



William James, Cognitive Science, and Consciousness

by **Laura Weed**

College of Saint Rose
Albany, NY, USA

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- ¶1. In this paper I will argue that an account of consciousness as experience, like that of William James, is more appropriate for accounting for recent discoveries in the neurosciences than is the eliminative reductivism currently being advocated by Paul and Patricia Churchland, Daniel Dennett and many other philosophers. To argue for this position I will, first, outline some recent discoveries in neuroscience, especially with respect to blindsight research, and discoveries about the embodied and environmentally enabled processes in thinking, to highlight some features of mentality that I believe resist an eliminativist interpretation. Then, I will show how a Jamesian account of experience can do a better job of explaining these features of mentality than an eliminative reductivist account can.

1. New Discoveries in the Neurosciences

- ¶2. Contemporary advances in the neurosciences are yielding insights into the nature of thinking and mental awareness that philosophers of the last century and before could not have imagined. In this section of this paper I will give a brief overview of several types of such discoveries that undermine some of the older conceptions of the operation of a mind: blindsight discoveries, new discoveries of the processes involved in consciousness, and new discoveries about the embodied and environmentally rooted nature of mental processes.

a. *Blindsight*

- ¶3. Lawrence Weiskrantz has been researching the consequences of brain damage in monkeys and humans, and has discovered some remarkable capacities that illuminate the brain processes involved in conscious awareness. Weiskrantz has discovered a phenomena that he calls ‘blindsight,’ in which a person or a monkey who has lost most or all of the V1 area of the brain, which is usually associated with visual processing, can, nevertheless identify stimulations presented before them with close to 100% accuracy, by being instructed to ‘guess,’ despite the subject’s denial of any ability to see or otherwise perceive the presented stimulus.
- ¶4. Weiskrantz has concluded from his studies of this phenomena, along with similar discoveries made by other researchers studying memory, hearing, touch, and several other categories of conscious awareness, that conscious capacities for awareness are multi-process capacities, with high levels of redundancy containing sub-structures for semi-autonomous sub-sections of the main capacity. Weiskrantz sums up the discoveries that lead to this conclusion as follows.
- ¶5. Where one finds double dissociations of function, with consequent anatomical or physiological evidence of independent pathways, one has a necessary and a sound basis for inferring independent components or biases.... The blindsight field was more biased towards detection, qua detection, than the intact ‘seeing’ field, whereas just the opposite was the case for form detection. And beyond striate cortex, there are multiple and parallel outputs, and so, independent components of vision are emerging, for example, movement, color and form, each of which may well turn out to be associated with its own form of blindsight...

Similarly, with memory disorders, there has been a host of instances of fractionation of ‘memory’ into different memory subsystems, for example, short term vs. long term, episodic vs. semantic, declarative vs. procedural. Some of these are accompanied by awareness and others not, as we have seen.

[\[1\]](#)

