## Review of Human Nature-- Sandis and Cain eds. (2012)

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## **ABSTRACT**

Like most writing on human behavior, these articles lack a coherent framework and so I hesitate to recommend this book to anyone, as the experienced ought to have about the same perspective I do, and the naïve will mostly be wasting their time. Since I find most of these essays obviously off the mark or just very dull, I can't generate much enthusiasm for commenting on them, so after providing what I consider a reasonable precis of a framework (see my other articles for an expanded version) I provide cursory comments on the various articles.

Those wishing a comprehensive up to date framework for human behavior from the modern two systems view may consult my article The Logical Structure of Philosophy, Psychology, Mind and Language as Revealed in Wittgenstein and Searle 59p(2016). For all my articles on Wittgenstein and Searle see my e-book 'The Logical Structure of Philosophy, Psychology, Mind and Language in Wittgenstein and Searle 367p (2016). Those interested in all my writings in their most recent versions may consult my e-book Philosophy, Human Nature and the Collapse of Civilization - Articles and Reviews 2006-2016' 662p (2016).

"The confusion and barrenness of psychology is not to be explained by calling it a "young science"; its state is not comparable with that of physics, for instance, in its beginnings. (Rather with that of certain branches of mathematics. Set theory.) For in psychology there are experimental methods and conceptual confusion. (As in the other case, conceptual confusion and methods of proof.) The existence of the experimental method makes us think we have the means of solving the problems that trouble us; though problem and method pass one another by." Wittgenstein (PI p.232)

"The decisive movement in the conjuring trick has been made, and it was the very one we thought quite innocent." Wittgenstein, PI para.308

"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 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)

"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

"...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 satisfaction, it turns out that all intentionality is a matter of propositions." Searle PNC p193

"So status functions are the glue that hold society together. They are created by collective intentionality and they function by carrying deontic powers...With the important exception of language itself, all of institutional reality and therefor in a sense all of human civilization is created by speech acts that have the logical form of Declarations...all of human institutional reality is created and maintained in existence by (representations that have the same logical form as) Status Function Declarations, including the cases that are not speech acts in the explicit form of Declarations." Searle MSW p11-13

"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 Philosophy in a New Century(PNC) p101-103

"In short, the sense of `information processing' that is used in cognitive science is at much too high a level of abstraction to capture the concrete biological reality of intrinsic intentionality...We are blinded to this difference by the fact that the same sentence `I see a car coming toward me,' can be used to record both the visual intentionality and the output of the computational model of vision...in the sense of `information' used in cognitive science, it is simply false to say that the brain is an information processing device." Searle PNC p104-105

"The intentional state represents its conditions of satisfaction...people erroneously suppose that every mental representation must be consciously thought...but the notion of a representation as I am using it is a functional and not an ontological notion. Anything that has conditions of satisfaction, that can succeed or fail in a way that is characteristic of intentionality, is by definition a representation of its conditions of satisfaction...we can analyze the structure of the intentionality of social phenomena by analyzing their conditions of satisfaction." Searle MSW p28-32

"Speaker meaning... is the imposition of conditions of satisfaction on conditions of satisfaction. The capacity to do this is a crucial element of human cognitive capacities. It requires the ability to think on two levels at once, in a way that is essential for the use of language. At one level, the speaker intentionally produces a physical utterance, but at another level the utterance represents something. And the same duality infects the symbol itself. At one level it is a physical object like any other. At another level it has a meaning: it represents a type of a state of affairs" MSW p74

"...once you have language, it is inevitable that you will have deontology because there is no way you can make explicit speech acts performed according to the conventions of a language without creating commitments. This is true not just for statements but for all speech acts" MSW p82

"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."
PI 126

"The more narrowly we examine actual language, the sharper becomes the conflict between it and our requirement. (For the crystalline purity of logic was, of course, not a result of investigation: it was a requirement.)"PI 107

"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. We have already said everything.---Not anything that follows from this, no this itself is the solution!....This is connected, I believe, with our wrongly expecting an explanation, whereas the solution of the difficulty is a description, if we give it the right place in our considerations. If we dwell upon it, and do not try to get beyond it." Zettel p312-314

These quotes are not chosen at random but (along with the others in my reviews) are an outline of behavior (human nature) from our two greatest descriptive psychologists.

