Review of Radicalizing Enactivism by Hutto and Myin (2012) (review revised 2019)

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ABSTRACT

Probably the leading exponent of Wittgenstein's ideas on the language games of inner and outer (the 'Two Selves' operation of our personality or intentionality or EP etc.) the prolific Daniel Hutto's approach is called 'Radical Enactivism' and is well explained in numerous recent books and papers. It is a development of or version of the Embodied Mind ideas now current and, cleansed of its jargon, it is a straightforward extension of Wittgenstein's 2nd and 3rd period writings (though Hutto seems only intermittently aware of this).

The basic idea of the Embodied Mind or Enactivism is that much of behavior is automated and does not involve representations (basically S2 dispositions-see Hutto's lovely dissection of the 'representation rats nest' in his online papers). To me this is just another way of stating the fact that System 1 precedes the operation of System 2 which is a standard feature of contemporary psychology, which I have explained above and in further detail in my reviews of Wittgenstein (hereafter W-who was the first to see this and explored it in great detail) and Searle (hereafter S-who called it The Phenomenological Illusion in his superb essay of this name in his book Philosophy in a New Century, which I have also reviewed). Since these are basic incontrovertible facts of animal behavior and I have already discussed them I won't dwell on it here.

This book is a sustained argument against other similar ways of describing behavior which he calls CEC and CIC in favor of REC (Radical Embodied Cognition), which he characterizes as "the strongest reading of the embodiment thesis—one that uncompromisingly maintains that basic cognition is literally constituted by, and to be understood in terms of concrete

patterns of environmental situated organismic activity, nothing more or less" (p11). This is clear as a bell if you understand the two systems view explained above but likely opaque if you don't. Much clearer is Fodor's characterization which he quotes as "abilities are prior to theories", that "competence is prior to content" and that "knowing how is the paradigm cognitive state and it is prior to knowing that" (p10). That is, the unconscious automatisms of S1 are evolutionarily and behaviorally prior to the slow conscious dispositions of S2.

This is classic Hutto high-level philosophical dialog, which is quite elegant, but somewhat too dense and a tad pretentious for the rest of us. I have not before encountered his coauthor Myin, so can't say how much of this text is really due to him. It is clear from this and the rest of Hutto's work that (like everyone else) he has not quite kept up with the latest work in psychology nor really grasped the full power of W or S, even though he is one of the top Wittgensteinians alive and as bright as anyone in the field. His discussions of the language games of "information" and "representation" in his other papers and books (and much else including his deconstructions of Dennett and Fodor) should be required reading for anyone interested in behavior. So, I have the greatest respect for him, but one hopes that he will mellow with time and write descriptions of behavior (i.e., all we can really do as philosophers according to W) in more mundane prose such as this lovely summation on p15. "Hence, REC is nothing less than a fundamental rethinking of the very foundations of standard approaches to cognitive science and philosophy of mind." Yes, and what a pity that this great Wittgensteinian (and everyone else) does not realize that W laid it all out with unmatched clarity in his third period works over 60 years ago.

I have much less sympathy for the extended and scaffolded minds of Chap 7. I don't see how one can lay the burden of explaining how the 'mind' works at Searle's door, nor how the convoluted prose about "decoupled contentful activities" etc. helps at all. Why not just say that automated unconscious prelinguistic S1 feeds deliberate, conscious linguistic S2, which is axiomatically extended by public language into the myriad wonders of

culture (S3)? Beginning and end of story.

Their last chapter is about "regaining consciousness," but I would say that if one has understood Wittgenstein and Searle, one has never lost it. And, though this is an excellent book by two of the brightest and the best, I suggest an even better filter for folly is mulling over my thoughts in this and other reviews, and reading Johnston and the latest from Searle, along of course with as much of 3rd period W as feasible. In sum an excellent book with various faults which I try to correct.

Those wishing a comprehensive up to date framework for human behavior from the modern two systems view may consult my book 'The Logical Structure of Philosophy, Psychology, Mind and Language in Ludwig Wittgenstein and John Searle' 2nd ed (2019). Those interested in more of my writings may see 'Talking Monkeys--Philosophy, Psychology, Science, Religion and Politics on a Doomed Planet--Articles and Reviews 2006-2019 3rd ed (2019) and Suicidal Utopian Delusions in the 21st Century 4th ed (2019)

"But I did not get my picture of the world by satisfying myself of its correctness: nor do I have it because I am satisfied of its correctness. No: it is the inherited background against which I distinguish between true and false." Wittgenstein OC 94

"Now if it is not the causal connections which we are concerned with, then the activities of the mind lie open before us." Wittgenstein "The Blue Book" p6 (1933)

"Nonsense, Nonsense, because you are making assumptions instead of simply describing. If your head is haunted by explanations here, you are neglecting to remind yourself of the most important facts." Wittgenstein Z 220 "Philosophy simply puts everything before us and neither explains nor deduces anything...One might give the name `philosophy' to what is possible before all new discoveries and inventions." Wittgenstein PI 126

"What we are supplying are really remarks on the natural history of man, not curiosities; however, but rather observations on facts which no one has doubted and which have only gone unremarked because they are always before our eyes." Wittgenstein RFM I p142

"The aim of philosophy is to erect a wall at the point where language stops anyway." Wittgenstein Philosophical Occasions p187

"The greatest danger here is wanting to observe oneself." LWPP1, 459

"The limit of language is shown by its being impossible to describe a fact which corresponds to (is the translation of) a sentence without simply repeating the sentence (this has to do with the Kantian solution to the problem of philosophy)." Wittgenstein CV p10 (1931)

"But you cannot explain a physical system such as a typewriter or a brain by identifying a pattern which it shares with its computational simulation, because the existence of the pattern does not explain how the system actually works as a physical system. …In sum, the fact that the attribution of syntax identifies no further causal powers is fatal to the claim that programs provide causal explanations of cognition… There is just a physical mechanism, the brain, with its various real physical and physical/mental causal levels of description." Searle PNC p101-103