- ¶6. So far, the Weiskrantz analysis might seem to be moving in the direction of reductivism, for it seems that complex and seemingly unified capacities, such as sight and memory, are being ‘broken down’ into functional subcomponents, and it seems this might continue “all the way down” expurgating all homunculi[2], as Dennett claims is possible. And, indeed, prior studies of sight in the brain had produced a grid-like analysis of the sections of the brain involved in sight processes, and the relationships among those sections that seem to be taking place when a subject is seeing something. Weiskrantz calls this grid, originated by Fellman and Van Essen (1991, Oxford University Press) the oil refinery model of how sight is produced by the brain.
- ¶7. Weiskrantz argues that his blindsight studies indicate, however, that sight is a more complex process than reductivists, relying on the oil refinery model of sight processing presume. He points out that there are routes through the brain that may detect visual stimulation while by-passing the oil refinery,[3] and there are also several generalized feedback loops, called back projections,[4] that pass across the oil-refinery grid and are implicated in the ability of sight to rise to the level of awareness. One might say that even these two aspects of sight production might still be amenable to an eliminativist interpretation, though.
- ¶8. But there are several aspects of the blindsight research that are not so amenable to reductivist interpretations. Weiskrantz, who calls himself an ‘elevationist,’ as opposed to a reductivist, points out that awareness requires an additional operation on top of all of the above brain processes. Unless a subject, whether monkey or human, can make a commentary on an object or stimulus, he or she cannot be said to be aware of it. The difference between cases in which a subject can or cannot make a commentary is quite striking in the blindsight and related cases. Because the blindsight victims are unaware of what they covertly see, they cannot make any use of the additional information afforded them by the blindsight capacity. This deficit indicates that the commentary either endows the state of awareness or enables it.[5] Unlike other autonomic systems in the body, such as the processes that control temperature homeostasis or salt-water balance within the body, for which awareness is completely unnecessary, absence of ability to make a commentary in the blindsight case is “...severe and deeply incapacitating within the particular category in question. It is by no means a mere subtraction of an epiphenomena,”[6] says Weiskrantz. This observation is obviously bad news for reductivist or eliminativist philosophers who think that there would be no difference between a person and his or her non-conscious zombie clone.[7]

- ¶9. Also, the context in which a blindsight capacity, or one of its cousins in another modality, occurs, is important in determining whether someone can make use of the blindsight capacities. In the case of a disability called prosopagnosia, involving inability to recall faces, even when the autonomic nervous system does recall them,[\[8\]](#) context cues turn out to be especially significant. Weiskrantz comments on the relationship between context cues and commentaries in the following passage.
- ¶10. What I mean to convey is that once a commentary can be made about an event a larger encyclopedia of knowledge and interests can be brought to bear, including what is sometimes called self-knowledge or self-awareness, which I take to be a complex concept.... Just as we do not normally see red, for example, divorced and isolated from an object and a context, so we do not issue commentaries as isolated nodes of the head or presses of a key without also conveying just what is being commented upon.[\[9\]](#)
- ¶11. So, language, self-reflection, and other knowledge all become relevant to determining how a perception or item of sensory stimulation is to enter into a subject's awareness. Weiskrantz' point isn't that the oil refinery isn't necessary, but it clearly isn't sufficient to explain conscious awareness. In addition to alternative tracks and back-projection across the refinery, context clues and an aware level of commentary are necessary for a subject to become conscious of a seen stimulus. Weiskrantz adopts Rosenthal's analysis of the situation as a thought reflecting on a thought,[\[10\]](#) as his elevationist account of what awareness adds to the processes in the oil refinery.
- ¶12. In the second section of this paper, I will show why James' stream of consciousness and radical empiricism do better justice to Weiskrantz' data than reductivism and eliminativism do. For now, I will continue to outline some more recent discoveries in cognitive science that I believe resist eliminativist reductions.

b. Processes in Consciousness

- ¶13. William Hirst has also been studying processes in consciousness, and has also focused on the differences between instances in which a subject is aware of a stimulus and instances in which the subject is not aware of a stimulus. I will list Hirst's discoveries in very brief outline form, here, rather than discussing each. Some of his observations are the following.

