

What Is It Like to Be Nonconscious?

A Defense of Julian Jaynes

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Abstract

I respond to Ned Block's claim that it is "ridiculous" to suppose that consciousness is a cultural construction based on language, and learnt in childhood. Block is wrong to dismiss social constructivist theories of consciousness on account of it being "ludicrous" that conscious experience is anything but a biological feature of our animal heritage, characterized by sensory experience, evolved over millions of years. By defending social constructivism in terms of both Julian Jaynes' behaviorism and J.J. Gibson's ecological psychology, I draw a distinction between the experience or "what it is like" of nonhuman animals engaging with the environment and the "secret theater of speechless monologue" that is familiar to a linguistically competent human adult. This distinction grounds the argument that consciousness proper should be seen as learned rather than innate and shared with nonhuman animals. Upon establishing this claim, I defend the Jaynesian definition of consciousness as a social-linguistic construct learnt in childhood, structured in terms of lexical metaphors and narrative practice. Finally, I employ the Jaynesian distinction between cognition and consciousness to bridge the explanatory gap and deflate the supposed "Hard" problem of consciousness.

Keywords: Julian Jaynes; 4EA cognition; ecological psychology; social-linguistic constructivism; consciousness; narrative

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The Reactive Mind

I concur with Ned Block (1995), Thomas Nagel (1974), and many other theorists who claim there is “something-it-is-like” for bats to perceive the world just as there is “something-it-is-like” for dolphins, cats, and humans to perceive the world. Unfortunately, there is no consensus on how to understand or define this mysterious concept of “what-it-is-likeness”, otherwise known as “phenomenal-consciousness”. Moreover, to equate phenomenal-consciousness with this “what-it-is-likeness” is practically synonymous with saying that phenomenal-consciousness is simply experience itself, particularly in respect to sensory perception and “how it seems” or “what-it-is-like” to perceive the world. However, I claim that the qualitative richness of sensory perception does not equate with “human consciousness”. Denying nonhuman animals *conscious* psychology is not to negate the phenomenology of their unique, embodied perspective.¹ Rather, it is to claim that the internal monitoring and spatialization of consciously reportable mental representations² is not the *sine qua non* of biological organisms when encountering the environment and its objects.³ As Julian Jaynes says,

Reactivity covers all stimuli my behavior takes account of in any way, while consciousness is something quite distinct and a far less ubiquitous phenomenon. We are conscious of what we are reacting to only from time to time... We are continually reacting to things in ways that have no... component in consciousness whatever... We are thus conscious less of the time than we think, because we cannot be conscious of when we are not conscious. (1976, p. 22-24)

¹See Merleau-Ponty (1945) for a classic antiCartesian analysis of bodily perspective.

²This definition of consciousness is fully fleshed out in the section below, “Metaphor as Mark of the Mental”.

³A corollary of this claim is that an animal could be “aware” of something without being conscious. On my account, an earthworm is aware of certain properties of the environment, but it is, strictly speaking, not “conscious”. Moreover, a distinction can be made between being unconscious and being nonconscious. When unconscious, brain-body activity and interaction with the world is at a minimal level (e.g. a coma); when nonconscious, the brain-body system is actively interacting with the world (e.g. normal reactivity), but there is no interiorized “mind-space” or “workspace” in which executive control (Alvarez & Emory, 2006) and internal speech (Morin, 2005) operate explicitly.

It is helpful to consider this claim in terms of the distinction between internalist and externalist theories of perception; that is, between internal constructivism (phenomenalism) and direct realism (radical behaviorism). In his magnum opus *The Origin of Consciousness in the Breakdown of the Bicameral Mind* (1976), Julian Jaynes argues for a radical behaviorism in regards to the psychological interpretation of nonverbal animal cognition and preconscious human cognition (Jaynes, 1986b, p. 4). By comparing internalist and externalist theories of perception in terms of Gibsonian ecological psychology, I demonstrate the conceptual foundations for Jaynes' theory of mind in regards to understanding (1) preconscious mentality and (2) consciousness as a "social construction" grounded by embodied sensorimotor experience and functionally structured by lexical metaphors and narrative practice. Thus, understanding Jaynes' ideas about nonhuman organisms is critical for appreciating his theory of human consciousness, which he sees as a construction based on social-linguistic scaffolding, and learned in childhood.

