Brad

Dear

You wrote of yourself looking into databases, so I thought of this over the past day. I have some good familiarity with relational databases (DBMS), having developed and used some of them, and believe such databases could model many of the characteristics and capacities related to behavioral change and development.

Capacities could be linked to types of stimuli and circumstances and there could be clear relations between the different databases. BUT, the links would not be just "static" links but would have to be conditional (with databases between databases determining the effective/operational relationship between them). Also, related to response alternatives and/or to multiple responses, there would have to be ALTERNATIVE relationships between the aspects represented in the databases -- some just to allow for alternatives or multiple response types, and others provisionally allowing any of several responses (represented in linked databases) to all be tried and the real conditional relationships set up only when the results are seen, judged, and the better responses become known.

The contents of the databases (or those linked to) would have to change with behavior changes and development.

Just a few quick thoughts. If necessary, could you do all that?

Regards, Brad

Quick P.S. to thoughts on databases: Databases should be especially useful to reference CAPACITIES (things of basically the same nature, used to hold various, but identifiable and somewhat LIMITED things-in-mind as needed); capacities are the more constant aspects of behavior (e.g. STM and WM have similar characteristics throughout ontogeny). There are other regularities that could be represented by related (conditionally linked) databases. The attentional/perceptual shifts have some constant aspects of their nature, though with variable content also.

But, of course, outside of this there have to be the associative learning AND the perceptual/attentional shift aspects of human behavior (AI) which are what most fundamentally and importantly RE-WRITE the contents of the databases themselves (or, often just the weights of contents), which change with the processes of learning and development just briefly mentioned.

Regards, Brad

Dear

Let me provide some clarifications of my views: (1) There is no reason to think of short-term memory at all, because there really isn't such a thing. Working memory IS when STM is active -- which it in-effect it always is.

(2) The episodic buffer (very different from episodic memory) is VERY important because it is THAT which largely determines (based on developments and past associations) WHAT we look-at/smell etc (sense) AND what we perceive in the first place -- AND, in some form the E.B. is present from the outset of life too.

(3) Episodic Memory (memory, such as we have, of EVENTS) MUST BE another major consideration in processing and for a at least part of a "primary key". This sounds undoable, but is not; you could ground this mechanistically by taking pictures of each mind-processing moment (in the actual physical world -- actual pictures) and, LIKE what FACIAL RECOGNITION software does, find-to-represent-and-store the aspects the organism (or AI robot) IS actually seeing/sensing at any given stage of development and at any given stage of learning (associations). I believe this would be an aspect of true AI -- I believe it would have to be. This alters or adds a variant of previous represented episodes (aka EVENTS). [(Time is just the sequences of EVENTS -- the perceived sequencing.)]

Finally, the 2 types of LTM, though changing with development and associations, are some things that can clearly be done mechanistically. From what I described before (in previous Messages), you should be able to see this would not be impossible (though maybe difficult).

Also: there is a way, if you look at the above summary AND what I have summarized for you before, a way to (IN A SENSE, in a way) process "things" one at a time (greatly aiding mechanistic modeling).

NONE OF THIS IS THEORETICAL (at this point); it should all be able to be seen in concrete and mechanistic terms.

The things I just mentioned IN THIS MESSAGE is a summary and outlines the way to go (guidance, along with previous communications) that, IN PRACTICAL TERMS, can be done.

I am sorry if I might seem "pushy", but this is simply an attempt at a strong, justified view, which is seemingly also practical.

Regards, Brad

Dear

Re: "mind moments" [(mind-processing moments)] in my earlier Message. "Mind moments", as described there, do NOT represent all thought/processing. While ultimately a lot of our perceiving (<- looser, yet real, sense) and thinking is based in SUCH "mind moments", a given bit of processing may be based in a VERY trimmed down version of 1 or more complete "images" OR on a combination of similar "images", which may also be trimmed down. <-- Often trimmed or distilled "images" may be seen as constituting a real sequence (and ARE). The purest (most abstract) sequence (aka "view of time" and of time-events) seems like it may be the basis of mathematics -- since there is no OTHER notable capacity that seems to otherwise help explain that.

There is more simple associations and learnings that become OTHER declarative and procedural long-term memory.

What is happening can all be inferred from close observation, which may have to be extensive (and long-term, aka developmental) and may well have to include eye-tracking and pattern analysis software often times.

This is an ultimately empirical view, as any practical AI system would have to be.

I feel no need presently to further clarify the other contents of the Messages I sent yesterday (and hope I am content with the clarifications I provided of the part I expanded on -- if I feel I should have said something else, I will get back to you).

Regards, Brad

Quick P.S.

I have been emphasizing and focusing rather exclusively on the use of the visual sense of the human, which is at least somewhat appropriate, since we are so visual.

I was content with the way you dealt with emotions. I did come to believe that you had accepted the premise of qualitative different thinking, based on stages -- on the basis of which I described.

Dear

It is my hope that you might think it over so as to gain the full understanding of the parts and the possible completely empirical connections, as follows: I contend that if you look at each aspect I prescribe you will see an empirical foundation (at least if you understand the more basic "units" I say there are also -- and which are TESTABLE hypotheses); THEN also you will see a possible empirical connection between each of (or, as necessary: any combinations of) the parts of the human thought-development system I describe. All are empirical and connected as needed, yet in every way open (limited only by what you find as you use the system and must make adjustments).

If you are offered nor can find any other complete human thought-development system, I would think doing this would be more than recommended : it would be necessary, in my view, if you want true AI.

Regards, Brad

Dear

I have been trying to think about how one might use the outline I provided to hone-in on what aspects of the environment are needed for each new major cognitive development. Here is a bit of what I have thought:

The memories (types of memory capacities) are an "open" system (an open, though [capacity-]limited, system). At any given different point in time (each with learnings happening, and sometimes with new type(s) of learnings to begin and to come) a researcher/engineer could try to "fill" these limited capacities with the types of knowledge that can presently come from memories and the corresponding environment, to give the robot all that is needed for his PRESENT abilities (and the simple learning processes). _AND_ then (for qualitative new cognitive development): AT PROPER POINTS (where there is not just the present 'simple'/regular learnings going on): you must determine what aspect(s) of the current observable proximate environment need to be seen/noticed/attended-to TO be crucially involved as major "basic" aspects (pivot points) of/towards the next hierarchical stage of cognitive development (new type(s) of thinking). [With this added to an otherwise open system, the organism/robot could integrate new things (and/or have a new focus and/or add new things) which allows the progress to the next higher (qualitatively new) stage of thinking.

After that AGAIN the system is open, both with respect to the memories and with respect to associative or dissociative (discriminative) learnings - but now (again) open just in the sense of: depending ONLY on experience [including, of course, needed reflection or awareness of/with what is present from the episodic buffer, the established memories (including visual-spatial as a "biggie" (and semantic and declarative knowledge)) AND then, using that in a particular circumstance, getting all from those memories and from the environment into working memory -- where all the associative/dissociative learnings then take place (important aspects, basically as consciousness itself).] Obviously this will involve at times comparisons with what is already known and adding on to or integrating that with some new material (i.e. involving reflectivity or 'self'-feedback) -- and, this will always and necessarily be involved during stage changes. (NOTE: regular 'simple' learnings may also involve such reflection -- but with simply the consequences of simple associative/dissociative learnings* providing for all changes.) Now, none of this is easy, but it makes for all but what is essential for new perspectives and new learning EXPLICIT and it does so in what is otherwise an open system -- with NO attempt to be defined by you or anyone else by just using their imagination (as your friend seems so frequently to do).