"Can there be reasons for action which are binding on a rational agent just in virtue of the nature of the fact reported in the reason statement, and independently of the agent's desires, values, attitudes and evaluations? ... The real paradox of the traditional discussion is that it tries to pose Hume's guillotine, the rigid fact- value distinction, in a vocabulary, the use of which already presupposes the falsity of the distinction." Searle PNC p165-171

"…all status functions and hence all of institutional reality, with the exception of language, are created by speech acts that have the logical form of Declarations…the forms of the status function in question are almost

invariably matters of deontic powers…to recognize something as a right, duty, obligation, requirement and so on is to recognize a reason for action…these deontic structures make possible desire-independent reasons for action…The general point is very clear: the creation of the general field of desire-based reasons for action presupposed the acceptance of a system of desire-independent reasons for action." Searle PNC p34-49

"Some of the most important logical features of intentionality are beyond the reach of phenomenology because they have no immediate phenomenological reality… Because the creation of meaningfulness out of meaninglessness is not consciously experienced…it does not exist…This is… the phenomenological illusion." Searle PNC p115-117

"Consciousness is causally reducible to brain processes…and consciousness has no causal powers of its own in addition to the causal powers of the underlying neurobiology…But causal reducibility does not lead to ontological reducibility…consciousness only exists *as experienced*…and therefore it cannot be reduced to something that has a third person ontology, something that exists independently of experiences." Searle PNC 155-6

"…the basic intentional relation between the mind and the world has to do with conditions of satisfaction. And a proposition is anything at all that can stand in an intentional relation to the world, and since those intentional relations always determine conditions of satisfaction, and a proposition is defined as anything sufficient to determine conditions of satisfactions, it turns out that all intentionality is a matter of propositions." Searle PNC p193

"Cognitive systems don't 'pick up' or 'take in' any informational contents; there are no such things as informational contents to take in." Hutto RE pxvi

Before commenting in detail on Radicalizing Enactivism (RE) I will first offer some comments on philosophy (descriptive psychology) and its relationship to contemporary psychological research as exemplified in the works of Searle (S) and Wittgenstein (W), since I feel that this is the best way to place any

commentator on behavior in proper perspective.

Wittgenstein is for me easily the most brilliant thinker on human behavior. His work as a whole shows that all behavior is an extension of innate true-only axioms and that our conscious ratiocination (now called System 2) (S2) emerges from unconscious machinations (System 1) (S1). See "On Certainty"(OC) for his final extended treatment of this idea-and my review thereof for preparation. His corpus can be seen as the foundation for all description of animal behavior, revealing how the mind works and indeed must work. The "must" is entailed by the fact that all brains share a common ancestry and common genes and so there is only one basic way they work, that this necessarily has an axiomatic structure, that all higher animals share the same evolved psychology based on inclusive fitness, and that in humans this is extended into a personality (a cognitive or phenomenological illusion) based on throat muscle contractions (language) that evolved to manipulate others (with variations that can be regarded as trivial).

All of W's and S's work as a development of or variation on these ideas. Another major theme here, and of course in all discussion of human behavior, is the need to separate the genetically programmed automatisms, which underlie all behavior, from the effects of culture. Though few philosophers, psychologists, anthropologists, sociologists etc., explicitly discuss this in a comprehensive way, it can be seen as the major problem they are dealing with. I suggest it will prove of the greatest value to consider all study of higher order behavior as an effort to tease apart not only fast and slow thinking (e.g., perceptions and other automatisms vs. dispositions- S1 and S2- -see below), but nature and nurture.

Because there is only ONE human psychology (for the same reason there is only ONE human cardiology), anyone accurately describing behavior must be voicing some variant or extension of what W and S have said and they should be easily translatable into one another. If not, one should be discarded and in my view that will rarely be W or S.

What W laid out in his final period (and throughout his earlier work in a less clear way) are the foundations of evolutionary psychology (EP), or if you prefer, psychology, cognitive linguistics, intentionality, higher order thought or just animal behavior. Sadly, almost nobody seems to realize that his works are a unique textbook of descriptive psychology that is as relevant now as the day it was written. He is almost universally ignored by psychology and other behavioral sciences and humanities, and even those few who have more or less understood him, have not realized the extent of his anticipation of the latest work on EP and cognitive illusions (Theory of Mind, framing, the two selves of fast and slow thinking etc., -- see below). Searle's work as a whole provides a stunning description of higher order social behavior that is possible because of the recent evolution of genes for dispositional psychology, while the later W shows how it is based on true only unconscious axioms of S1 which evolved into conscious dispositional propositional thinking of S2.

Long before Searle, W rejected the idea that the Bottom Up approaches of physiology, experimental psychology and computation (e.g., Behaviorism, Functionalism, Strong AI, DST, CTM, etc.) could reveal what his Top Down deconstructions of Language Games (LG's) did. The principal difficulties he noted are to understand what is always in front of our eyes (we can now see this as obliviousness to System 1 (roughly what S calls 'the phenomenological illusion') and to capture vagueness ("The greatest difficulty in these investigations is to find a way of representing vagueness" LWPP1, 347).

As with his other aphorisms, I suggest one should take seriously W's comment that even if God could look into our mind he could not see what we are thinking--this should be the motto of the Embodied Mind and, as S makes clear, of Cognitive Psychology. But God could see what we are perceiving and remembering and our reflexive thinking and acting, since these S1 functions are always causal mental states while S2 dispositions are only potentially CMS. I claim this is not a theory but a fact about our grammar and our physiology. S muddies the waters here because he sometimes refers to dispositions as mental states as well, but as W did long ago, he shows that the

language of causality just does not apply to the higher order emergent S2 descriptions—again not a theory but a description about how language (thinking) works.