Let us begin our inquiry with a brief summary of perceptual internalism from an epistemological perspective. On the internalist account, one does not perceive the public world directly. Instead, perception is quintessentially a registration of nerve states as they are agitated at receptor sites by the physical world outside the body (coupled with learning from previous experience).⁴ Under this framework, it is assumed that, *epistemically speaking*, the mind directly senses the retinal image in visual perception rather than the public world itself, and subsequently, the quality of visual sensation available for processing is simply the immediate quality of the

⁴“Whatever evidence there is for science is sensory evidence...the stimulation of sensory receptors is all the evidence anyone has to go on, ultimately, in arriving at his picture of the world” (Quine, 1969, p. 75). As the cognitive scientist Michael Anderson puts it, orthodox visual theory claims that “Conceptually synthesized sensory stimulation is our only epistemically relevant mode of access to the world” (Anderson, 2006, p. 126). Perhaps the best example of internalism is Richard Gregory, who agrees with Helmholtz in saying “Perception is but indirectly related to objects, being inferred from fragmentary and *often hardly relevant data signaled by the eyes*, so requiring inferences from knowledge of the world to make sense of the sensory signals” (1997, p. 1121, emphasis added).

receptor sites being agitated.⁵ In other words, the internalist claims that we have to “construct” a mental representation of the distal stimulus from the information available in the impoverished proximal stimulus. This internalist, sensation based approach dominates the philosophical foundations of contemporary perceptual research and promulgates a certain set of unexamined assumptions regarding visual perception.

Internalists repeat Kepler and Descartes’ error in assuming that animals directly sense a flat, upside-down “picture” of the environment as if the eye functioned like a passive camera. We can discount the idea that perception depends on a flat retinal “image” when we consider the compound perception of insects, for whom there is no lens, and thus no retinal “image”, but yet discrimination of stimulus information occurs smoothly so as to guide behavior in respect to bodily concerns. For internalists, the central problem of visual perception is resolving ambiguities inherent to the flat and impoverished retinal projection, with the brain laboriously generating hypotheses about the environment which are then “experienced naïvely” as reality.⁶ In other words, internalists argue that the brain must be in the business of making algorithmic “inferences” or “guesses” in order to resolve retinal ambiguities and distortions given that we only directly perceive an impoverished “image” or “picture” formed on the back of the retina.⁷ Accordingly, the internalist is committed to the idea that perceptual experience is a simulation or “mere phenomenal appearance”.⁸

⁵As Gibson says, discussing internalism, “The Causes of the excitation of our nerves...are forever hidden from us. We have only the deliverances of our senses to go by, and we are imprisoned within the limitations of the senses. We have to *deduce* the causes of our sensations, as Helmholtz put it, for we cannot *detect* them” (1966, p. 38).

⁶“Orthodox visual theory in this way frames its central problem as that of constructing an internal representation sufficient to support our detailed, high-resolution, gap-free, snapshot-like (Machian) visual experiences of the world despite the imperfections and limitations of the retinal image itself” (Noë , 2004, p. 38-39).

⁷That such theorists would deny there being a *literal* picture formed on the retina has no bearing on my argument. The point is simply that internalism is committed to the idea that visual perception involves correcting for retinal imperfections. Noë calls this the “fundamental problem for [classic] visual theory” (2004).

⁸This applies just as strongly to the experiences we have of our body. As Shaun Gallagher nicely puts it, “[In modern neuroscience, the body is sometimes reduced] to its representation in the somatosensory cortex, or is

Gibson overcomes the problem of retinal imperfection by supposing that we have no direct epistemic relation to the back of the retina, but rather, to the multidimensional structure of ambient light itself, which, in virtue of its well-ordered structure, contains information specific to invariant features of the environment such as surface layout, texture, color, chemical composition, etc.⁹ For Gibson, these features are encountered by the animal as meaningful in virtue of *affording* the opportunity for effectively changing its relationship with the environment (behavior). By sampling or exploring the ambient energy fields, animals can differentiate information in the given stimulus that specifies invariant properties of the environment (crucially, opportunities for behavior). Attending to the ambient array thus allows for the differentiation of *meaning* from the stimulus. On this account, “Meaning and values are *external*, not internal. We seek values and meanings, although we do not always succeed in obtaining what we want” (Reed, 1996, p. 101).