I will first offer some comments on philosophy and its relationship to contemporary psychological research as exemplified in the works of Searle (S) and Wittgenstein (W). It will help to see my reviews of PNC (Philosophy in a New Century), TLP, PI, OC, MSW and other books by these two geniuses, who provide a clear description of behavior that I will refer to as the WS framework.

A major theme in all discussion of human behavior is the need to separate the genetically programmed automatisms from the effects of culture. All study of higher order behavior is an effort to tease apart not only fast S1 and slow S2 thinking (e.g., perceptions and other automatisms vs. dispositions), but the logical extensions of S2 into culture (S3).

Searle's work as a whole provides a stunning description of higher order S2/S3 social behavior due to 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.

S1 is the simple automated functions of our involuntary, System 1, fast thinking, mirror neuron, true-only, non-propositional, mental states- our perceptions and memories and reflexive 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 linguistic functions 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, make no sense-- see W for many examples and Searle and Hacker (Human Nature) for good disquisitions on this).

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 Cognitive Psychology. A cognitive psychologist of the future my be able to see what we are perceiving and remembering and our reflexive thinking and acting, since these S1 functions are always causal mental states (CMS) while S2 dispositions are only potentially CMS. This is not a theory but description of our grammar. S, Carruthers (C) and others muddy the waters here because they sometimes refer to dispositions as mental states as well, but as W did long ago, S, Hacker and others show that the language of causality just does not apply to the higher order emergent S2 descriptions--again not a theory but a description of how language (thinking) works.

S1 is composed of unconscious, fast, physical, causal, automatic, non-propositional, true only mental states, while slow S2 can only coherently be described in terms of reasons for actions that are more or less conscious dispositions to behavior (potential actions) that are or can become propositional (T or F). It seems quite obvious to me (as it was to W) that the mechanical view of mind exists for the same reason as nearly all behavior--it is the default operation of our EP which seeks explanations in terms of what we can deliberately think through slowly, rather than in the automated S1, of which we mostly remain oblivious--called by S in PNC `The Phenomenological Illusion' (TPI). TPI is not a harmless philosophical error but a universal obliviousness to our biology which produces the illusion that we control our life and the consequences are almost certain collapse of civilization during the next 150 years.

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')--i.e., they are Causally Self Referential (CSR), 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')--i.e., they have Conditions of Satisfaction (COS) and are not CSR.

The investigation of involuntary fast thinking of System 1 has revolutionized psychology, economics 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).

One way of regarding this is that the unconscious automatic System 1 activates the higher cortical conscious personality of System 2, bringing about throat muscle contractions which inform others that it sees the world in certain ways, which commit it to potential actions. A huge advance over prelinguistic or protolinguistic interactions in which only gross muscle movements were able to convey very limited information about intentions.

The deontic structures or `social glue' are the automatic fast actions of S1 producing the slow dispositions of S2 which are inexorably expanded during personal development into a wide array of automatic universal cultural deontic relationships (S3). I expect this fairly well describes the basic structure of behavior.

"The crucial proof that we need a distinction between prior intentions and intentions-in-action is that the conditions of satisfaction in the two cases are strikingly different." (p35 MSW). The Conditions of Satisfaction (COS) of PI need a whole action while those of IAA only a partial one. He makes clear (e.g., p34) that PI are mental states (i.e., unconscious S1) while they result in IA which are conscious acts(i.e., S2) but both are causally self-referential (CSR). The critical argument that both are CSR is that (unlike beliefs and desires and other dispositions which have COS but don't cause them) it is essential that they figure in bringing about (causing) their COS. These descriptions of cognition and volition are summarized in Table 2.1 of MSW, which Searle has used for many years and is the basis for an extended one I have created. In my view it helps enormously to relate this to modern psychological research by using my S1, S2, S3 terminology and W's true-only vs propositional (dispositional) description. Thus CSR references S1 true-only perception, memory and prior intention, while S2 refers to dispositions such as belief and desire.

So, recognizing that 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) (e.g., see my review of Hutto and Myin's 'Radical Enactivism'), I would change the paragraphs from MSW p39 beginning "In sum" and ending on pg 40 with "conditions of satisfaction" as follows.