Some of W's favorite topics in his later second and his third periods are the different (but interdigitating) LG's of fast and slow thinking (System 1 and 2 or roughly Primary Language Games (PLG's) and Secondary Language Games (SLG's) of the Inner and the Outer--see e.g., Johnston-'Wittgenstein: Rethinking the Inner' on how confusing the two is a major industry in philosophy and psychology (but it's a universal mistake we all make), the impossibility of private language and the axiomatic structure of all behavior. Verbs like 'thinking', 'seeing' first described S1 functions but as S2 evolved they came to be applied to it as well, leading to the whole mythology of the inner resulting from e.g., trying to refer to imagining as if it were seeing pictures inside the brain. The PLG's are utterances by and descriptions of our involuntary, System 1, fast thinking, mirror neuron, true only, nonpropositional, mental states- our perceptions and memories and involuntary acts (including System 1 Truths and UA1 (Understanding of Agency 1) and Emotions1- such as joy, love, anger) which can be described causally, while the evolutionarily later SLG's are expressions or descriptions of voluntary, System 2, slow thinking, mentalizing neurons, testable true or false, propositional, Truth2 and UA2 and Emotions2- joyfulness, loving, hating, the dispositional (and often counterfactual) imagining, supposing, intending, thinking, knowing, believing, etc. which can only be described in terms of reasons (i.e., it's just a fact that attempts to describe System 2 in terms of neurochemistry, atomic physics, mathematics, just make no sense--see W for many examples and Searle for good disquisitions on this).

It is not possible to describe the automatisms of System 1 in terms of reasons (e.g., `I see that as an apple because...') unless you want to give a reason in terms of EP, genetics, physiology, and as W has demonstrated repeatedly, it is meaningless to give "explanations" with the proviso that they will make sense in the future--they make sense now or never.

A powerful heuristic is to separate behavior and experience into Intentionality 1 and Intentionality 2 (e.g., Thinking 1 and Thinking 2, Emotions 1 and Emotions 2 etc.) and even into Truths 1 (T only axioms) and Truths 2 (empirical extensions or "Theorems" which result from the logical extension of Truths 1). W recognized that `Nothing is Hidden'--i.e., our whole psychology and all the answers to all philosophical questions are here in our language (our life) and that the difficulty is not to find the answers but to recognize them as always here in front of us--we just have to stop trying to look deeper.

The true-only axioms, most thoroughly explored in 'On Certainty', are W's (and later S's) "bedrock" or "background" i.e., evolutionary psychology, which are traceable to the automated true-only reactions of bacteria and their descendants (e.g., humans), which evolved and operate by the mechanism of inclusive fitness (IF)--see Bourke's superb "Principles of Social Evolution".

W insisted that we should regard our analysis of behavior as descriptions rather than explanations, but of course these too are complex language games and one person's description is another's explanation. Beginning with their innate true-only, nonempirical (automated and nonchangeable) responses to the world, animals extend their axiomatic understanding via deductions into further true only understandings ("theorems" as we might call them, but this is a complex language game even in the context of mathematics).

Tyrannosaurs and mesons become as unchallengeable as the existence of our two hands or our breathing. This dramatically changes one's view of human nature. Theory of Mind (TOM) is not a theory at all but a group of true- only Understandings of Agency (UA --a term I devised 10 years ago) which newborn animals (including flies and worms if UA is suitably defined) have and subsequently extend greatly (in higher eukaryotes). However, as I note here, W made it very clear that for much of intentionality there are System 1 and System 2 versions (language games)-the fast unconscious UA1 and the Slow conscious UA2 and of course these are heuristics for multifaceted

phenomena. Although the raw material for S2 is S1, S2 also feeds back into S1— higher cortical feedback to the lowest levels of perception, memory, reflexive thinking that is a fundamental of psychology. Many of W's examples explore this two way street (e.g., see the discussions of the duck/rabbit and 'seeing as' in Johnston).

I think it is clear that the innate true-only axioms W is occupied with throughout his work, and almost exclusively in his last work `On Certainty', are equivalent to the fast thinking or System 1 that is at the center of current research (e.g., see Kahneman--"Thinking Fast and Slow", but he has no idea W laid out the framework some 75 years ago), which is involuntary and unconscious and which corresponds to the mental states of perception (including UOA1) and memory and involuntary acts, as W notes over and over in endless examples. One might call these "intracerebral reflexes"(maybe 99% of all our cerebration if measured by energy use in the brain).

Our slow or reflective, more or less "conscious" (beware another network of language games!) second-self brain activity corresponds to what W characterized as "dispositions" or "inclinations", which refer to abilities or possible actions, are not mental states (or not in the same sense), and do not have any definite time of occurrence and/or duration. But disposition words like "knowing", "understanding", "thinking", "believing", which W discussed extensively, have at least two basic uses. One is a peculiar philosophical use (but graduating into everyday uses) which refers to the true-only sentences resulting from direct perceptions and memory, i.e., our innate axiomatic S1 psychology (`I know these are my hands'), and the S2 one, which is their normal use as dispositions, which can be acted out, and which can become true or false (`I know my way home').

The investigation of involuntary fast thinking has revolutionized psychology, economics (e.g., Kahneman's Nobel prize) and other disciplines under names like "cognitive illusions", "priming", "framing", "heuristics" and "biases". Of course these too are language games so there will be more and less useful

ways to use these words, and studies and discussions will vary from "pure" System 1 to combinations of 1 and 2 (the norm as W made clear), but presumably not ever of slow System 2 dispositional thinking only, since any System 2 thought or intentional action cannot occur without involving much of the intricate network of "cognitive modules", "inference engines", "intracerebral reflexes", "automatisms", "cognitive axioms", "background" or "bedrock" (as W and later Searle call our EP).