Gibson diagnoses internalism as the result of an inordinate focus on artificial experiments wherein the reciprocal head-eye-body *perceptual system* is prevented from natural discrimination of action-opportunities through locomotion and inquisitive, multimodal exploration.¹⁰ For example, if an animal were presented with a retinal depth ambiguity in a natural rather than artificial setting, the immediate reaction would be to actively engage with the object by moving towards it or around it, and accordingly, there would be no ambiguity about the

considered important only to the extent that it provides the raw sensory input required for cognitive computations. In other cases, the body is first treated as an intentional object, an image, a mental representation, and then reduced to neural computations. This elimination of the body in favor of the brain is not so unCartesian” (2005, p. 134).

⁹For a detailed account of how Gibsonian ecological optics overcomes the problems associated with methodological solipsism in cognitive science, see Rowlands (1995).

¹⁰“Yes, the vertebrate nervous system has an input (afferent) and output(efferent) side, which are linked by central and higher structures. But there is simply no reason to believe that these *anatomical* facts support the *psychological* theory of association [internalism]” (Reed, 1996, p. 95).

size of the object given motion parallax, texture gradients, etc.¹¹ Similarly, the Ames distorted room illusion is defeated as soon as one moves to get a better look at the physical layout of the room.

Moreover, the poverty of sensory input is usually presupposed only after thinking about perception in terms of a frozen snapshot of reality. However, I assume that ecological information does not exist exclusively in an instantaneous slice of time for “Animals and men [directly] perceive motions, events, episodes, and whole sequences” (Gibson, 1966, p. 276). According to Gibson, the information that stimulates us has both successive *and* adjacent order. For ecological psychology, it is a mistake to think of persisting patterns as being a separate stimulus; biologically speaking, “Transformations of pattern are just as stimulating as patterns are...motion is immediately detected by animals, not secondarily deduced from change of position”(*ibid.*, p. 40). Accordingly, I claim that the brain is not in the business of constructing a mind bogglingly detailed phenomenal model from spots of sensations differing in brightness and color.¹² Instead, we can theorize that the organism directly “picks up” or behaviorally “resonates” (reacts in real-time) to ecological stimulus information available in the environment (affordances).¹³

Consequently, I argue we do not internally construct something called “space” from 2D inputs. Rather, we directly attend to environmental surfaces and their 3D layouts insofar as such

¹¹In *The Ecological Approach to Visual Perception* (1979), Gibson goes so far as to dismiss the entire concept of depth perception, saying “The traditional list of cues is worthless if perception does not begin with a flat picture” (p. 149). I agree. On the assumption of an information-based theory of perception, the “problem” of depth perception becomes tractable for there is no “picture” of the world formed in the brain or on the retina, except in a trivially true physiological sense.

¹²As Alva Noë points out, however, the rejection of internal world modeling is compatible with the claim that representations are necessary for perception (2004, p. 22). For example, isomorphic or topographic representations are promising theoretical entities for understanding perceptual processing that do not require any problematic mind/body distinction.

¹³It is important to note that real-time “reaction” does not necessarily mean locomotion or intentional action as neural activity of any kind is a reaction to the environment (and metabolism itself is a way of reacting to the environment). Also, it is important to note that some animals can *detect* an affordance without acting on it. This is called “scanning” the environment for information.

content is specified by the ambient optic array and we are able to pick up the information in terms of the history of structural coupling between our nervous system and the environment (Maturana & Varela, 1987).¹⁴ The epistemic “problems” related to depth perception and the retinal image are thus largely based on misconceptions of the nature of what constitutes a perceptual stimulus (Gibson, 1960). Moreover, Gibson points out that the perceiving animal is usually not passive like a camera. Rather, it actively explores the environment, *seeking* meaning. Crucially, movement (sampling) transforms the optic array across the retina in such a way as to facilitate the extraction of ecological stimulus information by means of optic flow. For this reason, the metaphor of a passive camera is entirely inappropriate for understanding the nature of what stimulates us. Under the externalist, Gibsonian rubric, visual perception is intimately connected with behavior and, indeed, fundamentally *is* a type of exploratory behavior.¹⁵ Since behaviors are always behaviors embedded into a physical, public world, the epistemic situation of perception is that of *open directedness* towards reality, not mediated isolation behind a “veil” of re-presentations. One might call this openness, as Heidegger says, an “encountering” or “uncovering” of the world.¹⁶

¹⁴“Instead of postulating that the brain constructs information from the input of a sensory nerve, we can suppose that the centers of the nervous system, including the brain, resonate to information” (Gibson, 1966, p. 267). Consequently, Gibsonian theory requires us to rethink the nature of information processing rather than abandon it altogether. For an interesting Heideggerian/Bergsonian theory of Gibsonian resonance, see Robbins (2006).