In sum, perception, memory and reflexive prior intentions and actions (`will') are caused by the automatic functioning of our S1 true-only axiomatic EP. Via prior intentions and intentions-in- action, we try to match how we desire things to be with how we think they are. We should see that belief, desire (and imagination-desires time shifted and decoupled from intention) and other S2 propositional dispositions of our slow thinking later evolved second self, are totally dependent upon (have their COS originating in) the CSR rapid automatic primitive true- only

reflexive S1. In language and neurophysiology there are intermediate or blended cases such as intending (prior intentions) or remembering, where the causal connection with COS (i.e., with S1) is time shifted, as they represent the past or the future, unlike S1 which is always in the present. S1 and S2 feed into each other and are often orchestrated seamlessly by the learned deontic cultural relations of S3, so that our normal experience is that we consciously control everything that we do. This vast arena of cognitive illusions that dominate our life S has described as 'The Phenomenological Illusion.'

It follows in a very straightforward and inexorable fashion, both from W's 3rd period work and from the observations of contemporary psychology, that `will', `self' and `consciousness' are axiomatic true-only elements of System 1 just like seeing, hearing, etc., and there is no possibility (intelligibility) of demonstrating (of giving sense to) their falsehood. As W made so wonderfully clear numerous times, they are the basis for judgment and so cannot be judged. The true-only axioms of our psychology are not evidential.

Like Carruthers and others, S sometimes states (e.g., p66-67 MSW) that S1 (i.e., memories, perceptions, reflex acts) has a propositional (i.e., true-false) structure. As I have noted above, and many times in other reviews, it seems crystal clear that W is correct, and it is basic to understanding behavior, that only S2 is propositional and S1 is axiomatic and true-only. They both have COS and Directions of Fit (DOF) because the genetic, axiomatic intentionality of S1 generates that of S2 but if S1 were propositional in the same sense it would mean that skepticism is intelligible, the chaos that was philosophy before W would return, and in fact if true, life would not be possible. As W showed countless times and biology shows so clearly, life must be based on certainty--automated unconscious rapid reactions. Organisms that always have a doubt and pause to reflect will die-no evolution, no people, no philosophy.

Language and writing are special because the short wavelength of vibrations of vocal muscles enable much higher bandwidth information transfer than contractions of other muscles and this is on average several orders of magnitude higher for visual information.

Thinking is propositional and so deals with true or false statements, which means that it is a typical S2 disposition which can be tested, as opposed to the true-only automatic cognitive functions of S1. Or you can say that spontaneous utterances and actions are the primitive reflexes of S1, while conscious representations(R1) are the dispositional Secondary Language Games (SLG's) of S2. It sounds trivial and indeed it is, but this is the most basic statement of how behavior works and hardly anyone has ever understood it.

Thus I would translate S's summary of practical reason on p127 of MSW as follows: "We yield to our desires (need to alter brain chemistry), which typically include Desire -Independent Reasons for Action (DIRA--i.e., desires displaced in space and time, most often for reciprocal altruism), which produce dispositions to behavior that commonly result sooner or later in muscle movements that serve our inclusive fitness (increased survival for genes in ourselves and those closely related)." And I would restate his description on p129 of how we carry out DIRA2/3 as "The resolution of the paradox is that the unconscious DIRA1 serving long term inclusive fitness generate the conscious DIRA2 which often override the short term personal immediate desires." Agents do indeed consciously create the proximate reasons of DIRA2/3, but these are very restricted extensions of unconscious DIRA1 (the ultimate cause).

Evolution by inclusive fitness has programmed the unconscious rapid reflexive causal actions of S1 which often give rise to the conscious slow thinking of S2 (often modified by the cultural extensions of S3), which produces reasons for action that often result in activation of body and/or speech muscles by S1 causing actions. The general mechanism is via both neurotransmission and by changes in neuromodulators in targeted areas of the brain. The overall cognitive illusion (called by S `The Phenomenological Illusion', by Pinker `The Blank Slate' and by Tooby and Cosmides `The Standard Social Science Model') is that S2/S3 has generated the action consciously for reasons of which we are fully aware and in control of, but anyone familiar with modern biology and psychology who thinks a bit can see that this view is not credible.

Here is my summary (following S in MSW) of how practical reason operates: We yield to our desires (need to alter brain chemistry), which typically include Desire -Independent Reasons for Action (DIRA--i.e., desires displaced in space and time, often for reciprocal altruism--RA), which produce dispositions to behavior that commonly result sooner or later in muscle movements that serve our inclusive fitness-IF (increased survival for genes in ourselves and those closely related).