Finally, let me suggest that with this perspective, W is not obscure, difficult or irrelevant but scintillating, profound and crystal clear, that he writes aphoristically and telegraphically because we think and behave that way, and that to miss him is to miss one of the greatest intellectual adventures possible.

Now that we have a reasonable start on the Logical Structure of Rationality (the Descriptive Psychology of Higher Order Thought) laid out we can look at the table of Intentionality that results from this work, which I have constructed over the last few years. It is based on a much simpler one from Searle, which in turn owes much to Wittgenstein. I have also incorporated in modified form tables being used by current researchers in the psychology of thinking processes which are evidenced in the last 9 rows. It should prove interesting to compare it with those in Peter Hacker's 3 recent volumes on Human Nature. I offer this table as an heuristic for describing behavior that I find more complete and useful than any other framework I have seen and not as a final or complete analysis, which would have to be three dimensional with hundreds (at least) of arrows going in many directions with many (perhaps all) pathways between S1 and S2 being bidirectional. Also, the very distinction between S1 and S2, cognition and willing, perception and memory, between feeling, knowing, believing and expecting etc. are arbitrary--that is, as W demonstrated, all words are contextually sensitive and most have several utterly different uses (meanings or COS). Many complex charts have been published by scientists but I find them of minimal utility when thinking about behavior (as opposed to thinking about brain function). Each level of description may be useful in certain contexts but I find that being

coarser or finer limits usefulness.

The Logical Structure of Rationality (LSR), or the Logical Structure of Mind (LSM), the Logical Structure of Behavior (LSB), the Logical Structure of Thought (LST), the Logical Structure of Consciousness (LSC), the Logical Structure of Personality (LSP), the Descriptive Psychology of Consciousness (DSC), the Descriptive Psychology of Higher Order Thought (DPHOT), Intentionality-the classical philosophical term.

System 1 is involuntary, reflexive or automated "Rules" R1 while Thinking (Cognition) has no gaps and is voluntary or deliberative "Rules" R2 and Willing (Volition) has 3 gaps (see Searle).

I suggest we can describe behavior more clearly by changing Searle's "impose conditions of satisfaction on conditions of satisfaction" to "relate mental states to the world by moving muscles"—i.e., talking, writing and doing, and his "mind to world direction of fit" and "world to mind direction of fit" by "cause originates in the mind" and "cause originates in the world"   S1 is only upwardly causal (world to mind) and contentless (lacking representations or information) while S2 has content and is downwardly causal (mind to world). I have adopted my terminology in this table.

	Disposition*	Emotion	Memory	Perception	Desire	PI**	IA***	Action/ Word
Cause Originates From****	World	World	World	World	Mind	Mind	Mind	Mind
Causes Changes In*****	None	Mind	Mind	Mind	None	World	World	World
Causally Self Reflexive******	No	Yes	Yes	Yes	No	Yes	Yes	Yes
True or False (Testable)	Yes	T only	T only	T only	Yes	Yes	Yes	Yes
Public Conditions of Satisfaction	Yes	Yes/No	Yes/No	No	Yes/No	Yes	No	Yes
Describe A Mental State	No	Yes	Yes	Yes	No	No	Yes/No	Yes
Evolutionary Priority	5	4	2,3	1	5	3	2	2
Voluntary Content	Yes	No	No	No	No	Yes	Yes	Yes
Voluntary Initiation	Yes/No	No	Yes	No	Yes/No	Yes	Yes	Yes
Cognitive System *******	2	1	2/1	1	2 / 1	2	1	2
Change Intensity	No	Yes	Yes	Yes	Yes	No	No	No
Precise Duration	No	Yes	Yes	Yes	No	No	Yes	Yes
Time, Place (H+N, T+T) ********	TT	HN	HN	HN	TT	TT	HN	HN
Special Quality	No	Yes	No	Yes	No	No	No	No
Localized in Body	No	No	No	Yes	No	No	No	Yes
Bodily Expressions	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Self Contradictions	No	Yes	No	No	Yes	No	No	No
Needs a Self	Yes	Yes/No	No	No	Yes	No	No	No
Needs Language	Yes	No	No	No	No	No	No	Yes/No

FROM DECISION RESEARCH

	Disposition*	Emotion	Memory	Perception	Desire	PI**	IA***	Action/Word
Subliminal Effects	No	Yes/No	Yes	Yes	No	No	No	Yes/No
Associative/Rule Based	RB	A/RB	A	A	A/RB	RB	RB	RB
Context Dependent/Abstract	A	CD/A	CD	CD	CD/A	A	CD/A	CD/A
Serial/Parallel	S	S/P	P	P	S/P	S	S	S
Heuristic/Analytic	A	H/A	H	H	H/A	A	A	A
Needs Working Memory	Yes	No	No	No	No	Yes	Yes	Yes
General Intelligence Dependent	Yes	No	No	No	Yes/No	Yes	Yes	Yes
Cognitive Loading Inhibits	Yes	Yes/No	No	No	Yes	Yes	Yes	Yes
Arousal Facilitates or Inhibits	I	F/I	F	F	I	I	I	I

Public Conditions of Satisfaction of S2 are often referred to by Searle and others as COS, Representations, truthmakers or meanings (or COS2 by myself), while the automatic results of S1 are designated as presentations by others (or COS1 by myself).

* Aka Inclinations, Capabilities, Preferences, Representations, possible actions etc.

** Searle's Prior Intentions

*** Searle's Intention In Action

**** Searle's Direction of Fit

***** Searle's Direction of Causation

****** (Mental State instantiates--Causes or Fulfills Itself). Searle formerly called this causally self- referential.

******* Tversky/Kahneman/Frederick/Evans/Stanovich defined cognitive systems.

******** Here and Now or There and Then

It is of interest to compare this with the various tables and charts in Peter Hacker's recent 3 volumes on Human Nature. One should always keep in mind Wittgenstein's discovery that after we have described the possible uses (meanings, truthmakers, Conditions of Satisfaction) of language in a particular context, we have exhausted its interest, and attempts at explanation (i.e., philosophy) only get us further away from the truth. He showed us that there is only one philosophical problem—the use of sentences (language games) in an inappropriate context, and hence only one solution— showing the correct context.