* FOOTNOTE: I use the word "learnings" instead of "learning" because, at each new stage of cognitive development, learning the "old ways", using cognitive 'abstraction' abilities of previous stages are still present. ALSO: At stage shifts there may seem to not be just one type of learning either -- thus the term "learnings" is appropriate for this reason as well (the "stage" transforming more and involving new things with time).

P.S. It is almost certainly better to think in terms of BEHAVIOR PATTERNS than in artificial terms of single "behaviors"

Regards, Brad

Dear

The bit you said sounds basically good. But I do believe there are essential elements. I do believe both hierarchical learning and using the various capacities of all the memories in your actualization of your vision is important. AND related to these: Finding the environmental aspects corresponding to levels of 'abstraction' in thinking is also important, for a thorough and dynamic open model -- those are the bases behind major shifts in thinking and learning (i.e. it is behind the hierarchical levels) -- unfortunately this involves the discovery of the unknown (unlike the flexible memory capacities, which are quite well-known qualitatively, though the visual-spatial aspect, as I described, is no easy matter). I do not know what "tree graph" you refer to.

Regards, Brad

P.S. The way we are alike: we both seek to understand an OPEN SYSTEM -- me, in order to understand human development and learning and you, to have the robot do self learning. I see the two goals as involving the same thing, empirically.

Dear

I view the memories as just getting content based upon what is attended to and from the spread of activation and from other possible procedures and content "triggered" from all that (and see my further statement, below). The memories (all the types of memories) do not provide any further structuring themselves but only show what structuring has already otherwise been established (via development and associative/dissociative learning) . Of course, they do reflect the structuring that has developed (with the main impetus for the previous development -- and sometimes current development going forth -- being perceptual/attentional shifts). It is much more parsimonious, for nature and for us to view memory as simply an open system -- getting what it gets from what is "triggered" and brought forth (but note: this also has to do with the episodic buffer, in addition to what is attended to and in addition to "spread of activation").

The thing that makes for something tree-graph-like would be the contents of working memory (which at most has 7 + or - 2 "chunks" BUT in the view of some theorists as little as a one "chunk" of truly operational content -- which would be especially convenient for the idea of tree graph; OTHERWISE the 3-4 or so chunks could be considered a meaningful unit and that as the start of the "tree graph").

Regards, Brad

P.S. "other possible procedures and content "triggered" from all that " -- indicating THIS BIT of further content stems from automatic ("over-learned") procedures -- the procedures leading to more content coming in. This could also be conceptualized as changes in the episodic buffer -- one can make reasonable choices for when one conceptualization or the other (well-learned procedures OR changes in the buffer) is better (likely depending on the involvement of any consciousness (deliberateness, broad sense) involved).

Also know (as a point of knowledge, which you likely already have) that "spread of activation" refers to the spread of activation to close nodes in declarative memory (the more static-knowledge memory), i.e. to the triggering of MORE such related content.

Dear (read my other Messages of today first, which answer your important questions)

More good news (in addition to my other Messages of today):

From my more recent reading:

A consensus seems to be building that when humans are doing noteworthy thinking, there are only about 4 "chunks" in working memory (vs 7 + or - 2, as with simple list memorizing tasks -- where the number of WM "chunks" are at their maximum). This means that for your robot you only need to determine (usually) what 4 elements of knowledge are in "the mind" at one time (and, as I indicated, one may be able to "see" why these are related and thus, in a sense, are a UNIT) -- and move on from there. Though "mind-moments" may come and go and follow one upon another

rather frequently, one would expect there to be sensible limits to how frequently "the mind" would change (and this is without a doubt environmentally-related). THOUGH some certain regular sequence of "mind moments" may well occur to some extent, it would not be to any extent that would be a big problem (because, as an empiricist, I believe each switch in content ITSELF must be related to some environmental consideration(s), or at least one(s) imagined -- and, when imagined, each such consideration must have some previous overt behavioral counterpart).

The big question is how do we DISCOVER the developmental process (changes) where everything is built up using THIS MEMORY SYSTEM (including the ability to "chunk" things so as to build out of this and enable, with ontogeny, hierarchical levels of thinking). Of course, my nomination is for perceptual/attentional shifts (which should be discoverable, developmentally, using new eye-tracking technology and computer-analysis software). It seems to me you need to team up with some good developmentalist and together get a grant to do such discovery work and, with each discovery, you do more engineering and programming (with considerations of past discoveries that may be clearly relevant).

This all makes it sound "not so hard" as one might otherwise imagine based on traditional and/or prevalent false assumptions.

Regards, Brad

A Quick final P.S.

I should tell you that my view of memory (the memories) is at least very similar to that of other psychologists. No one speaks about any structure being added by the memories per se -- that is not related to experience and learning. So, when I say "I view ..." I really should have noted that my view (in most of its main basics) is a widely held view.

Dear

Indeed it is good to know what forms content ("chunks") must take (or be forced into). While providing no content, this does have implications for content (making requirements clearer, and I would suspect: simpler).

Regards, Brad

Dear

A P.S. I keep thinking, as I ponder things, that the hardest memory to replicate and probably the most complex (visual-spacial) may well ironically make things simpler. It could be many of what we use as cues ("triggers") for thinking (and for re-"chunking", and as aspects of the episodic buffer) are the aspects of given visual-spacial memories. When these aspects are known (through a process somewhat like facial analysis), you may get some of the best hints conceivable of what MANY of the "triggers" are (and how all these "triggers" can occur together in a particular visual spacial memory -- and also corresponding to some present reality). I hope you might see this as something encouraging.

Of course, the labor-intensive part is finding the directly observable aspects of a current environment which are proximate causes (for behavior change) and which guide perception/attention/learning. Not only are these discoveries yet to come (or you or your team must do them), but mainstream psychology does not even 'believe in' them. You should see 2 of my recent posts: [after the links to those posts is something I wrote to another AI guy, so do not consider me to be too repetitive as far as you are concerned (if I say some things again which I have written about before, please understand that a lot of this was for the benefit of another AI person)]:

Some of these essays (via links) should provide some good new , though related, outlooks on things.:

https://www.researchgate.net/post/Is_it_true_Innate_Guidance_IS_Involved_in_the_Development_of_more_Abstract_Thought_OR_THERE_CAN_BE_NO_TRUE_Artificial_Intelligence

and

https://www.researchgate.net/post/Doesnt_our_Understanding_of_the_Memory_Capacities_Capabilities_Inform_Us_that_Innate_Guidance_to_Learning_During_Ontogeny_would_INCREASE_LEARNING

Regards,
Brad Jesness

(quoting hereon from a P.S. to that other guy):

P.S. It is not "learnable attention", but discovery of what makes for good attention-for-the-learnable . You must find the correct containers -- and have it (the AI machine) function containing all those (again, by proper attention). YET: Forget "meta" that is the homunculus (the man-within-theman); "ditto" for executive processes. (Keep in mind that there are many kinds of learning and psychologists have differentiated and defined very few -- and the ones they have well-defined are of the simple/trivial sort. Thus, I would caution using the word 'learning' at all -- as if it meant something, it doesn't)
(end quoted material)

Regards, Brad

Dear

I have been reading this paper, "Representational Issues in the Debate on the Standard Model of the Mind" (by Antonio Chella, Marcello Frixione, and Antonio Lieto, which supposedly comes out this coming November 2017) about "conceptual spaces" (which are described as geometric). They propose "conceptual spaces" as elements of an architecture that would solve problems otherwise routinely occurring (they say it would solve both the "limited size" problem and the homogeneous typology problem). I have got to thinking: Couldn't extraction of the real key elements of visual-spacial memory (as retained -- and then as used) do this same thing, but better? Using something like facial analysis _and_ CONSIDERING EYE-TRACKING data, and perhaps drawings done by Subjects and related problems solved by Subjects, to get at these elements. This would yield some well-conceived structure and nature for such a related-"spaces" system(s) but based on research. AND: this would have great advantages: (1) it is based on what is real and (2) it has (also) the temporal aspect.