¹⁵Accordingly, I think Alva Noë is right to emphasize the importance of subconscious sensorimotor skills (2004), particularly in respect to saccadic motion and the dynamic causal couplings of the head-eye system (Gibson, 1966).

¹⁶At this point, the internalist might ask how the “problem” of hallucination and illusion is accounted for under a framework of direct realism. I think Gibson is right to respond “[I]t is not one problem but a complex of different problems” (1979, p. 243). Indeed, the problem of information pick up and the problem of how that process can fail are separate explanandums. The reliable perception of information can fail for numerous reasons, including an inability to acquire all available information, deficiencies in the physiological process, etc. As for hallucinations, most people who experience them correctly surmise that they are hallucinating, as with typical psychedelic drug use or perceptual after-effects. Moreover, true hallucination (in the sense discussed by British empiricism and epistemology) is actually extremely rare; a more common phenomenon is the modification and amplification of normal perceptual processes with full metacognitive awareness that your normal perceptions are being disturbed. The problem then becomes physiological, not epistemological.

The externalist claims that perception is usually characterized by behavioral reactivity *towards* an environment instead of passive impingement *by* the environment. This leads to a “transition from models of representation as mirroring or encoding to models of representation as control” (Clark, 1997, p. 47). Accordingly, I claim that animal minds are dominated by *reactive* perceptual couplings. As Jaynes says, “Perception is [fundamentally] sensing a stimulus *and responding appropriately*” (1976, p. 448, emphasis added). This characterizes what I call the “reactive mind”. It holds sway over the mental landscape of our animal cousins and developmentally grounds the higher-order processing of “secondary” or “reflective” consciousness.

Furthermore, I claim that behavioral reactivity is best characterized as happening nonconsciously, *organically*, and with learned automaticity, as with the long-distance truck driver.¹⁷ Under the pragmatic-externalist position (Carman, 2003), organic perception primarily consists in a behavioral directedness towards the environment and its objects rather than the possession of internally constructed mental models accessible by a conscious mind and experientially structured in terms of an inner/outer conceptual schema (Lakoff & Johnson, 1999). As J. K. O’Regan and Alva Noë say, “Seeing is directed to the world, not the brain...In our view, it is just bad phenomenology to assert that we take ourselves to have a 3D-model or picture in our head when we see” (2001, p. 962).¹⁸ Accordingly, visual perception is the subconscious discrimination of pragmatically salient stimulus information from invariant environmental structures embedded within the ambient optic array; sensation (how it consciously “feels” to see)

¹⁷The point is not that truck drivers are never conscious of the road, but rather, that when they are “zoned out”, truck drivers can still nonconsciously react to the changing road circumstances. See Armstrong (1997) for a discussion of this example.

¹⁸Heidegger often makes the same point when he critiques sensation-based theories of mind e.g. (1927/1996, p. 58) and (1975/1982, p. 63). This is why he insists that we are always already “outside” of our heads, *dwelling-in-the-world*. I take it we should read Alva Noë’s controversial claims (2009) similarly.

is incidental for almost all situations (Merleau-Ponty, 1945/2006, p. 263).¹⁹ If we are to make sense of conscious thought, we must be clear that organic perceptual reactivity is not alone constitutive of *consciousness*. To think otherwise is to operate under the confusion that consciousness is the same as perceptual cognition.^{20,21}

In order to better frame the tension between Block and Jaynes on this issue, I want to follow Jan Sleutels (2006) in positing that a central question in regards to the social construction of consciousness is determining the extent to which “cultural zombies” are plausible. By a cultural zombie, I mean a human being endowed with a different sort of “mind”, still in possession of a complex culture, capable of advanced behavioral reactivity and ritual practice, but profoundly lacking in conscious introspection, executive control, and the ability to explicitly reason and articulate about intentional actions. Jaynes called the cultural zombie a “bicameral mind”.²² To interact with something as a bicameral mind is to react to it without explicitly realizing that you have done so and without the ability to reason about *why* you did so. With bicamerality, there is no metacognitive awareness, no executive monitoring or autobiographical memory, and no experience of an introspectable “mind-space”²³ through which narratization of behavioral possibilities occurs. Bicameral perception and action is quintessentially pragmatic-