- ¶14.
1. Conscious awareness does not mirror the world,[\[11\]](#) and adds information to what it receives. Consciousness is highly selective in to what it attends ignoring most of what is available in the environs to know; so we are conscious of very little of what is happening around and within us.[\[12\]](#) Further, we fill in gaps in what is perceived, either psychologically or from our stock of knowledge.[\[13\]](#)
 2. Conscious awareness differentiates semantically into categories,[\[14\]](#) and disappears once processes (such as typing and dancing) become automatic[\[15\]](#).
 3. The parameters of what can become conscious are not rigid, but are amenable to variations related to a person's organizational and perceptual skills. Increasing skill levels expand the range of experiences of which someone can become aware[\[16\]](#).
 4. Tests on subliminal mental processing, dichotic listening, and neurophysiology, indicate that consciousness is not all-or-nothing; it occurs in degrees.[\[17\]](#) Neither Hirst nor Weiskrantz accepts a deep, complex Freudian unconscious, but both think that there are elements of relatively conscious and unconscious material, that occur in degrees, of one or the other at or near the periphery of conscious life.[\[18\]](#)
- ¶15. Hirst's observations in 1, above, are clearly inconsistent with the Artificial Intelligence position that John Searle characterized as 'strong AI,' for the claim that there is an isomorphism between thoughts and the world is central to that paradigm. [\[19\]](#) Hirst's observations in 2, further undermine the claimed isomorphism between a thought and a state of affairs, while showing the flexibility between conscious and unconscious states. Rather than simply 'emerging' as epiphenomena or being inconsequential, as they would be for zombies, states of consciousness can be called upon by a subject to pay heed to something that he or she previously ignored, or dismissed by a subject for habitual actions for which they are no longer needed.
- ¶16. Hirst's observations under 3 above, reinforce the flexibility and variability of conscious states, while highlighting that, far from being a mechanical production of biochemical forces beyond the control of the subject, conscious states are tools that subjects use to expand their own conscious horizons. Point 4, in addition to emphasizing point 3, also presents a view of consciousness as an expanding horizon, much more like the horizon of experience in James' radical empiricism than like the deterministic mechanical world envisioned by the Churchlands and Dennett.
- ¶17. I will now summarize one more collection of discoveries from contemporary neuroscience, before giving my Jamesian evaluation of the group.

c. Dorsal-Ventral embodied streams

- ¶18. Andy Clark extends the analysis of mental operations presented by Hirst and Wisekrantz even further out of the brain chemistry and into the environment. Clark analyses how perception uses dynamical loops of semi-integrated systems to include the context, the environment, self-awareness, and ability to process semi-conscious or sub-conscious repertoires, in his account of consciousness. Clark discusses the interpenetration of perception and interaction with the environment in the following passage.
- ¶19. In the specific case we considered the role of embodied action in visual awareness there is convincing evidence that perception and action are both intricately intertwined and multiply dissociated! There is clear evidence of fine-tuned action-oriented coding in the dorsal stream. But there is also suggestive evidence that this whole visual stream operates semi-autonomously from the ventrally dominated systems underlying major aspects of visual awareness. Within the ventral stream, itself, however, we find another kind of interpenetration of perception and action...involving the influence of gross motor intentions and schematic action plans on conscious visual content. Finally we must also consider how best to conceptualize the way these two, semi-autonomous systems work in harmony so as to yield useful visual awareness of the very world in which we move and act. [\[20\]](#)
- ¶20. Clark is pointing out two key facts about consciousness in the above passage: one is the extreme diversity and specificity of the mechanisms and sub-systems that subserve consciousness, both within the brain and scattered throughout the body and even the environment, and yet, simultaneously, the other fact is the high level of coordination, integration, intentionality and organization that the whole achieves in functioning. Just as the oil refinery paradigm short changed the other aspects of consciousness that we have already mentioned, it must also misrepresent the action and intention driven contributions to consciousness of the embodied aspects of consciousness exhibited in the dorsal and ventral streams of the visuo-motor system.
- ¶21. In concurrence with Clark's stress on the embodied and contextual characteristics of consciousness, also indicated by Hirst and Weiskrantz, Jana Iverson and Esther Thelen argue for an intimate connection among hand, mouth, and brain. Iverson and Thelen claim;