Regards, Brad

Brad Jesness · 3.79 · n/a

Human and AI robot. If the following is how it IS (with the human), then this would give some clear idea of what a true AI robot would be like AND BE WORKABLE for engineers and programmers (though quite a lot of psychology research might be necessary). It is fully workable BECAUSE THIS IS a 100% empirically-based development (developmental) system, based on behavior patterns (and developing behavior patterns) "interacting" with specific environmental aspects, and those things being the proximate causes of behavioral change. (The ONLY other things always used and always taken into consideration in this system are the empirically well-established and well-defined natures of the memory capacities -- which most certainly seemed necessary; these are "open" CAPACITIES that provide only limits and perhaps, then, some influence on structure BUT are not ever of themselves sources of content.)

Here is likely the briefest outline of the system (pure behavioral psychology) :

https://www.researchgate.net/post/Could_some_behavior_change_have_overt_aspects_so_subtle_as_change_in_time_environmental_aspects_are_gazed_at_or_significant_decreases_in_gaze_time

(This linked essay, now, as of today, Tues. 26, 2017, 3:11 pm Mountain Time Zone of North America, finally fully edited.)

This (above) is the "containing system"; there is no problem adding in the more non-universal (in behavior) stereotyped, specific-function-type behavior patterns: here I am thinking of the emotions. (NOTE, though: Some secondary emotions, like shame and guilt, rely on first having cognitive developments, such as covered in the outline of the "containing" system (see "A Human Ethogram ... " to learn about some more specific (more specified) particular cognitive developments associated with some emotions). "Interest" is NOT an emotion -- I don't care if it seems like it (it does NOT have enough stereotyped patterning.)

(This "containing" system is a cognitive-developmental system and works autonomously and develops with the proper things (objects and/or happenings) perceived and attended to, and given the memory capacities: working memory (as it "goes") and the other memories also being active.)

1d ago

Could some behavior change have overt aspects so subtle as change in time environmental aspects are gazed at &/or significant decreases in gaze time ? Edit

[This is a thoroughly empirical cognitive-developmental approach to research and theory.]

I have tried to conceive of what possible overt behavior-pattern aspects AND clearly observable environmental aspects might always be able to be found at least at the inception of any major behavior change (including, and especially, the beginnings of major qualitative shifts in learning and conceptualization during ontogeny). I settled (by its possible adequacy in-the-'complex'-context-of-behavior -- and with nothing else historically noted as something apparently happening nor anything else imaginable) on the idea that perceptual/attentional shifts could indeed suffice. These may be enough to have a behavior that can be seen (using eye-tracking technology) and also to be able to see (or see with knowledge of past such developments) the clear environmental aspects involved as a new way of learning begins.

I believe as empiricists (and in trying to be completely strict empiricists) that at some points in ontogeny with major behavior-pattern changes there ARE such overt corresponding aspects (proximate causes: subtle yet clear behavioral redirection and still-detectable corresponding environmental aspects involved). But, I am always wondering: in how many contexts do these (or similar things) need to even be that overt as one generalizes a new WAY of viewing and conceptualizing and relating things or happenings (<-- also corresponding to new representations)? AND, finally, what signs may there be of lesser changes such as some simple new combinations, extensions, and/or elaborations of the new major behavior patterns (conceptual knowledge, thought and causal understandings)?:

Could these be undetectable? Maybe, but I don't like it and I think it best to assume otherwise UNTIL THERE ARE LESSER THINGS (clearer and more basic "chunks") to be manipulated and changed in/by working memory. So alternatively (to the idea of them being undetectable): couldn't some of these such "lesser" behavioral changes involve yet subtler yet still overt things: so subtle as change in amount of time spent on some environmental aspect(s) which are gazed at &/or significant decreases in gaze time? This would be better than NO overt signs -- though I believe eventually (at each stage beyond infancy or toddlerhood) behavioral change well-established CAN INDEED have no further direct signs AS it undergoes SOME further changes through thought (and thus those behavior changes only being "seen" to exist indirectly "in" overt behaviors patterns (i.e. by inference viewing overt behavior patterns as more of a whole -- yet this still retaining our empiricism). So, even the most subtle should be detectable indirectly by changes in things observed and/or acted on. One can expect to have a background of cognitive-

developmental knowledge in order to do this OR even in order to detect gaze-time changes, mentioned before.

Let me say it again, another way (as I likely all too often do):

Once perceptual/attentional shifts have been reliably seen and associated with ... and cognitive developments, one may come to have in-the-context-of-ones-knowledge the ability to see these subtler things just mentioned (and to "see" in a way: final intermediaries to or the final results of what are in-some-sense completely covert behavior patterns (and behavioral (concept) change). (Yet, these (again) are empirically assessable; even the last-mentioned cognitive changes would be assessable, as outlined above.)

As you can see: It is my contention that INDIRECT evidence is what one must "fall back on" ONLY when the "chunks" working memory would have to deal with can be dealt with without direct external supports -- these would be relatively simple elaborations or combinations (made in thought only). Still, when of some importance even these should be INDIRECTLY assessable in behavior (looking at more of it): there nearly never is anything, and NEVER anything for a strict empiricist, IF generally true about people, THAT DOES NOT have an environmental manifestation that can be found ("indirect evidence" does not mean "not really there"; if you were able to look at enough behavior and "have it in perspective", there no doubt would be some DIRECT manifestation. BUT: in addition: there are, of course, possible individual differences: this is why often you look for types of things and not a given particular behavior -- the TYPE of behavior, often is "the behavior", with a clear specifiable and particular nature. ALSO: 2 "things" (aspects) perceived and/or attended to need not be in the same space-and-time: one must account for very noteworthy abilities related to impressive visual-spacial memory (even in many mammals and birds this is quite impressive; I have little doubt it is impressive in humans too). This v-s Memory may "make for" apparent violations of the rules-of-what-to-expect, but I believe the "rules" hold -- you just need to have existing possible views and/or analysis stemming from the manipulations of v-s memories as part of your perspective as you observe. BUT:

None of this will lead to not having to have the direct actual environment (with some important aspects) before (i.e. in front of) a Subject for KEY MAJOR behavioral change (behavior pattern change, in what are often called "stages") in childhood/adolescence to begin.

And all this remains ALL "just" real psychology, as originally intended: the science of behavior -- actually: of behavior patterns and relevant environmental aspects as proximate cause of behavior change (new behavior) -- and NOTHING ELSE.

[My apologies for continuing to add to this and even do some editing for 2 hours. Still, even the next day I found one editorial error (occurring twice) and decided to re-write a part more clearly.]