¹⁹As a *reductio* of the internalist theory of consciousness, Jaynes points out that white blood cells perceive bacteria and respond appropriately by chasing them around and devouring them. If we claim that intelligent perceptual reactivity is constitutive for consciousness, then we must conclude that there are billions of unique, conscious entities swirling in our bloodstream.

²⁰In how I am using it, cognition is subsumed by perception, attention, and emotion whereas consciousness depends on verbal language and consists in self-reflective awareness, volition, and metacognition. Clark (1997, 2008), Baars (1997; 2002), Schooler (2002), Zelazo (2004), Wheeler (2007), and Hobson (2009) make a similar distinction.

²¹Jaynes points out that this confusion of perception and consciousness has been endemic since at least 1921 when Bertrand Russell said “We are conscious of anything that we perceive” (1921, p. 12).

²²The idea of bicamerality is based off the metaphor of a divided house. Two minds in one brain. On one “side”, there is the reactive-receptive human, on the other, the commanding-advising gods. The gods are a mechanism of cognitive control during novel breakdown situations such that imperatives are issued from the god-function and experienced in terms of an auditory verbal hallucination. Jaynes speculated that this linguistic control system arose because language is the most efficient way to transfer information across the hemispheres that evolution has ever stumbled upon.

²³As Jaynes uses the term, “mind-space” refers to the “space” that we are “seeing” when we turn inwards and consciously introspect. He claims that it exists only in a functional sense.

externalist reactivity. Block finds it intuitively obvious that cultural zombies are conceptually implausible. But as Sleutels rightly points out, “Uncritical rehearsal of intuitions is the shortest route to parochialism.”

What it Is Like to Be Nonconscious

Now we need to introduce Block’s distinction between access-consciousness and phenomenal-consciousness. We already defined phenomenal-consciousness as the what-it-is-like of an organism,²⁴ with sensory perception being the example *par excellence*. In contrast,

A state is access-conscious if, in virtue of one's having the state, a representation of its content is (1) inferentially promiscuous, i.e. poised to be used as a premise in reasoning, and (2) poised for [rational] control of action and (3) poised for rational control of speech. (Block, 1995, p. 231)

With this distinction in mind, let us propose that a bicameral mind is phenomenally-conscious but not access-conscious. The bicameral human is an animal who perceives the world, but whose mental content is not accessible for conscious access, voluntary control, or rational articulation. Moreover, let us say that consciousness proper is a social construction based on verbal language. Both Jaynes and Block²⁵ agree that to say consciousness is a cultural construction based on language means that consciousness cannot predate certain conceptual structures conditioned by culture and language. The crucial question then is whether it is plausible that our human ancestors could have ever lacked consciousness proper despite possessing an elaborate behavioral repertoire of complex cultural phenomena, including speech, religion, tools, problem solving, writing, etc. Furthermore, we can extend the question to ask whether it is plausible that human minds could be structured by conceptual content but lacking in access-consciousness.

²⁴In his recent publications, Block has abandoned the term “phenomenal-consciousness” in favor of “phenomenology” to clear up conceptual muddles concerning whether or not phenomenal-consciousness is necessary for conscious access.

²⁵As well as Dennett (1986).

That is, minds shaped by culture, but lacking conscious, metacognitive access to mental contents in terms of a narrating, reason-giving, autobiographical self.