- ¶22. Gestures communicate important information to the listener, but even blind speakers gesture while speaking to blind listeners. (Iverson and Goldin-Meadow, 1998), so the mutual co-occurrence of speech and gesture reflects a deep association between the two modes that transcends the intentions of the speaker to communicate. Indeed, we believe that this linkage of the vocal expression of language and the arm movements produced with it are a manifestation of the embodiment of thought; that human mental activities arise through bodily interactions with the world, and remain linked with them throughout the lifespan.[\[21\]](#)
- ¶23. We see in Iverson and Thelen, that thought, language, or conscious experience and awareness can not be reduced to brain functions, in part because they cover a ‘space’ too large to be enclosed in a skull. At least the whole body, plus the environment and relationships with other people, must be included in the space of thinking language and thought. A phrenological model of the mind, again, even updated with biochemistry, proves inadequate. I will conclude this section of the paper with a quotation from Andy Clark on the tendency of cognitive scientists to slight some of the concerns that the authors in this section of the paper have considered essential for understanding consciousness.
- ¶24. For a mature science of the mind needs somehow, to do simultaneous justice to the emergent unity (courtesy of looping webs of dynamical influence) and the frequent sub-systemic estrangement (courtesy of computationally efficient pockets of specialization and insulated functioning) characteristic of biological brains and natural intelligence. Current cognitive scientific research still tends to be drawn to one or the other of these poles, oscillating between stress on complex dynamical intimacy and recognition of significant specialization and dissociation. Nature, as ever, contrives to have it both ways and all at once.[\[22\]](#)
- ¶25. So, there are a wide variety of aspects of consciousness that eliminative reductivists must outright deny, misrepresent, or underrate. In the next section I will show how a Jamesian account of consciousness can better describe the functioning of some of these aspects of consciousness.

2. A Jamesian Account of Consciousness as *Experience*

- ¶26. First, I will give a list of the points raised by my sources in the first section of this paper that I believe resist a reductivist interpretation. Second, I will outline James's position on the nature of consciousness and experience, and third, I will show how James, or a slightly modified version of James' account, can better accommodate the features of consciousness described by the neuroscientists than reductivism can.

a. Properties of Conscious or Aware States

- ¶27. Here is a list of properties of conscious or aware states compiled from the first section of this paper.
- ¶28.
1. **Consciousness is a thought about a thought.** (Weiskrantz)
 2. **Consciousness is context-dependent.** It works well only when one bit of info can be coordinated to others, in a way that makes sense to the subject. (Weiskrantz and Clark)
 3. **Consciousness is commentary-driven.** (Weiskrantz)
 1. The commentary either endows or enables awareness. (Weiskrantz)
 2. Consciousness differentiates the things of which it is aware into semantic categories (Hirst)
 3. The semantic concepts are themselves embodied in bodily movements, actions and environmental relations. (Clark, Iverson and Thelen)
 4. **Consciousness is intentional and selective.** (Hirst)
 - a. It concentrates on only one thing at a time, and fills in data gaps. (Hirst)
 - b. It varies with the perceptual and organizational skills of the subject, and can be expanded to include new experiences. (Hirst and Clark)
 - c. It builds on coordination of feedback loops through the body and across the environment. (Weiskrantz, Clark, Iverson and Thelen.)
 5. **Consciousness is embodied**
 - a. It includes hands, mouths and environments as much as brains. (Iverson and Thelen)
 - b. It features dorsal and ventral streams of processes that differ in content and use different sub-processes, but are somehow coordinated to each other. (Clark and Weiskrantz)
 6. **Consciousness is a form of Self-organization.**
 - a. It requires self-awareness, and ability to relate items perceived to one another, (Clark, Hirst, Iverson and Thelen)
 - b. It organizes the multi-various conscious and sub-conscious processes that subservise it.(Weiskrantz, Clark. Iverson and Thelen)
 - c. It integrates, and coordinates its sub-processes and endows or enables them with actions and intentions. (Clark, Iverson and Thelen)
 7. **Consciousness occurs in degrees.** There are many levels from never conscious processes through rarely or occasionally conscious ones, to usually or always conscious ones. The border between aware and not aware is

crossable in both directions; habitual actions become unconscious and new learning can bring some formerly unconscious processes into awareness
(Weiskrantz, Hirst, Clark)