EXPLANATION OF THE TABLE

System 1 (i.e., emotions, memory, perceptions, reflexes) which parts of the brain present to consciousness, are automated and generally happen in less than 500msec, while System 2 is abilities to perform slow deliberative actions that are represented in conscious deliberation (S2D-my terminology) requiring over 500msec, but frequently repeated S2 actions can also become automated (S2A-my terminology). There is a gradation of consciousness from coma through the stages of sleep to full awareness. Memory includes short term memory (working memory) of system 2 and long term memory of System 1. For volitions one would usually say they are successful or not, rather than true or false. S1 is causally self-reflexive since the description of our perceptual experience-the presentation of our senses to consciousness, can only be described in the same words (as the same COS - Searle) as we describe the world, which I prefer to call the percept or COS1 to distinguish it from the representation or public COS2 of S2.

Of course, the various rows and columns are logically and psychologically connected. E.g., Emotion, Memory and Perception in the True or False row will be True-Only, will describe a mental state, belong to cognitive system 1, will not generally be initiated voluntarily, are causally self-reflexive, cause originates in the world and causes changes in the mind, have a precise duration, change in intensity, occur here and now, commonly have a special quality, do not need language, are independent of general intelligence and working memory, are not inhibited by cognitive loading, will not have voluntary content, and will not have public conditions of satisfaction etc.

There will always be ambiguities because the words (concepts, language games) cannot precisely match the actual complex functions of the brain (behavior), that is, there is a combinatorial explosion of contexts (in sentences and in the world), and in the infinite variations of 'brain states' ('mental states or the pattern of activations of billions of neurons that can correspond to 'seeing a red apple') and this is one

reason why it's not possible to 'reduce' higher order behavior to a 'system of laws' which would have to state all the possible contexts –hence Wittgenstein's warnings against theories. And what counts as 'reducing' and as a 'law' and a 'system' (see e.g., Nancy Cartwright). This is a special case of the irreducibility of higher level descriptions to lower level ones that has been explained many times by Searle, DMS, Hacker, W and others.

About a million years ago primates evolved the ability to use their throat muscles to make complex series of noises (i.e., primitive speech) to describe present events (perceptions, memory, reflexive actions) with some Primary or Primitive Language Games (PLG's). System 1 is comprised of fast, automated, subcortical, nonrepresentational, causally self-reflexive, intransitive, informationless, true-only "mental states" with a precise time and location, and over time there evolved in higher cortical centers S2 with the further ability to describe displacements in space and time of events (the past and future and often hypothetical, counterfactual, conditional or fictional preferences, inclinations or dispositions - the Secondary or Sophisticated Language Games (SLG's) of System 2 that are slow, cortical, conscious, information containing, transitive (having public Conditions of Satisfaction- Searle's term for truthmakers or meaning which I divide into COS1 and COS2 for private S1 and public S2), representational (which I again divide into R1 for S1 representations and R2 for S2) , true or false propositional thinking, with all S2 functions having no precise time and being abilities and not mental states. Preferences are Intuitions, Tendencies, Automatic Ontological Rules, Behaviors, Abilities, Cognitive Modules, Personality Traits, Templates, Inference Engines, Inclinations, Dispositions, Emotions (described by Searle as agitated desires), Propositional Attitudes (correct only if used to refer to events in the world and not to propositions), Appraisals, Capacities, Hypotheses. Some Emotions are slowly developing and changing results of S2 dispositions (W - 'Remarks on the Philosophy of Psychology' V2 p148) while others are typical S1— automatic and fast to appear and disappear. "I believe", "he loves", "they think" are descriptions of possible public acts typically displaced in spacetime. My first-person statements about myself are true-only (excluding lying) –i.e. S1, while third person statements about others are true or false –i.e., S2 (see my reviews of Johnston 'Wittgenstein: Rethinking the Inner' and of Budd 'Wittgenstein's Philosophy of Psychology').
"Preferences" as a class of intentional states --opposed to perceptions, reflexive acts and memories-- were first clearly described by Wittgenstein (W) in the 1930's and termed "inclinations" or "dispositions". They have commonly been termed "propositional attitudes" since Russell but it has often been noted that this is an incorrect or misleading phrase since believing, intending, knowing, remembering

etc., are often not propositional nor attitudes, as has been shown e.g., by W and by Searle (e.g., cf Consciousness and Language p118). Preferences are intrinsic, observer independent public representations (as opposed to presentations or representations of System 1 to System 2 – Searle-Consciousness and Language p53). They are potential acts displaced in time or space, while the evolutionarily more primitive S1 perceptions memories and reflexive actions are always here and now. This is one way to characterize System 2 -the second major advance in vertebrate psychology after System 1—the ability to represent (state public COS for) events and to think of them as occurring in another place or time (Searle's third faculty of counterfactual imagination supplementing cognition and volition). S1 'thoughts' (my T1-i.e., the use of "thinking" to refer to automatic brain processes of System One) are potential or unconscious mental states of S1 --Searle-- Phil Issues 1:45-66(1991).