On Block's account, this position is absurd. Ancient humans in possession of complex culture must surely have had a robust conceptual life. And since it has been argued that a sufficiently large, interrelated network of concepts is necessary for having any concepts at all—and this is precisely the sort of process that seems to require rational, deliberate access *to* the mental content—it is unlikely that a human mind could have had a robust conceptual structure before the advent of access-consciousness of concepts poised for deliberate, “serial” control of rational action and speech. Sleutels summarizes Block's dilemma nicely:

...if anything qualifying as a cultural construction is necessarily based on a corresponding concept, and if such concepts necessarily involve consciousness, then consciousness cannot be a cultural construction. Similarly, if anything qualifying as a culture is necessarily based on concepts, and if such concepts necessarily involve consciousness, then no culture can be unconscious. (2006, p. 318)

To establish the plausibility of cultural zombies then, we need to show that consciousness is not necessary in the intelligent control of action or language, nor is consciousness necessary for complex conceptual structure. This would amount to demonstrating the plausibility of a culturally endowed human who does not, as Sleutels puts it, “*know* what he is doing or saying, nor why he is doing or saying it, in the sense that his mind is constitutionally unable to explain, elaborate, question, doubt, or otherwise conduct articulate reasonings about its contents” (Sleutels, 2006, p. 319). I want to claim that this inability to consciously introspect and reason about mental content is the natural state of animal mentality. Moreover, all animals “have” at least some conceptual structure provided we have a pragmatic-externalist understanding of concepts. As Jaynes says,

The bee has a concept of flower, the eagle a concept of a sheer-faced rocky ledge, as a nesting thrush has a concept of a crotch of upper branch awninged with green leaves. *Concepts are simply classes of behaviorally equivalent things.* Root concepts are prior to experience. They are fundamental to the aptic structures that allow behavior to occur at all. (1976, p. 31, emphasis added)

And as he defines them, “Aptic structures are the neurological basis of aptitudes that are composed of an innate evolved aptic paradigm plus the results of experience in development...They are organizations of the brain, always partially innate, that make the organism apt to behave in a certain way under certain conditions” (Jaynes, 1976, p. 31). Moreover, this understanding of concepts accords with our earlier discussion of externalist perception and organic reactivity. It is central to the success of organisms that they react appropriately in coordination with their environmental niche and bodily concerns. And there is a “something-it-is-like” associated with this. But Jaynes’ reply to Block would be that what-it-is-like to be a reactive organism does not involve deliberate control within the private workspace or “mind-space” familiar to average human adults (Baars, 1997). In fact, human and nonhuman animals can perform a wide range of complex tasks without an explicit metacognitive awareness that they are doing anything at all.

For example, the capacity for sleepwalking intimates that there is a dearth of consciousness within everyday sensorimotor habits. One can easily reflect on the number of intricate maneuvers carried on everyday unnoticed and uncontrolled by conscious thought. The continual maintenance of posture and balance through a preflexive body schema (Gallagher, 2005) or the automaticity of reading, writing, and speaking are but a few examples to illustrate how consciousness is largely unnecessary in the achievement of effective behavior. Upon reflection, we can see that when immersed in conversation, consciousness is not to be found in

the motor dynamics of moving your mouth or speaking your mind.²⁶ The subconscious routines of sensory perception go on quite smoothly without our conscious interference; is the reader conscious of the technical complexities of saccadic motion as he or she reads this line? Generally, the technical intricacies of perception and biological maintenance are inaccessible to conscious thought.

Furthermore, learning has been shown to go on quite independently of consciousness,²⁷ and, indeed, consciousness often inhibits the execution of practiced skills (Dreyfus, 2002). Nor is consciousness necessary for basic conceptual structure, for, as we said above, even the nonhuman animal has a concept of shelter and food in terms of affordances. Surprisingly, even thinking does not necessarily rely on consciousness, for how often are we conscious of what we are going to think before we think it? The history of scientific discovery has aptly illustrated the power of the subconscious with moments of brilliant scientific discovery surging into consciousness with the scientist often at a loss to describe how he or she arrived at such an insight. For the most part, we cannot even consciously articulate how it is we open and close our own hands; we simply intend for it to happen (go on, try it).

Perceiving, acting, reasoning, thinking, and many other processes go on rather automatically – nonconsciously – and are for the most part better off for it. But the illusion of conscious continuity persists. Why? Simply stated,

Consciousness is a much smaller part of our mental life than we are conscious of, because we cannot be conscious of what we are not conscious of...It is like asking a flashlight in a dark room to search around for something that does not have any light shining upon it. The flashlight, since there is light in whatever direction it turns, would have to conclude that there is light everywhere. And so consciousness can seem to pervade all mentality when actually it does not. (Jaynes, 1976, p. 23)

²⁶As Jaynes put it, “To be conscious of elements of speech is to destroy the intention of the speech” (1976, p. 27).

²⁷See Deeprouse et al. (2004) and Pessiglione et al. (2008).