For a start to get a better idea of the MAIN basic, empirical, behavioral perspective (if you have not already) read the 'attached' (It is an modern, empirical ethological overview of the 5 main stages of cognitive development and some of the major consequences , describing how the stages may be begin as perceptual (perceptual/attentional) shifts, as described above, and outlining the nature of these NOW TESTABLE hypotheses.) :

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Article: A Human Ethogram: Its Scientific Acceptability and Importance (now NEW, because new technology allows investigation of the hypotheses)

[Brad Jesness](#)

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Brad Jesness · 3.79 · n/a

Dear All

Perhaps I should address the human/robot differences in the main Question of the thread and as related to my last post. Let me first say a bit more about the aspects of the SYSTEM described in the last post:

FEATURES:

(1) IT is fully behavioral/experiential which a system for use in AI would have to be. THIS IS ALL GOOD, because behavior patterns are behavior patterns and environmental aspects are environmental aspects.

[Now, the following is most speculative (and just to provide a possible view of the amount and nature of the effects of learnings and developmental changes on the different Memory capacities -- and the challenges you may have there):

(2) Any further limits-on/parameters-of the nature of the system and how it autonomously develops are mainly: the limits of the capacity of working memory (basically in some respect quantitatively constant (constant number or number-range of "chunks" involved)) and otherwise design, alterations (changes in "chunk"-nature) and additions to it being rather-simple-rule based (a lot related to observable behavioral change) . AND then: the general nature of declarative and procedural memory (each of a fairly constant qualitative nature): EACH of them having/using a specifiable design and non-complicated rules for additions -- the question mainly being: when have changes consolidated/integrated enough and become reliable enough and thus then actually used by the organism/robot. NOW:

The nature of visual spacial memory and the episodic buffer -- these may be the main memory aspects that would have most to be attended to (these are quite likely IN EFFECT the most variable factors BUT still not hugely qualitatively variable, as viewed in-context). (ALSO: it could be there are clear relationships between v-s memory and episodic memory: so there may exist SOME FACTOR(S) shared and that/those may be the

most VARIABLE that may need to be attended to more frequently than any others (i.e. more than the ones following simpler rules). ALSO, the 2 may each need to be adjusted in different (though perhaps related) ways in these 2 different memory (contexts) . And perhaps, most variable is episodic memory -- more in need of frequent adjustments that are not clearly-[yet]-rule-based (and may need to be inferred). (NOTE, though: Even what is inferred should/must become rule-based eventually, maybe soon.)

Based on the quality of the design and programming of these AND ON USING KNOWLEDGE ACCRUED FROM SYSTEMATIC OBSERVATION from psychological/ethological longitudinal, developmental observations and studies AND patterns found there, there will be differences. And what-you-get will also depend on what other sub-systems (e.g. emotions) are added on and how well that is done. Ideally your work will still result in AI - robot differences, humans differing from the AI , the ideal AI, that being being a generic (but non-error making human) -- clearly the "generic" and [progressively] non-error-making human simulation itself is destined to be different in performance from a human just by being THAT (along with those other reasons for difference cited).

[I hope all notice that the entire system I describe may come close to involving just one variable left to be sufficiently "pinned down" (that is, one left to be "pinned down" enough to seem possibly meaningful and distinct -- and perhaps enough to be model-able; the other variables should be seen as close to understandable/model-able -- which I believe you might see if you look into the knowledge on these variables and the nature of fairly successful models, such as ACT). One variable at a time is good. Sometimes it may be essential; at least one needs enough knowledge to know how to reasonably develop "some order to work on", given mutually related aspects of a system.]

Finally, the answer to the question (now that things are put in some perspective):

Qualitative conclusion: The differences will likely be less astonishing or terrifying than USEFUL -- I am hoping this is apparent from the description of the aspects and some description of an AI/human comparison (above).

Hackers may "screw it up", but you provide the environment and experience; I would think that only if they could make a credible (thus operational) version of the resultant system from such as THAT, could they get something evil done. (Aren't hackers, in a sense a bit lazy -- just exploiting the things of others? Your system is a whole system that likely would have to be understood quite completely before someone could add something that would actually be "accepted" and used -- in a way beyond arbitrary, little, and apparent "screwing things up". This, of course, is just a guess; I have known a lot of programmers and techies, but no hackers.)

The Question:

Have technologies, with the importance of, AND essentially the role of, a MICROSCOPE been developed which could be used for the parsing out and investigation of very specific, likely important, particular, directly observable behavior patterns? (This post will be about the nature of such things which may be seen only with eye-tracking and related technologies.)

I am talking about NEW directly observable, NEWLY reliably-seen subtle but OVERT behaviors -- see-able by using the new technology BUT OTHERWISE NOT NORMALLY OR RELIABLY SEEN, and thus not yet expressly any key part of any key theory, BUT likely destined to become THAT. I think we now have technology capable of allowing us to do that : eye-tracking technology (perhaps with computer-assisted analysis). AND, of course, ALL THIS good use of the new technologies, roughly described, HAS YET TO BE DONE. I have a good imagination for SUCH NEW-TO-BE FOUND AND SEEN BEHAVIOR PATTERNS, termed "perceptual shifts" in "A Human Ethogram ...", and having the ROLE THEY ARE HYPOTHESIZED TO HAVE THERE at the inception of major cognitive-developmental changes. This involves coming to literally see what normally is NOT parsed out or ever clearly seen, by either researchers or the developing organism (as a clear set of things ATTENDED TO, or to attend to) during key points in ontogeny, BUT STILL are manifested in OVERT AND SEE-ABLE BEHAVIOR, right THERE at key points, QUITE POSSIBLY IN THAT ROLE hypothesized, DIRECTING ATTENTION(S) (I will call these "attentions noticed", though they are not in any conventional sense noticed -- they simply DIRECT attentions). There are, of course, both those "attentions noticed", the nature of which was just indicated, and attentions "conventionally noticed". AND yet those not so-expressly noticed (the former), though not part of deliberate attention, in any sense, are THERE consistently affecting the direction of behavior, including eye gaze -- and which soon come to affect attention. AND these, due to the perceptual "shifts", reliably see-able and possibly reliably SEEN in specific-typical ways, are likely having important species-typical roles in developing "HIGHER ORDER" LEARNING AND that YIELDING HIGHER ORDER REPRESENTATIONS (including "abstractions"), providing for further "higher order" OVERT species-typical OVERT behaviors. (It is also noteworthy that having such as these "shifts" are the only way to have a empirical foundation for qualitative changes in learnings -- otherwise developmental psychology, in an essential way, LACKS an empirical foundation.) (It may also be becoming clear to you why the term "PERCEPTUAL shifts" rather than a later-used term, "perceptual/attentional shifts", is the greatly preferred way to refer to the "shifts", i.e. the terminology without the "attentional" part -- and that is clear in "A Human Ethogram ...", where "perceptual shifts" is always or almost always the terminology used.)

IN ADDITION (via "The Human Ethogram ..." perspective): It can be clearly shown how major classic psychology developmental (personality) theories are clearly seriously flawed YET ALL OF THEM, AND JUST THEM, still the only ones always found in General Psychology and Developmental Psychology and Cognitive Psychology textbooks. YET, in fact, they can clearly be shown to involve inappropriate ways of developing 'assumptions' AND that these assumptions (and other even more basic 'assumptions' held) are unfounded and baseless and unjustified

AND have better-founded, better-justified ALTERNATIVES (consistent with biological principles).

Plus (in the main "Ethogram" paper), a related alternative/resultant approach to studying development (AND using this new, newly observable, data on behavior patterns) prescribes a way to see the development of cognitive and cognitively-related behavior patterns ALWAYS GROUNDED (at least the inception of ALL central key behaviors) IN reliable, direct-observable, concrete behaviors BY DESIGN (by biology), and it correctly applies and uses the full terminology of classic ethology.