Perceptions, memories and reflexive (automatic) actions can be described by primary LG's (PLG's -- e.g., I see the dog) and there are, in the normal case, NO TESTS possible so they can be True-Only- i.e., axiomatic as I prefer or animal reflexes as W and DMS describe. Dispositions can be described as secondary LG's (SLG's –e.g. I believe I see the dog) and must also be acted out, even for me in my own case (i.e., how do I KNOW what I believe, think, feel until I act or some event occurs—see my reviews of the well known books on W by Johnston and Budd. Note that Dispositions become Actions when spoken or written as well as being acted out in other ways, and these ideas are all due to Wittgenstein (mid 1930's) and are NOT Behaviorism (Hintikka & Hintikka 1981, Searle, Hacker, Hutto etc.,). Wittgenstein can be regarded as the founder of evolutionary psychology and his work a unique investigation of the functioning of our axiomatic System 1 psychology and its interaction with System 2. After Wittgenstein laid the groundwork for the Descriptive Psychology of Higher Order Thought in the Blue and Brown Books in the early 30's, it was extended by John Searle, who made a simpler version of my table here in his classic book Rationality in Action (2001). This table expands on W's survey of the axiomatic structure of evolutionary psychology developed from his very first comments in 1911 and so beautifully laid out in his last work 'On Certainty' (OC) (written in 1950-51). OC is the foundation stone of behavior or epistemology and ontology (arguably the same as are semantics and pragmatics), cognitive linguistics or Higher Order Thought, and in my view (shared e.g., by DMS) the single most important work in philosophy (descriptive psychology) and thus in the study of behavior. Perception, Memory, Reflexive actions and Emotion are primitive partly Subcortical Involuntary Mental States, in which the mind automatically fits (presents) the world (is Causally Self Reflexive--Searle) -- the

unquestionable, true-only, axiomatic basis of rationality over which no control is possible.

Preferences, Desires, and Intentions are descriptions of slow thinking conscious Voluntary Abilities— that can be described in SLG's-- in which the mind tries to fit (represent) the world. Behaviorism and all the other confusions of our default descriptive psychology (philosophy) arise because we cannot see S1 working and describe all actions as the conscious deliberate actions of S2 (The Phenomenological Illusion—TPI—Searle). W understood this and described it with unequalled clarity with hundreds of examples of language (the mind) in action throughout his works. Reason has access to memory and so we use consciously apparent but often incorrect reasons to explain behavior (the Two Selves or Systems or Processes of current research). Beliefs and other Dispositions can be described as thoughts which try to match the facts of the world (mind to world direction of fit), while Volitions are intentions to act (Prior Intentions—PI, or Intentions In Action – IA - Searle) plus acts which try to match the world to the thoughts—world to mind direction of fit— cf. Searle, e.g., Consciousness and Language p145, 190).

Sometimes there are gaps in reasoning to arrive at belief and other dispositions. Disposition words can be used as nouns which seem to describe mental states ('my thought is…"), or as verbs or adjectives to describe abilities (agents as they act or might act -'I think that…') and are often incorrectly called "Propositional Attitudes". Perceptions become Memories and our innate programs (cognitive modules, templates, inference engines of S1) use these to produce Dispositions — (believing, knowing, understanding, thinking, etc., -actual or potential public acts such as language (thought, mind) also called Inclinations, Preferences, Capabilities, Representations of S2) and Volition, and there is no language (concept, thought) of "private mental states" for thinking or willing (i.e.,no private language, thought or mind). Higher animals can think and will acts and to that extent they have a public psychology.

PERCEPTIONS: (X is True): Hear, See, Smell, Pain, Touch, Temperature

MEMORIES: Remembering (X was true)

PREFFERENCES, INCLINATIONS, DISPOSITIONS: (X might become True):

CLASS 1: PROPOSITIONAL (True or False) PUBLIC ACTS of Believing, Judging, Thinking, Representing, Understanding, Choosing, Deciding, Preferring,

Interpreting, Knowing (including skills and abilities), Attending (Learning), Experiencing, Meaning, Remembering, Intending, Considering, Desiring, Expecting, Wishing, Wanting, Hoping (a special class), Seeing As (Aspects).

CLASS 2: DECOUPLED MODE-(as if, conditional, hypothetical, fictional) - Dreaming, Imagining, Lying, Predicting, Doubting.

CLASS 3: EMOTIONS: Loving, Hating, Fearing, Sorrow, Joy, Jealousy, Depression. Their function is to modulate Preferences to increase inclusive fitness (expected maximum utility) by facilitating information processing of perceptions and memories for rapid action. There is some separation between S1 emotions such as rage and fear and S2 such as love, hate, disgust and anger. We can think of them as strongly felt or acted out desires.

DESIRES: (I want X to be True—I want to change the world to fit my thoughts): Longing, Hoping, Expecting, Awaiting, Needing, Requiring, obliged to do.

INTENTIONS: (I will make X True) Intending.

ACTIONS: (I am making X True) : Acting, Speaking , Reading, Writing, Calculating, Persuading, Showing, Demonstrating, Convincing, Doing Trying, Attempting, Laughing, Playing, Eating, Drinking, Crying, Asserting (Describing, Teaching, Predicting, Reporting), Promising , Making or Using Maps, Books, Drawings, Computer Programs–these are Public and Voluntary and transfer Information to others so they dominate over the Unconscious, Involuntary and Informationless S1 reflexes in explanations of behavior ((The Phenomenological Illusion (TPI), The Blank Slate (BS)or the Standard Social Science Model (SSSM)).

One should always keep in mind Wittgenstein's discovery that after we have described the possible uses (meanings, truthmakers, Conditions of Satisfaction) of language in a particular context, we have exhausted its interest, and attempts at explanation (i.e., philosophy) only get us further away from the truth. It is critical to note that this table is only a highly simplified context-free heuristic and each use of a word must be examined in its context. The best examination of context variation is in Peter Hacker's recent 3 volumes on Human Nature, which provide numerous tables and charts that should be compared with this one.

Those wishing a comprehensive up to date account of Wittgenstein, Searle and their analysis of behavior from the modern two systems view may consult my book The Logical Structure of Philosophy, Psychology, Mind and Language as Revealed in Wittgenstein and Searle 2nd ed (2019).