- ¶29. So, these are some aspects of consciousness that a theory must take into account to be dealing fairly with the issue. Eliminativists misunderstand point one, above, casting the thought about a thought as a set-theoretic set-subset relationship in AI, via symbolic logic. But it cannot be that because of point two. Thoughts about thoughts are context-relative, and eliminativism, as a form of atomism, denies that context has any bearing on anything. On point three, eliminativism misrepresents language as a bottom –up product of genetics, rather than a top-down intentional process, and so it misrepresents the nature of a commentary. On point 4 eliminativists just flat out deny that there is any intentionality in the world, or try to reduce it to something else that it is not. They also misrepresent the embodied nature of thought, limiting it to what goes on within a brain and ignoring the rest of the body, the environment, and the social context of thought. Eliminativists adopt the denial approach on the claim that consciousness is a form of self organization. On this issue, they argue that organization occurs in a bottom up way, generating phenomena as at most an epiphenomenon, which could not direct coordination on a global scale for an organism or an environment, or anything else. Eliminativists also cannot admit point seven, that consciousness occurs in degrees, because they deny that it occurs at all. For eliminativists there is no accurate distinction to be made, whether epistemological or metaphysical, between a person aware and his or her zombie clone who has no phenomenal states.
- ¶30. I will now turn to James to show how he can do a better job of accounting for these points about consciousness.

b. James on Consciousness

- ¶31. Here I will outline just two of William James' positions on conscious experience, to show how he can better account for our list of properties of consciousness; his radical empiricism and his notion of experience as a stream of consciousness.
- ¶32. James, in his radical empiricism, faults most empiricists for being too atomistic; he accuses Hume, Berkeley, and Mill, for instance, of failure to see the connections among things because they attend too avidly to the disjunctions among them.[\[23\]](#) About the connections that atomists ignore or discard, James claims,

- ¶33. ...[T]he relations that connect experiences must themselves be experienced relations, and any kind of relation experienced must be accounted as real as anything else in the system.[\[24\]](#)
- ¶34. Rationalists, in contrast, overemphasize the unity of experience, abstract qualities and *apriori* principles. James criticizes the logicians who consider truth and reference transcendent of human experience, objective, unchanging and eternal in these words.
- ¶35. Objective reference, I say then, is an incident of the fact that so much of our experience comes in as insufficient and consists of process and transition. Our fields of experience have no more definite boundaries than have our fields of view. Both are fringed forever by a *more* that continuously develops and that continuously supercedes them as life proceeds. The relations, generally speaking, are as real here as the terms are..."[\[25\]](#)
- ¶36. Eliminativist reductivism, interestingly, combines the extremes of both empiricism and rationalism that James criticizes in the above two passages. Dennett and the Churchlands are atomists about the need for brain chemistry to operate only in a bottom-up manner, but rationalists in their endorsement of a static, AI driven view of language and reference. In the deterministic squeeze between these two vice points, the real world of processes, dynamics and James' *more* has been compressed out of view. But James is right, of course, to insist on the reality of expanding and shifting horizons.
- ¶37. James attributes the symbolic logic notion of a truth relation to Idealism, although it's AI reincarnation can be more directly attributed to Frege[\[26\]](#) and to Russell's version of symbolic logic[\[27\]](#). James abuses the conception of a truth relation, as a static, two-sortal relation between a proposition and a state of affairs in the following passage.
- ¶38. The most peculiar and unique, perhaps, of all these categories is supposed to be the truth relation, which connects parts of reality in pairs making of one of them a knower and of the other a thing known, yet which is itself contentless experientially, neither describable, explicable, nor reducible to lower terms, and denotable only by uttering the name 'truth'.[\[28\]](#)