For the basic perspective and for one outlook on pseudo-assumptionism see "A Human Ethogram ...:

Article A Human Ethogram: Its Scientific Acceptability and Importanc...

For explication of THE false, even more BASIC, unfounded 'assumptions' held (and at the very base of modern psychology theory, and which are behind the other aspects of the seriously flawed classic and current explanations given --as described in "A Human Ethogram ..") AND for an explication of the better alternatives: see a lot of my essays in Questions asked and Answers given, here on researchgate (start at my Profile, click Contributions, and then finally click Questions and click Answers). Start here: Brad Jesness

ALL OF THIS, IN CERTAIN MAJOR WAYS, PROVIDES FOR REAL ARTIFICIAL INTELLIGENCE and remarks pertaining to that are in the "Answer", directly below this "Question".

P.S. Each of the perceptual shifts are likely not applied to a single context:

These are OVERT DIRECTLY-OBSERVABLE phenomenology, related to the INCEPTION OF new ways of perceiving (new THINGS OF PERCEPTION), RESULTING in coming to ATTEND to NEW patterns (or key parts of patterns); AND, from such new "outlooks", then comes: new ways of learning and then new ways of thinking/acting. This PHENOMENOLOGY is what must be discovered:

All this, BEGINNING WITH THE EMERGENCE OF PERCEPTUAL "SHIFTS", periodically occurring DURING THE COURSE OF ONTOGENY (child development), would likely be impossible to guess BUT MUST BE DISCOVERED. BUT THEN, ALSO: The range of application of such shifts (or types of shifts) and what range/sets of new learning possibilities are associated with _EACH_ SUCH _INSTANCE_ of qualitative change (i.e. with EACH of the "perceptual shifts" during development) are not known. So, these are additional details, which must also be discovered.

Another P.S.

I also want to address possible limitations you may imagine if major behavior pattern changes are directed in a major/main way by perceptual shifts. In fact, I would like to describe qualitatively the nature of some of the broad phenomenological change possibilities which may exist with perceptual shifts as a first major proximate cause of new behaviors (covert and overt). In fact, this description of possibilities seems to me to provide the needed "openness" and great behavior change variability (providing for different results) of various relations-to-the-environment that is allowed-for WITH having perceptual shifts in such a prominent role.

How can experiences with what MUST BE CONSIDERED the main operational environments, experiences in such an environment of the human, be imagined to change (and yet stay the same in some ways)? [By operational environments, I mean environments that are acted in, however subtly (as subtle as eye gaze patterns), and providing for any significant behavioral changes (in the broadest sense: including any significant memory changes and other covert and/or overt behavioral changes).]

Such "operational" environments must include, because of continued effects (behavioral changes), any changes that can result from and, in the same environment which was "operated in" BEFORE, and that is "operational" AGAIN with any noteworthy significant instance of interaction providing for change: properly INCLUDING relevant MEMORY and cognitions, with aspects of those or/and of what is classically considered overt behavior strengthening/weakening OR CHANGING. AND, YET also, very importantly: meaningfully-the-same environment may be adaptively and essentially newly INTERACTED WITH over again (but now IN NEW WAYS), at each stage/level, for each key conceptual/relational new understandings which are to result. We would like to think that there WILL continue to BE relevant "CONSTANT ASPECTS" (AMONG relatively constant effective factors _OR_ yet-present contextual factors at all points related to development) which make an environment (some environments) "the same one" -- and this may to a notable extent be true. Of course, the relatively constant aspects WHICH ACTUALLY ARE IMPORTANT AND EFFECTIVE in and for change will not remain precisely the same going from stage to stage; and, conceivably these may well not remain the same at all (as far as the ones active for new overt or covert behavioral change, changing Memories included).

Thus, from the perspective of the operational environment, the idea: "there WILL BE "CONSTANT ASPECTS" which make an environment "the same one", certainly need not be true (and may effectively not be true), nor anything close to the "whole story". The important environmental behavioral aspects, including the relative "constants", may accrue with development AND not only "constants-THERE (present)" may change that way but key new subsets of experience may need to be defined/found (by the organism -- and discovered and seen by researchers) AND some new aspects included, while some 'old' ones excluded -- at least as far as being operational-for-change is concerned. As reliable internal representations develop, it is even conceivable (again) that there is effectively a completely new operational set of relative "constants" of that level/stage. So, with ontogeny unfolding, in types of circumstances/situations it is perhaps best to consider the possibility that the previous significant actual [relative] constants THEN may have very little -- and perhaps even nothing -- of the same nature, NOW: This is comparing that which in past instances (interactions) gave rise to previous behavior pattern change with what is happening presently with and in current behavior patterns CHANGE/CHANGING. (And, similarly for the present new learnings and "insights", compared with earlier conceptualizations/overt behavior patterns developed).

[Yet, something(s) might well impel us to continue to consider it a very similar environmental setting, to one earlier, perhaps very rightfully: somethings PRESENT, having to due with developments which have occurred and stabilized earlier but no longer be involved in significant species-typical behavior pattern change/development, may well BE THERE -- and in a role of providing a CONTEXTfor new behavioral

developments. Such could well, if conceptually "enough" and limiting nothing to-be-seen, provide for validly defining AN environment of learnings and development.]

NOW: in addition to the examples of some various natures of changing experiential circumstances (described above), there will be NEW [relative] CONSTANTS cross-environments -- considering, of course, the varying/changing/developing Memories-possible -- and that will be there with each new stage/level of cognitive development.

All these qualitatively described phenomenon, in the paragraphs above, STILL could very well have very much (and most) to do with the when/where/what of what I call perceptual shifts. Nothing more than a systematic series of perceptual shifts could still produce all I just described and this may be the most efficient, effective-yet-open mechanism for good adaptation to the environments the organism finds itself in (thus, something again, making the perceptual shifts with major roles likely). [It may well be that only perceptual shifts provide the openness and variability of responses needed for individual adaptation.]

Postscripts addressing possibilities for artificial intelligence:

What about this perspective for AI, without doing the eye-tracking research and getting and establishing some psychological findings:

A possibility (though I see this as very unlikely -- because it would take great insight) is: IF someone could guess a [set of] somethings that is perceived/remembered (and may well also be processed to some extent via working memory and possible contextualization contents there), before becoming [part of] an "object" of attention or even an attentional bias. And, if this beginning-with feature(s)-detection/selection (however it goes), influencing what WILL be attended to, has the result of yielding an appropriate SET of attentional sets which then appropriately and in a GENERAL cross-situational way YIELD correct associative learnings (aka "higher"-level learnings or "abstract learnings"), "whatever" the domain (at least to an extent) OR across-domains (at least to an extent) _THEN_ you would have simulated something in a role similar to my hypothesized "perceptual shifts". If this worked-well for functionality (as compared to other solutions), it would be a type of proof of concept, and perhaps it could be refined to be usable in real AI.

The guessing of somethings that are perceived (in such perceptual shifts) which guides attention and eventually yields a significant part of what is attended to would VERY much depend on FIRST "bringing forward" all the appropriate relevant situational Memories (of all sorts) before the "perceptual shift" itself: this is to have the correct and full real "seen-and-understood" situation-at-hand ** for any developments and eventual shifts in deliberate attention, and new learnings (<-- NOTE: it is conceivable some of the new learnings would precede eventual shifts in deliberate attention, so the ORDER of things, in the statement before THIS statement in-parentheses, is not at all firm) .