Though W is correct that there is no mental state that constitutes meaning, S notes (as quoted above) that there is a general way to characterize the act of meaning-- "Speaker meaning... is the imposition of conditions of satisfaction on conditions of satisfaction" which is an act and not a mental state. This can be seen as another statement of his argument against private language (personal interpretations vs publicly testable ones). Likewise with rule following and interpretation --they can only be publicly checkable acts--no private rules or private interpretations either. And one must note that many (most famously Kripke) miss the boat here, being misled by W's frequent referrals to community practice into thinking it's just arbitrary public practice that underlies language and social conventions. W makes clear many times that such conventions are only possible given an innate shared psychology which he often calls the background.

As I have noted in my other reviews, few if any have fully understood the later W and, lacking the S1, S2, S3 framework it is not surprising. Thus one can understand why one cannot imagine an object while seeing it as the domination of S2 by S1. There is no test for my inner experiences, so whatever comes to mind when I imagine Jack's face is the image of Jack.

Similarly with reading and calculation which can refer to S1, S2 or a combination and there is the constant temptation to apply S2 terms to S1 processes where the lack of any test makes them inapplicable. Two of W's famous examples used for combatting this temptation are playing tennis without a ball (`S1 tennis'), and a tribe that had only S2 calculation so `calculating in the head (`S1 calculating') was not possible. `Playing' and `calculating' describe actual or potential acts--i.e., they are disposition words but with plausible reflexive S1 uses so as I have said before one really ought to keep them straight by writing `playing1' and `playing2' etc. But we are not taught to do this and so we want to either dismiss `calculating1' as a fantasy, or we think we can leave its nature undecided until later. Hence another of W's famous comments--"The decisive movement in the conjuring trick has been made, and it was the very one we thought quite innocent."

A sentence expresses a thought (has a meaning), when it has clear COS, and this means has

public truth conditions. Hence the comment from W: "When I think in language, there aren't `meanings' going through my mind in addition to the verbal expressions: the language is itself the vehicle of thought." And, if I think with or without words, the thought is whatever I (honestly) say it is as there is no other possible criterion (COS). Thus W's lovely aphorisms (p132 Budd) "It is in language that wish and fulfillment meet" and "Like everything metaphysical, the harmony between thought and reality is to be found in the grammar of the language." And one might note here that `grammar' in W can usually be translated as `EP' and that in spite of his frequent warnings against theorizing and generalizing, this is about as broad a characterization of philosophy and higher order descriptive psychology as one can find.

Likewise with the question "What makes it true that my image of Jack is an image of him?" Imagining is another disposition and the COS is that the image I have in my head is Jack and that's why I will say 'YES' if shown his picture and 'NO' if shown one of someone else. The test here is not that the photo matches the vague image I had but that I intended it (had the COS that) to be an image of him. Hence the famous quote from W: "If God had looked into our minds he would not have been able to see there whom we were speaking of (PI p217)" and his comments that the whole problem of representation is contained in "that's Him" and "...what gives the image its interpretation is the path on which it lies," or as S says its COS. Hence W's summation (p140 Budd) that "What it always comes to in the end is that without any further meaning, he calls what happened the wish that that should happen"..." the question whether I know what I wish before my wish is fulfilled cannot arise at all. And the fact that some event stops my wishing does not mean that it fulfills it. Perhaps I should not have been satisfied if my wish had been satisfied"...Suppose it were asked 'Do I know what I long for before I get it? If I have learned to talk, then I do know." Disposition words refer to PE's which I accept as fulfilling the COS and my mental states, emotions, change of interest etc. have no bearing on the way dispositions function. I am hoping, wishing, expecting, thinking, intending, desiring etc. depending on the state I take myself to be in-- on the COS that I express. Thinking and intending are S2 dispositions which can only be expressed by reflexive S1 muscle contractions, especially those of speech.

I have had to cut the background info to a minimum, so those wishing for more please consult my many other reviews on W, S, Hutto, Johnston, etc.and expecially the recent work of DMS and Hacker and of course much of the recent work of of the psychologists and social psychologists on automatisms.