- ¶39. The conception of truth as a static, two-sortal relationship is problematic for our list of properties of consciousness because it must misrepresent the nature of a commentary, and of the semantic categories used to identify experiences, according to Hirst. Far from being an abstract, logically coherent mathematical system, the semantic categories used in a commentary must be rooted in the dorsal and ventral experiential streams, and must be intentionally laden tools for action and interaction with the environment. They must be informed through multiple layers of feed-back loops across an environment, through conscious and sub-conscious processes in hands, brains and environments, and filtered through highly selective intentional aims. James's position on truth is far better equipped to handle all of the above, as one can see in the following passage:
- ¶40. The 'workableness' which ideas must have, in order to be true, means particular workings, physical or intellectual, actual or possible, which they may set up from next to next inside of concrete experience.[\[29\]](#)
- ¶41. I conclude this discussion of James on radical empiricism with the observation that a heavy dose of James' radical empiricism is badly needed to correct the inadequacies of the eliminativist point of view.
- ¶42. James's conception of the stream of consciousness, of course,. contains rich resources for dealing with the observations about consciousness listed in our list. I have room to mention only a few, here. First, thought requires a self, and is personal. On this matter James comments,
- ¶43. [With respect to thoughts] Absolute insulation, irreducible pluralism is the law. It seems as if the elementary psychic fact were not *thought*, or *this thought*, or *that thought*, but *my thought*, every thought being *owned*.[\[30\]](#)
- ¶44. Further, thoughts can intrude from the subconscious. James does not think there is a full-blown sub-conscious mind of the type postulated by Freud, but he follows Janet in postulating a sub-conscious borderline across which psychologically dissociated phenomena such as automatic writing, spirit control, religious experiences, hypnosis and multiple personality disorders may intrude on a person's ordinary consciousness [\[31\]](#). James claims that the intrusive thoughts are generally quite stupid, for intelligence belongs to conscious thought.[\[32\]](#) But he respected the perspectives gained and lives transformed through religious and extraordinary psychic events, and the healing power of shamanistic and other transformative practices.

- ¶45. In addition, far from being a static platonic heaven in which eternal thought resides, the stream of consciousness is a Heraclitean flux of constant change. James' argument for this point resonates closely with the findings of cognitive science that we have been examining in this paper.
- ¶46. Every sensation corresponds to some cerebral action. For an identical sensation to recur it would have to occur the second time in *an unmodified brain*. But as this, strictly speaking, is a physiological impossibility, so is an unmodified feeling an impossibility, for to every brain modification, however small, must correspond a change of equal amount in the feeling which the brain subserves.[\[33\]](#)
- ¶47. Since for James there is no dramatic distinction to be made between feelings and thoughts, the Heraclitean flux would apply to thoughts, as well. James comments,
- ¶48. *A permanently existing 'idea' or 'Vorstellung' which makes its appearance before the footlights of consciousness at periodic intervals is as mythological an entity as the jack of spades.*[\[34\]](#)
- ¶49. Consciousness, according to James, is a continuous stream or flow of experience, marked by "contrasts in the quality of successive segments".[\[35\]](#) A sense of embodied self accompanies the stream at each of its various meanderings,[\[36\]](#) and it moves like a bird's life, through a series of flights and perchings in which the flights, the in between spaces, or transitive parts, are as significant to the existence of the whole as are the perchings.[\[37\]](#)
- ¶50. Just as James refuses to objectify thoughts, or feelings, or objects within the mind, or even the mind, he also refuses to substantialize the 'objects' known by the mind. On this issue, James is a direct realist, asserting,
- ¶51. The object of your thought is really the entire content or deliverance, neither more nor less. It is a vicious use of speech to take out a substantive kernel from its content and call that its object; and it is an equally vicious use of speech to add a substantive kernel, not included in its content and call that its object.[\[38\]](#)