** FOOTNOTE: THERE MAY BE A SEQUENCE OF PROCESSING VIA CHANGING CONTENTS OF WORKING MEMORY (contextualizations), ALL before the attentional biases produced actually result in processed-attention (aka deliberate attention)(some 'biasing' maybe preceding and some maybe following the full/true "perceptual shift") -- THERE ARE A LOT OF POSSIBILITIES which, if indeed possible, can be considered. (Of course regarding what makes such things possible: If there is such a sequence of processing before true attention, it will still have to be based on clear directly observable things (sets of things or things-with-establish thought) in the organism's/robot's past actual experience.)

[Regarding the portion of the statement, "some 'biasing' may be preceding and some may be following the full/true "perceptual shift"": Of course a big part of what this "preceding or following" matter depends on it WHAT IS ACTUALLY _THERE_ TO BE PERCEIVED (specifically, what aspects of the real current environment are available AND COULD BE as-considered in a context (or resultant context): NEW.]

[The number and complexity of covert-processing sequences is greatly limited by the limited ("chunk") capacity of working memory -- so there is no infinite regression OR anything like that possible. That which is already established in memory, in contrast, is often a "BIG deal".]

The other AI postscript:

A more optimistic view for possible true AI progress:

I do make the idea of trying true AI (AGI) without psychological science findings seem hopeless, above. BUT: You do have a way to simulate key things (Memories) and establish MANY basic possibilities and test them quickly; plus maybe there is some way to 'see' various dimensions of possibilities (on which to systematically vary "values") regarding each of the established Memories (and eventually, in-combinations) -- all the facilities/faculties -- and also (at the same time) involving clear environmental aspects (systematically available and systematically found/seen/"accrued", even if in some same environment) -- AND including much cross-circumstance/ cross-memory 'sets' (giving real needed context). The various possibilities proposed ("values" set) might somehow be tried (and those and others systematically tried, and then also in reasonable combinations). This could answer major questions about whether it is "here" or "there" major changes need to occur (and establish some at-least a qualitative idea of reasonable "values"). [CAPACITY of working memory for "chunks" is the fortunate "bottleneck"/ limiter; possibilities may be many, but not infinite (with given 'experiences').]

Using decently well-defined dimensions seems like a challenge, but you can fully know the " 'grist' for the mill" (capacities and facilities provided and environmental-circumstance-aspects provided and responses you've enabled) and sensibly sequence 'experience' (with feedback (response) from your robot system) using the memories and abilities established . With good knowledge of all the possibly-involved Memories (their specific natures, and using that) and correspondingly envisioning (and trying) a series of environmental contexts and experiences "recorded" starting from

KEY existing aspects (then systematically sequenced and "recorded" via working memory IN the Memories) perhaps you would have at least "enough" to 'see' something informative.

Reflections on the organismic context of perceptual shifts:

I, myself, still cannot really even roughly imagine what concrete aspects of the environment might direct attention for the inception of a new "level" of thinking. (I have indicated their species-typical RESULTS in my larger papers (Research Items).) I do have a tendency to imagine that perceptual shifts have to do with some "gap" ** noticed by the organism between rich representations of important circumstances/situations: THEN, I imagine, when something "comes up" as a new aspect of a current environment that may fill the gap then it is 'seen' ('noticed' -- in the sense of "attentions noticed" in the Question beginning this thread).

The good thing about the "gaps" idea is it does expressly indicate a relationship between present representations and understanding and the new aspect(s) eventually yielding further understanding. There are gaze pauses likely in each context, both the known but incomplete, and the new where more is to be 'seen'. TO COORDINATE the represented/known/understood with the good-to-'see' new representables/knowables in the present environment is good -- this keeps the process very much like a biological thing should be. [This is as close as a "knowing before found" could reasonably be -- I think much more reasonable than what you find in current popular theories that are like that.] Also, you have more clues as to what the perceptual shifts will be, because of what-is-an-'issue' BEFORE a perceptual shift; potentially each may be equally 'seeable' with eye-tracking technology. Plus you have a pattern to look for : a "this" before "that".

FOR AI: Realistically representing the nature of key visual-spacial memories seems to me to be the main challenge and biggest challenge (the other knowledge and skill factors OF long-term memory are, of course involved, BUT those may be the easy parts). The other challenge is defining BUT NOT LIMITING the episodic buffer -- what is the "frame", what is the contextualization THEN yielding some of the "chunks" worked on in working memory?

Given our adaptive nature, the way all BIG qualitative changes in thinking occur ABOUT the same time may be related to TRUE analogies -- the same pattern for advancement repeated for developments in different domains. [I normally eschew analogies, but the idea of 'seeing' or looking for similar patterns (somehow) may be adaptive.]

** FOOTNOTE: an example of a 'gap' would be noticing differential responses to individuals in a social hierarchy, where the immature organism has not yet come to an understanding of the full nature of the bases of status. (It is from such things, that were the likely evolutionary precursors to 'abstract thought' -- AND involve some abstract thought themselves -- that we have the cognitive abilities we do).

As important as perceptual shifts may be, the empirical/biological/behavioral/assumptions CONTEXT and JUSTIFICATION of such a view would be just as important or more so. Readers can find the justifications for this "shifts" perspective, with respect to all 4 of those major types of considerations (just noted), in the many, many other essays I have written here, under Questions (I asked) and Answers (I've given) [(On my Profile page, click Contributions, and then click Questions, and Answers: You will find an entire LARGE book on the better justification and advantages of the perspective: for empiricism; with biologically-congruent explanations; having explanations in terms of behavior patterns (and environmental aspects) -- JUST those -- providing complete explanations (as psychology was intended); _AND_ ALL associated with well-justified assumptions.) Readers will also see the huge short-comings of other classic and current theories, in each of the 4 big areas, "spelled out". The FULL CASE, argued and detailed.]

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Something further that may help the system (AI or human) work:

Something I never expected I do, I am now going to do. I am going to further hypothesize the NATURE of the perceptual shifts initiating each new stage/level of cognition. I am going to do this to address what seems to be a paradox between extremely major developments (as they are first initiated) and how the environmental aspect(s) involved must be absolutely basic/simple (as well as being flexible and open, and shown in many domains).

I have already noted that I think these "perceptual shifts" quite likely, at first, are NOT noticed in any way by the Subject (NOR by the researcher, without the latter having special equipment). (I have referred to these shifts as they first manifest themselves as "attentions noticed" -- simply because researchers can notice and see them with eye-tracking technology, and computer-assisted analysis, AND (of course) with some good knowledge of when and under what circumstances these could/would come up, during child development. The perceptual shifts probably at first should have been called patterned-gazes-noticed -- and perhaps that would be a good idea, here on, to call them that, until the Subject (the child) does notice new important environmental aspects changing experience -- and then these would be perceptual or perceptual/attentional shifts that are just THAT for the Subject (those both being other phases of the cognitive-developmental shifts).

(At all times (phases), these gazes and perceptual shifts DO involve innate guidance and will involve associative/discriminative (dissociative) learning -- AND to know the covert contextualizations and thinking involved, one must have done this research with all previous Periods/stages/levels, in order).

Freudians and neo-Freudians see a total of 5 such developmental stages (3 mo. to 18+ years) and neo-Piagetians can also most meaningfully see 5 if the Pre-Operational Period is divided into 2 stages, based on Piaget's own recognition of 2 phases OF this Period: the Preconceptual stage (2 to 4 y.o.) and the Intuitive stage (4 to 7 y.o.).