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)

	Disposition *	Emotio n	Memor y	Perceptio n	Desire	PI**	IA***	Action/Wor
Cause Originates From****	World	World	World	World	Mind	Mind	Mind	Mind
Causes Changes In****	None	Mind	Mind	Mind	None	Worl d	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/N	Yes	No	Yes
Describe a Mental State	No	Yes	Yes	Yes	No	No	Yes/N o	Yes
<b>Evolutionary Priority</b>	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/N o	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) *******	тт	HN	HN	HN	тт	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

Subliminal Effects	No	Yes/No	Yes	Yes	No	No	No	Yes/No
Associative/Rule	RB	A/RB	Α	Α	A/RB	RB	RB	RB
Context Dependent/Abstract	Α	CD/A	CD	CD	CD/A	Α	CD/A	CD/A
Serial/Parallel	S	S/P	Р	Р	S/P	S	S	S
Heuristic/Analytic	A	H/A	Н	Н	H/A	Α	Α	Α
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	ı	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

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 article The Logical Structure of Philosophy, Psychology, Mind and Language as Revealed in Wittgenstein and Searle (2016).

Now for some cursory comments on "Human Nature."

First we can take it as given that modern humans did not exist until their evolution from other hominoids as recently as 50k years, or perhaps several times longer depending on one's view of the evidence on the emergence of language. Take away language and most of S2 and culture are not possible, as we can see in very young children, animals and the genetically deficient or brain damaged. Secondly, given the above WS framework, and the fact of evolution driven by inclusive fitness, there is, for me at least, very little of interest

in nearly all discussion of society, politics, religion, history, ethics, and much else in this book or anywhere. If you don't understand the two systems in evolutionary perspective, the impossibility of private language, the way dispositional language works, the axiomatic nature of behavior, and the automaticity of behavior including deontology, it's just not possible to grasp social behavior or the language games that can be played with the term "Human Nature".

In my view very very few people have this comprehensive vision and of those in this volume

only Hacker approaches it. He is the leading authority on W and one of the very few who actually puts W into practice. I have read him before and this essay is brilliant, as far as it goes, but he tends to preciousness (as another philosopher characterized him) and so can be a bit tedious. The criticisms he makes here of cognitive science are also well explored in his books "Human Nature" and "Philosophical Foundations of Neuroscience" and further explained and criticized in "Neuroscience and Philosophy (see my reviews). By and large I find him close to the mark but I think he exaggerates the actual damage the sloppy use of language by cognitive scientists can do. Since I have made detailed comments on these topics in my other reviews I will not repeat them here. Also, since I find most of these essays obviously off the mark or just very dull, I can't generate much enthusiasm for commenting on them.

Some of the papers try to decide what if anything is really unique or essential to us. Those unfamiliar with philosophy might be incredulous--isn't it obvious! But this is just the normal case--we know but we can't precisely say, just as we can't say what exactly makes something an apple or a splash. But philosophers want to try anyway. I suggest you should see this question as essentially the same as all philosophical questions. We want to understand how S1 does it but S2 is not up to it. It's all (or mostly) in the unconscious machinations of S1 via DNA. We don't know but our DNA does courtesy of the death of trillions of organisms over some 3 billion years. Thanks! So we struggle with science and ever so slowly describe the mechanisms of mind, knowing (as I think most of those who have really thought about it carefully would agree) that even should we arrive at "complete" knowledge of the brain, we would still just have a description of what neuronal pattern corresponds to seeing red and an "explanation" of why its red is not possible. Glock I know well from his other writings and again think that if he would just read WS carefully (or better read my reviews) he could rate 5 stars instead of 3. Hinzen is bright but ranges too wide and too shallow and there is little in him really useful to a comprehensive understanding of human nature. Those with little knowledge of human genetics may find Crow interesting but of course it barely scratches the surface of an immense subject. Clack has some mildly interesting comments, but for me psychoanalysis is a very dead horse and no amount of beating will make it stand up.

I hesitate to recommend this book to anyone, as the experienced ought to have about the same perspective I do, and the naïve will mostly be wasting their time. Among the endless books and articles available, I commend the 3 volumes on Human Nature edited by Carruthers, the Handbook of Evolutionary Psychology, my reviews of WS, Hutto, DMS, Hacker et all, and any good recent texts on human genetics and evolution.