- ¶52. Neither objects nor ideas, nor even a manifold of both is needed to hold thought together, because it is primordially unified as subjectivity, for James. “*in a single pulse of subjectivity, a single psychosis, feeling or state of mind.*”[39]
- ¶53. Most of what we think, according to James is a product of highly selective mental processes. James concurs with Hirst that we actually ignore most of the environmental or sensory data that occurs before us or within us,[\[40\]](#) according to our interests, needs, and prior habits of thought and feeling. James describes the selectivity of mind in this passage.
- ¶54. Out of what is, in itself, an undistinguishable swarming *continuum*, devoid of distinction or emphasis, our senses make for us, by attending to this motion and ignoring that, a world full of contrasts, of sharp accents, of abrupt changes, of picturesque light and shade.[\[41\]](#)
- ¶55. James’s view of the operation of thinking in the above passage is obviously more amenable to the outward and backward looping processes of engagement with the environment presented by Weiskrantz, Clark, Iverson and Thelen, earlier in this paper than the static Fregian Truth Function between a proposition (or computer string) and the world is. And reasoning, as well as sensation can be accounted for in these terms, according to James. His claim with respect to reason is;
- ¶56. [A]ll reasoning depends on the ability of the mind to break up the totality of the phenomena reasoned about into parts and to pick out from among these the particular one which, in our given emergency, may lead to the proper conclusion.[\[42\]](#)
- ¶57. Further, James anticipated the layers of intertwined processes that contemporary cognitive scientists would find in analyzing the relationships among the layers of organization in the body, brain and consciousness. While he understood the relationships among the layers hierarchically, he represented them as interacting with one another in more multi-various ways than the eliminativists are inclined to allow. James’ summary account of the mind and how it operates follows.

- ¶58. [T]he mind is at every stage a theater of simultaneous possibilities. Consciousness consists in the comparison of these with each other, the selection of some, and the suppression of the rest by the reinforcing and inhibiting agency of attention. The highest and most elaborated mental products are filtered from the data chosen by the faculty next beneath, out of the mass offered by the faculty below that, which mass in turn was sifted from a still larger amount of yet simpler material, and so on.[\[43\]](#)
- ¶59. James's interactions among the layers of brain and bodily and environmental processes is top-down, rather than bottom up, as the eliminativists would require these relations to work. And, it is intentional and agent driven, rather than being mechanical, as eliminativists would require it to be. But it has the type of flexibility that the contemporary researchers in cognitive science require, and it features a thought about a thought, in Weizkrantz' sense, as an account of what consciousness is. This concludes my overview of a few features of Jamesian thought that can help us to better understand consciousness. I will conclude this paper with a quick summary of how our list of properties of consciousness can better be described in Jamesian terms.

c. James on the properties of Consciousness

- ¶60. 1. Consciousness is a thought about a thought. James's notion of the mind as a theater of possibilities and a stream of consciousness, directed by choices is clearly better equipped to discuss consciousness of conscious processes than is a materialist reductivism. While his hierarchy of relations among more and less conscious states may not be structured in the right way to characterize what actually happens, he was, at any rate, on the right track in his discussion of streams of consciousness that intertwine and inform one another.
- ¶61. 2. Consciousness is context-dependent. James's view of reality as a continuum that we intentionally break up into significant pieces, according to our interests, provides the framework needed to account for the contextual aspects of consciousness.