Though I never expected to say more (but rather just leave all the rest to actual observation and research), for several nights, it has occurred to me ("plagued me", might be a better description) that more about the likely nature of the environmental aspects setting off all those responses and developments, described above, should be presented. These environmental aspects (MOST CERTAINLY SOME PRESENT IN DIRECTLY OBSERVABLE BEHAVIOR PATTERNS AS THE PROXIMATE CAUSE(S)) are behind the inception of everything cognitive that can be manipulated in working memory, I.E. everything ever deliberately processed (though in the early phase they may well be described as unconscious). This may seem hard to understand, given this process occurs at the inception of even the highest levels of cognitive development, including that providing beginning content to 'abstract thought'.

What could this behavior pattern responses be, phenomenologically, given the role(s) these "shifts" have, and with their phases, have? To get the correct perspective, one must have a thorough understanding of the vast amount of contextualization (of the environment and of overt and covert behaviors) brought forth by our various types of memory. This factor is so huge, that the new environmental aspects, triggering off these gaze/perception/attention changes can be VERY limited additional stimuli: altering some cognition already existing or adding to existing behavior or adding (perhaps with some subtraction) a whole new aspect of experience.

I have also frequently thought that the "shifts" could begin as gaps "noticed" with gazes WHERE THE NEW ASPECT FOR NEW UNDERSTANDING of concepts and physical processes COULD BE USEFUL (a innate "understanding" of a lack of "understanding"). _THEN_, perhaps on other similar circumstances (or just other instances of the same circumstances): a good "gap filler" WILL BE patterned-gazes-noticed (phase two of my "perceptual shifts" processes). This idea of there being initial "gaps", where, soon with development, new environmental aspects

will be seen, or new experience combined with existing cognitions ... enhances the ability for this process in development to be very open and flexible, AS IT MUST BE. In short, the "gaps" themselves are the impetus to "look/see" further; the "gaps" themselves would be the organismic trigger (in Piaget's terms: where the recognition and response of the current Period are inadequate and a transition to the next Period must begin).

Also, the "gaps" in spacial or temporal/spacial patterns experienced could allow for SIMILAR responses to similar areas (OR TYPES) of experience, where more understanding is needed. HERE, I substantiate what may be behind TRUE actual analogies "in play" in situations, where similar developments are needed; and, of course, those needed aspects become "present", as appropriate, in the environment.

Here is another way I described and told about the same details as were described above .

This expression of these more detailed hypotheses may be much clearer so, while it is supposed to be the same thing I said above, the following may be better written-up:

The phases I was referring to are possible different behavioral/phenomenological characteristics during a "perceptual shift" (those overall occurrences at the inception of each transition from one way of thinking to a 'higher' level). Thus, I was referring to phases during any one of those perceptual shifts involved in any such stage advance (the INCEPTION of a behavioral/thinking advance). (So: They are, in effect, phases of any one single perceptual shift.)

The reason I keep coming up with idea of this extra phase is that it would facilitate openness/flexibility for learning and allow for some pre-apperception of things that structurally (e.g. like their place in visual-spacial memory) that are indeed analogously alike (what one could call "true analogies"). I usually dislike analogies, but in human development it could help the generalization and reuse of "noticing" processes (in a later phases) across domains where there is some real structural similarity (such at that I just described for v-s memory, above). (The "gaps" I refer to are fixations of gaze, but NOT on some new aspect of the environment -- but indicating a need for some more information to "fill up" the phenomenon the child is experiencing (basically a "something's missing" experience). Now, one whole "perceptual shift": In this conceptualization of a perceptual shift, it is thought it may involve: (1) such gaps, then (2) "noticed attentions" (--- this does involve an orienting response to a 'new' environmental aspect -- but an orienting response is all), (3) actual attention, and then (4) good integral processing; and then from that eventually the development of new representation and new ways of thinking.

** FOOTNOTE: The "attentions noticed" probably should be better named with the term "gaze pauses" -- to more clearly indicate the absence of any particular/specific attention OR of any specific orienting of any sort.

There may be other sorts of phases in stages, at a grosser level, as outlined by Andreas Demetriou et al; this could yield further points of clear discrimination in observations during the continued development of the major levels/stages of cognition. Piaget, too, may have indicated the nature of some invariant changes, with progress through a stage/level.

Learning : a relatively permanent change in behavior patterns* due to the association (or disassociation) of distinct certain, well-specified aspects of experience (or documented types of experience), clearly corresponding to aspects of the present (or once present) observable environment and/OR clearly and properly having their foundation in behaviors directly related to such **. [Often learning, most notably includes: that for useful representation and understanding, for species-typical adaptation -- though this last part can be (and can "safely" be) implicit, so the definition can end at : "... related to such" .]

* FOOTNOTE: If you find the patterns (which, in a biological organism WILL BE THERE), this at least somewhat demarcates or specifies the real behaviors. The fact that psychology rarely speaks in terms of behavior patterns, itself, indicates how far "off base" past and present psychology has been and IS.

** FOOTNOTE: Other than these aspects of overt behavior patterns (and corresponding environmental aspects), including those that are foundational, there is only associative and discriminative learning -- terms which, if taken to mean ONLY what they indicate, are ALREADY well-defined.

Being able to well-understand this definition involves knowing the nature of our Memories, and using that to contextualize much behavior (the content foremost in our memories changes with development, of course). If you think this definition is incorrect, know that it relies ONLY on hypotheses which are testable.

The capacities and processes I have outlined can get you to each of the categories of Knowledge you describe. It is far better to get to each knowledge in an appropriate developmental sequence, etc. (and ontogeny) THROUGH the use of these capacities and processes (in their true developmental states ready for the sort of achievement you want have) THAN TO define things yourself. (You may have to show that the development of your Ai is capable at lower levers of hierarchical thought FIRST, of course.)

If you go with KNOWN processes and capacities, YOUR programming and use of them will at least give qualitatively correct results (and, to the extent there is error, IT is correctable). On ThE OTHER HAND: Once you define things you make the system not of related well-defined components (lacking developmental validity) and errors intractable.

P.S. YOU defining anything at all is not best. Don't do any of that; do NO defining. (True classical ethology, circa 1960-1970s, SHOWS true behavior patterns associated with other behavior pattern(s) occurring ALWAYS AT the "given" stage of development (including those developing in more special ways) AND WITH the given environmental aspects (aka "circumstances"). If you start with a system which is valid behavior patterns associated with the Memories and with innate guidances for stages, as found via "perceptual shift" research, THEN you will be in line with key "knowns" (of memory and development) and cannot be far off.

It is far better to get to each knowledge in an appropriate developmental sequence, etc. (and ontogeny) THROUGH the use of these capacities and processes (in their true developmental states, ready for the sort of achievementS you want have) THAN TO define things yourself. You basically have behavior patterns which DO exist triggering and allowing for cognitive advances (I.E. new or shifted behavior patterns), which are also clear and these are all RELATED behavior patterns (related to each other, in clear, known ways, using our system; AND, these are clear enough to be programed). (These developing behavioral patterns in major situations and at key points in ontogeny ARE and may yield a behavior change in one or more of these very behavior patterns involved -- all through [changes in] the simple innately guided processes and the well-known, well-defined other changes, possible because of the nature of our Memory systems AND otherwise: via simple associative learning. SO, it is all as simple as it can be, yet is clear, well-defined by the Subject and can work -- this is what we want and, this is what we need.)