I have commented previously on Hutto in my review of his "Wittgenstein and the End of Philosophy." Probably the leading exponent of W's ideas on the language games of inner and outer (the 'Two Selves' operation of our personality or intentionality or EP etc.) the prolific Daniel Hutto's (DH) approach is called 'Radical Enactivism' and is well explained in numerous recent books and papers. It is a development of or version of the Embodied Mind ideas now current and, cleansed of its jargon, it is a straightforward extension of W's 2nd and 3rd period writings (though Hutto seems only intermittently aware of this). He is also author of the best deconstructions I know of Dennett's preposterous claim to be following in W's footsteps (in fact Dennett is just repeating most of the classic mistakes in grandiose fashion and hasn't a clue about W) and of Fodor's LOT and other nonsense. But of course, one must read Searle too and the title of his famous review of Dennett's book says it well "Consciousness Explained Away". Incidentally, unlike most philosophers and other scholars, who make little or no effort to give the general public access to their papers, Hutto has put nearly every paper (though of course often just proofs and not the final paper) free online at www.academia.edu.

The basic idea of the Embodied Mind or Enactivism is that much of behavior is automated and does not involve representations (basically S2 dispositions-see Hutto's lovely dissection of the 'representation rats nest' in his online papers above). To me this is just another way of stating the fact that System 1 precedes the operation of System 2 which is a standard feature of contemporary psychology, which I have explained above and in further detail in my reviews of Wittgenstein (who was the first to see this and explored it in great detail) and Searle (who called it The Phenomenological Illusion in his superb essay of this name in his book Philosophy in a New Century which I have also reviewed). Since these are basic

incontrovertible facts of animal behavior and I have already discussed them I won't dwell on it here.

This book is a sustained argument against other similar ways of describing behavior which he calls CEC and CIC in favor of REC (Radical Embodied Cognition), which he characterizes as "the strongest reading of the embodiment thesis—one that uncompromisingly maintains that basic cognition is literally constituted by, and to be understood in terms of concrete patterns of environmental situated organismic activity, nothing more or less" (p11). This is clear as a bell if you understand the two systems view explained above but likely opaque if you don't. Much clearer is Fodor's characterization which he quotes as "abilities are prior to theories", that "competence is prior to content" and that "knowing how is the paradigm cognitive state and it is prior to knowing that" (p10). That is, the unconscious automatisms of S1 are evolutionarily and behaviorally prior to the slow conscious dispositions of S2.

This is classic Hutto high level philosophical dialog, which is quite elegant, but somewhat too dense and a tad pretentious for the rest of us. I have not before encountered his coauthor Myin so can't say how much of this text is really due to him. It is clear from this and the rest of Hutto's work that (like everyone else) he has not quite kept up with the latest work in psychology nor really grasped the full power of W or S, even though he is one of the top Wittgensteinians alive and as bright as anyone in the field. His discussions of the language games of "information" and "representation" in his other papers and books (and much else including his deconstructions of Dennett and Fodor) should be required reading for anyone interested in behavior. So, I have the greatest respect for him, but one hopes that he will mellow with time and write descriptions of behavior (i.e., all we can really do as philosophers according to W) in more mundane prose such as this lovely summation on p15. "Hence, REC is nothing less than a fundamental rethinking of the very foundations of standard approaches to cognitive science and philosophy of mind." Yes, and what a pity that this great Wittgensteinian (and everyone else) does not realize that W laid it all out with great (and unmatched) clarity in his third period works over 60 years ago.

And again "By giving pride of place to embodied habits and skills when it comes to explaining how sophisticated mentality emerges, REC denies CIC accounts of the same. REC's credo—that 'we act before we think' –is an outright denial of the CIC thesis that 'we must think in order to act'" (p12). As noted above we are dealing here with the two senses of mentalizing verbs, or as I suggest Thinking 1 and Thinking 2. If not identical with CIC, Phenomenology is at least quite similar and so one really ought to read Searle's "The Phenomenological Illusion" at this point and of course all of W3 (third period W) but there is no hint of this here. Finally, for anyone who still is confused "Enactivists are concerned to defend the view that our most elementary ways of engaging with the world and others—including our basic forms of perception and perceptual experience—are mindful in the sense of being phenomenally charged and intentionally directed, despite being non-representational and content free. Defending this understanding of basic mentality is the primary aim of this book" (p13).

This leads to his accepting Dretske's idea that experiencing things (i.e., qualia such as redness) is (in my terms) a representational function of S2—i.e., dispositional (propositional) and hence true or false and conscious and slow, in contrast to S1 which is reflexive, non-representational, fast and true only.

Throughout Chap 3 he promotes the fast, automated reflexive behaviors of S1 (i.e., REC) over the representational, content possessing ones of S2 (i.e., instructionalism or intellectualism), but never quite gets around to using this common modern terminology. E.G., p49 top and p50 bottom. As always, one must be constantly aware of the quite different language games played with 'conscious', 'cognitive', reflexive, 'representation', 'information', 'computation', 'subpersonal', 'automatic', 'contents', 'function', etc., which are typically used by both pros and amateurs as if their meanings were uniform and obvious. As one digs into the discussion on p59 et seq. it is good to have in mind Searle's lucid differentiations of observer independent intrinsic intentionality and functions thatconscious creatures have, vs. observer dependent ascribed intentionality and functions which we may attribute to the rest of nature (for a capsule summary see my recent review of his Philosophy

in a New Century, which also delves into the related issues of 'syntax is not semantics' and 'structure (e.g., regularity) is not syntax').