- ¶62. 3. Consciousness is commentary-driven. James's conception of language, as something that arises from experience and is intimately tied to 'my thoughts', which are personal, not universal ideas or propositions, is much closer to the Weiskrantz notion of a commentary, or the Hirst notion of the use and development of semantic categories than is the Frege/Russell platonism that is built into the AI paradigm of language. Likewise, James's experience-laden conception of language is much better equipped than the AI paradigm to account for the Clark-Iverson-Thelen conception of language as an effective, embodied tool for use in the world.
- ¶63. 4. Consciousness is intentional and selective. James always describes consciousness as an active agent, the unified subjectivity of self that compares, selects, chooses, and unifies what it is to attend to in its world. Consciousness is an ever-changing dynamic stream, that, at least in part, determines its own direction. His studies of psychopathology convinced him that the absence of intentionality, selectivity and unity in a personality was far from the normal human condition; rather it was a dysfunctional state, contra the proponents of epiphenomenal accounts of mind. Weiskrantz concurs.
- ¶64. 5. Consciousness is embodied. Again, James' conception of hierarchies of processes related to processes, many of which connect to processes in the environment, resonates well with the findings of contemporary neuroscience. Reduction to brain chemistry provides a necessary condition for the occurrence of consciousness, but not a sufficient one.
- ¶65. 6. Consciousness is a form of self-organization. Again, all consciousness is personal for James. While late in life he toyed with Fetchner's pan-psychism, featuring animal-souls, tree-souls and earth-souls, he clearly considered persons the chief possessors of consciousness. For James, personal ego accounts for the unity in the stream of consciousness, and the relationship and organization among the processes in the stream. Following Janet, James even thought that some pathological states featured more than one consciousness. The stream of consciousness is, as we already saw, intentionally driven and selective, so, the owner of the stream is creating as well as understanding the world he or she interprets consciously.
- ¶66. 7. Consciousness occurs in degrees. James's many studies of extraordinary states of consciousness convinced him that the line between conscious and unconscious states was porous and transversable in both directions. His accounts of the margins of thought, of the *more*, and of the ways in which unconscious or subconscious material can intrude into conscious awareness, provide conceptual frameworks for dealing with the degrees of consciousness cited by Hirst and Weiskrantz.

- ¶67. In conclusion, the Jamesian approach for understanding consciousness is rich and productive, while eliminative materialism is impoverished and must deny, misrepresent or misunderstand this pervasive aspect of human experience. As Oz Lorentz points out in his paper, “The Pragmatics of Spirit: A centenary Celebration of James’ *Varieties*,” the objectivism and materialism engrained in academic thought, are themselves, not based on objective reasoning, which would indicate that subjective states clearly exist and are especially important for human life.[\[44\]](#) Further, as Oz points out, the reductivist view of reality is dehumanizing.[\[45\]](#) Far from escaping emotions and values, reductivists are embracing a position motivated largely by fear,[\[46\]](#) as James argued in *The Will to Believe*, against Clifford, and they are attempting to shut the rest of us off from the truths there are to be learned from having values, commitments and faith.[\[47\]](#)
- ¶68. I agree with James and Lorentzen that the truths sacrificed by reductivists for objectivity outweigh the value of the intellectual clarity gained. On the issues I have been considering in this paper, consciousness, and most of its most salient features have been sacrificed by the Dennetts and Churchlands of the philosophical world. The conception of a human being that they offer is an eviscerated, valueless, mechanical shell of the creative, self-organizing selves discovered by neuroscience. Reductionists preach scientism, not good scientific practice.

END NOTES

1. Lawrence Weiskrantz, *Consciousness Lost and Found*, Oxford, UK: Oxford University Press (1997)1 Lawrence Weiskrantz, *Consciousness Lost and Found*, Oxford University Press, Oxford, UK, 1997, p. 46
2. Daniel C. Dennett argues for reducing all mental phenomena to the function of neurons, on parallel with computer micro-chips, in Daniel C. Dennett, *Artificial Intelligence as Philosophy and Psychology* in G. L. Bowie, M.W. Michaels and R.C. Solomon (Eds.), *Twenty Questions* New York: Harcourt, Brace Jovanovich Publishers (1988).
3. Lawrence Weiskrantz, *Consciousness Lost and Found*, Oxford, UK: Oxford University Press (1997), 211.
4. *ibid.*, 216.
5. *ibid.*, 201.

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IJFB - Fairfield University - Fairfield, CT - 06430

Tel: (203) 254-4000 Ext. 2857, 2851 Fax: (203) 254-4074
lktong@iifb.org -- cnaser@iifb.org -- <mailto:cnaser@iifb.org>

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