Subject: On definitions and algorithms

You want to have a well-founded, research-based-and-justified, dynamic 'self-defining system (AS it operates); OTHERWISE one can just have FUNCTIONAL objectives (you believe should clearly be reached if the functioning of the system is as it should/must be) and see if that happens with the system you are using (IN OPERATION).

Algorithms should be used ONLY to make aspects of the pre-defined, research-defined and self-defined Memory systems _and_ the innate guidance systems BE as the should be and come into play as the could/should.

In "there" somewhere is ALL definitions and ALL proper use of algorithms. Result: Things are thereby tractable because you KNOW what is in your system (and how all operates together).

P.S.

The justified way-of-defining, I described, is the "best" it can be: IF ONLY BECAUSE INDIVIDUAL EXPERIENCES WILL MAKE EACH SYSTEM DIFFERENT (that's true AI for you) -- but there are other reasons , too, that "defining" should be done in the way I prescribed (e.g. biological-principles necessities; congruence and consistency with all truly good research findings on the "components").

P.P.S.

My outlook allows for great "openness" of "the system" . And, at the same time, allows for A LOT of creativity by the research engineer: While the NATURE of the memories (and the yet-to-be discovered "shifts") will be known, the actual where, when, and detailed-how are very, very much open questions. The questions may be solved in more than one way (even in any individual instance of "the system"), but likely there is a best solution (for each system); the possibilities will be quite rich and numerous.

My system is properly empirically based AND FOUNDED on the direct observable phenomenology of the Subject, in the terms it must be in, given strong findings on our Memories, and given cognitive stages -- which must have a basis, such as I describe. These stages are VERY likely with phases of different types, some described by me and other sorts of phases in each of the stages, at a grosser level, as outlined by Andreas Demetriou et al,
Emotions will have to be added in as will be apparent when needed (ditto for language).

In my view it would be better to try to use the system, even if just some plausible outline of it (using it crudely), than to use ANY hypothetico-deductive system that you otherwise formulate. A crude model could likely be done as easily as about anything else with any "beginning 'validity'" -- as good (and quite possibly better) functionally.

With that you should be able to achieve all the functional states you initially seek in your AI.

I myself would find following my "model", act. my understanding of key processes, etc., challenging. But I do believe this is necessary. The hardest part is to imagine (at proper points) the actual nature and content of the "perceptual shifts", because the official knowledge on this is presently non-existent. That said, understanding all ALWAYS in terms of the Memories may be not so hard. AND, THAT is essential, because

basically ALL is Memory:

The working memory is our very "place" of interaction with the world -- at all times. This is filtered by the Episodic Buffer, but otherwise just draws on the other sorts of memory available: Declarative and Procedural long-term memory and, especially visual-spacial memory. [There are other notable aspects in the operation of memory: the phonological loop; mirror neurons (both this and the former item -- the "loop"-- basically enabling some automatic rehearsal of key things seen/heard, etc.) ; some variable system of marking "time" (related to internal rhythms); and inhibitory processes, so we can focus on what we want to or need to. These are less challenging to understand and can rather easily be inductively inferred as needed. Similarly, the need for emotions will be clear when they ARE needed; and one can have a well-justified similar outlook for language.]

Acknowledging some challenges, it is essential that the "chunks" thought-of in working memory and (limits to their number and nature), must constantly be determined or at least roughly hypothesized for ANY understandings. AGAIN, all we are (as we understand ourselves and our world phenomenologically) IS MEMORY (with working memory the guiding/control center). I believe not acknowledging this, and always clearly reflecting this (as it is, or as you can best understand it), is essential for a view to have any validity to it. Anything else is intractable, because it does not adhere to existing real systems (and what "anything else" would be will be necessarily vague and uncertain because THAT would be an indirect representation of any real processes going on, with NO clear way of "carrying that forward").

The good news is this outlook is close to having the particulars to use in programming for AI. Getting a little more particular about the actual (and eventually or finally sequential) processing is another remaining challenge. Plenty of challenge, but plenty of room for any needed creativity: for YOU and for your AI "robot".

Added note about "perceptual shifts" (clearly indicating the "openness" of behavior patterns, related to thought):

About the "perceptual shifts", their nature, natural history phenomenologically, and their establishment: I would claim that these "shifts" are "intervening variables", of a constitutive nature and relevance, and may be exemplified by the space-time-object gaps IN related visual-spacial memories and that these are/create the initial "gaps", then orienting responses [, then eventually (thirdly) attention-to the key environmental aspects], operative in the early phases of a perceptual shift. (It would be like comparing 2 pictures used for identity recognition, but HERE it would be the spacial-time relations between one instance of v-s memory and one or more [eventual] subsequent v-s memory instances. Still the analysis your system would do is similar in nature to the process of image recognition, though more sophisticated.)

The "shifts" will be able come up with new "free space" (in the episodic buffer and in working memory) once what you already know is well integrated, consolidated and coordinated. The shifts are based in related patterns in v-s memories AND NOT on any SET particular content (though may have similar natures (aspects) across all people, given the stage of development) -- giving us the "openness" of our biological behavioral system. They will successively (as the hierarchical stages unfold) lead to key environmental aspects which are more key parts of new representations and new understandings (and more sophisticated and 'abstract', with each stage).

A recent summary of brain activity related to behavior (esp. cognitive behaviors and cognitive development), which I read, is consistent with the system I have described for you and Gen. AI. (It also displays to me the very disruptive intrusion of needless concepts, like the "meta"s and executive control -- which cannot be consistently construed, at any point, and are needless.)

One thing I have not noted that may be functionally related to behavior (overt and/or covert) and brain activity is some kind of "beat of readiness": A rhythm of "looking for" certain types of pertinent things (or pertinent thoughts/representations) to provide readiness. There does seem to be something like this. (This is also congruent with the "finding gaps" and "perceptual shifts" for stage changes I describe -- since what is activated by these rhythms is no doubt very much "forward looking".)

The visual-spacial abilities also DO seem to have the prominence I have given them in descriptions to you.

Other completely useless (and actually destructive) things modern psychology researchers and theorists do is to divide things up as if their words or concepts are real: examples: trying to talk about "attention" or "consciousness" as supposed separate things (of course, they are not: not generally, to any noteworthy extent) -- nor are they meaningfully viewed as having clear, significant CONCRETE different separate aspects (themselves). They also like to parse things up according to what they see as "types of functioning", so you have visual short-term storage (or working memory) , verbal short-term storage (WM), and "executive processing" STM/WM AND OTHER SUCH THINGS -- as if each was separate and something to research separately.* (Obviously, "executive processing" STM/WM is a double "NO-NO".) You likely realize all these things; I guess I just like to say them again.

* FOOTNOTE: Some theorists even separate out "cognizance", as if such a thing was possible.

Be sure to see the qualitative descriptions of possible (hypothetical, TESTABLE) descriptions of innately guided perceptual shifts I provide. See especially:

https://www.researchgate.net/post/Have_Technologies_in_the_role_of_a_MICROSCOPE_for_psychology_been_developed_which_can_now_be_used_to_investigate_important_observational_specifics

AND

https://www.researchgate.net/post/How_about_a_description_of_a_possible_hypothetical_inception_of_a_new_qualitative_stage_change_in_cognitive_processes_with_a_perceptual_shift

I have also sent AI people a summary of all previous (and generally shared, publicly shared stuff) as onmemory.txt (link:

<https://mynichecomp.com/onmemory.txt>)