Inevitably we run into the multifarious LG's of 'information' (p62 etc.) which has drastically different uses and often refers to the true only (not really info bearing in the normal sense) non-propositional mechanisms of S1, but is commonly taken to mean the true or false content bearing propositional statements of S2 which is what he says flat out on p67. Naturally he quotes Dretske's classic book on this. It seems Dretske's most recent article on info is in the 30th Intl. Wittgenstein Symposium, which you can page capture and print direct from Amazon or GoogleBooks or maybe find on b-ok.org or libgen.io, but it's got little to say, and the main reason to view that volume is to get Rodych's latest article on W's mathematics. H&M recommend giving up on info as content and adhering to info as covariance so that one can distinguish info processing "action oriented representations" (i.e., S2 higher order dispositional thought) from info sensitive (i.e., S1 reflexive response). If contentful properties can't be reduced to physical properties then "…the explanatory project of naturalism with respect to them would be quite different—it would be to discover the set of fundamental bridging laws that explain how contentful properties relate to basic physical properties. That would be the only way to solve what we might call the Hard Problem of Content." Yes, we all want to know how S1 (teleosemiotics) gives rise to S2 (teleosemantic intensionality) or, to put it another way, mind arises from matter.

They quote Jacobs: "In all of these cases it is not unreasonable to assume that the informational relation holds between an indicator and what it indicates (or a source) independently of the presence of an agent with propositional attitudes". Mindful of S's classic discussions, we realize that Jacobs is talking about derived intentionality and hence concepts of info that have nothing to do with human behavior. So, they are forced to conclude that "There is no naturally occurring contentful information that can be "used and fused" to from inner representations. Unless we assume that pre-existing contents exist to be received through sensory contact, the last thread of the analogy between basic cognitive systems and genuinely communications

systems breaks down at a crucial point. (p70)"

And once again: "Taking an even stronger line on this holds that the interpretative response does all the work. This would surrender any commitment to the idea that informational content exists independently of the activities of cognitive agents." (p74) Quite so! And so vanish Fodorian qualms about Darwin (p80) and his and Strawson's Hyperintellectualism (p90).

That is, no bridge from S1 to S2 at least via info. How about some Wittgensteinian therapy here?

"Here we come up against a remarkable and characteristic phenomenon in philosophical investigation: the difficulty---I might say---is not that of finding the solution but rather that of recognizing as the solution something that looks as if it were only a preliminary to it." Zettel p312

But if we accept that the simple explanations we can give now are the only ones possible, what about philosophy and neurophysiology? Nothing about them—they will ever long for a completion they cannot attain. At least this is my take on things.

And finally: "This is to accept that organisms often act successfully by making appropriate responses to objects or states of affairs in ways that are only mediated by their sensitive responding to natural signs, where this responding does not involve contentfully representing the objects or states of affairs in question (p81)." In my words, the automatic unconscious reflexive operation of S1 undergirds all behavior. When they note that perceptual experiences (i.e., S1 mental states) "…do not attribute properties to the world. Consequently, they do not have built in conditions of satisfaction, nor do they possess veridical content, possess content that is true or false." These true only S1 qualities ensuing from our axiomatic psychology, and their generation of the higher order thought of S2, are exactly what W discoursed upon so brilliantly at the end of his life (but it seems H&M, along with everyone else, have no idea).

Not only does the idea that the mental perceptual states of S1 are conceptual get the boot, but they might claim that "…the very nature of such perceptual content debars the possibility of ever fully or exhaustively capturing its essence by means of conceptual descriptive characterization (p97)." Inner states are what they are and since there is no private language and no way in the public one to describe them in a really satisfying way-- they will always remain "qualia". But I think (and am pretty sure W would take the view) that "stabbing pain", "bright red", "green apple tree" and "galloping horses" are as good as it gets—that is, there is no useful meaning that can ever be given to "exhaustively capturing its essence". As good as H&M are, I am afraid they have fallen into the classic philosopher's trap so beautifully described by W. They reach the limits of language, so naturally they want to go beyond them. One can say or write anything, but one cannot mean anything. Must it not be either true or false that 7432 occurs in the decimal expansion of PI? As W showed, your intuition often leads you astray.

Before reading the next few pages on Gauker's Assumptions and nonintensional, nonpropositional, nonconceptual "content" (i.e., S1) it will be useful to read Searle's old paper on unconscious intentionality (Phil Issues 1:45-66(1991)) which shows how S1 generates S2 "…the ontology of the unconscious is strictly the ontology of a neurophysiology capable of generating the conscious" as well as Johnston's classic book 'Wittgenstein: Rethinking the Inner' (or at least my review of it), -- especially the material on indeterminacy of language. And of course, to the list of those rejecting the propositionality of perception one should add W who anticipated them in detail by some 60 years and provided in his last period the good news (to balance the bad on p103) that S1 is the true-only axiomatic foundation of S2—that is, of all higher order behavior and so of course these *aliefs* are not revisable (p104, 105). And, since S1 is prelinguistic, it is hardly surprising that there "…is no conceptual content of perception to express" (p100).

They are much exercised in Chap 6 to show that perceptual science, and illusions in particular, provide no evidence of representations or content in S1 and I applaud their conclusion that "…it is not clear what 'possessing content' really amounts to, or what work it is meant to do that couldn't be done just as easily by assuming that

human beings share basic and content-free ways of responding directly to certain worldly solicitations and offerings." That is, S1 is automated as modern biology and psychology shows.

I have much less sympathy for the extended and scaffolded minds of Chap 7. I don't see how one can lay the burden of explaining how the mind works at Searle's door, nor how the convoluted prose about "decoupled contentful activities" etc. helps at all. Why not just say that automated unconscious prelinguistic S1 feeds deliberate, conscious linguistic S2, which is axiomatically extended by public language into the myriad wonders of culture? Beginning and end of story.

Their last chapter is about "regaining consciousness," but I would say that if one has understood Wittgenstein and Searle, one has never lost it. And, though this is an excellent book by two of the brightest and the best, I suggest mulling over my thoughts in this and other reviews and reading Johnston and the latest from Searle, along of course with as much of 3rd period W as feasible, is an even better filter for folly.

His second book with Myin 'Evolving Enactivism' appeared in 2017.