Let us summarize what we have covered. The question concerned the plausibility of consciousness being a cultural construction, requiring that certain preconscious, social-linguistic structures precede the full maturation of consciousness in the human phylogeny. But this immediately raised a problem: if the set of conceptual preconditions necessary to construct consciousness requires a mental workspace in terms of inferential promiscuity and rational access/control, and such a workspace presupposes consciousness, then it is impossible for a culture to have concepts without also having rational, introspective access to them. Thus, consciousness, in the sense of access-consciousness, obviously predates the development of any complex conceptual preconditions from which consciousness could have been culturally constructed. Furthermore, since all animals, lower or higher, possess a what-it-is-like, it is absurd to claim that conscious experience is based on a cultural construction.

However, if we can show that language, writing, and conceptual structure are all possible without a mental workspace accessible through deliberate access and rational control, we can escape the above dilemma by proposing that consciousness is not ubiquitous or constantly present in everyday habitual behavior. The plausibility that consciousness need not precede the development of advanced conceptual-cultural operations is secured then given we accept that conceptual structure and culture can exist without conscious, deliberate access within a mental workspace and that, moreover, what-it-is-like to be an animal is primarily constituted by nonconscious behavioral reactivity. In other words, because Block thinks that any society complex enough to “construct” consciousness out of language must already have a conceptual structure that necessitates it, if we can demonstrate that consciousness is not necessary for such conceptual complexity, then Block’s dilemma is mitigated. It is my contention that the preceding discussion of nonconscious behavior demonstrates exactly this. Accordingly, this requires that

we rethink the nature of modern human consciousness in light of the distinction between consciousness proper and stimulus-based, task driven cognition. As Jaynes argues, “Saying that consciousness is developed out of language means that everybody from Darwin on, including myself in earlier years, was wrong in trying to trace out the origin of consciousness biologically or neurophysiologically. It means we have to look at human history after language has evolved and ask when in history did an analog ‘I’ narratizing in a mindspace begin” (1986a, p. 8).

The Narrative Scaffold of Consciousness

So far, we have introduced three different types of mentality. The most basic mentality is simply experience in terms of nonconscious reactivity. All lifeforms “possess” this mentality and it can be understood as an autonomous, self-organizing, dynamic system (Thompson, 2007). The next mentality is the bicameral mind and it involves the capacity for complex human culture but is nevertheless nonconscious. This mentality includes symbolic cognition, judgment, pragmatic reasoning, problem solving, planning, etc. Despite the impressive cognitive achievements of the bicameral mind, such a mentality would be nonconscious in the sense of lacking deliberate, rational access and control of conceptual content in terms of an internal mental workspace and “executive ego”. In terms of Block’s distinction, we can say that such a mentality possesses a “what-it-is-like”, but lacks access-consciousness. Such creatures possess concepts, but not in the sense that they are personally responsible for them or capable of explicitly reasoning about them through an autobiographical narrative. The concepts are nonconscious and largely extensional, that is, cashed out in terms of concrete, bodily reactivity amongst worldly opportunities for action. Good examples of nonconscious bodily reactivity in humans are somnambulism, “blinking out” or “zoning out” while engaged in habitual routines, athletic “flow”, meditation,

and hypnotic trance. To summarize then, to nonconsciously engage with the world is to do so without metacognitively realizing it, along with the inability to explicitly discourse on actions through a mentalistic (i.e. folk psychological) framework.

Finally, the third and most advanced form of mentality is modern human consciousness, capable of J-consciousness, for Jaynesian consciousness. J-consciousness is hypothesized to be built “on top of” or “out of” the underlying neurological substrate of the bicameral mind.²⁸ The essence of J-consciousness consists of “narratizing” events through a cultural-linguistic cognitive scaffold based on lexical metaphors.²⁹ As Jaynes understands it then, full blown consciousness is “[T]he development on the basis of linguistic metaphors of an operation of space in which an ‘I’ could narratize out alternative actions to their consequences” (1976, p. 236). For example, if I see a man sprinting through the city with a purse in his hands, consciousness will explicitly structure the event in terms of causal-interpretive narrative concerning a thief and a woman. Moreover, our own self-interpretations are constantly influenced in terms of a dynamically constructed autobiographical “worldview” constantly updated and modified in light of our continual experience. As Jaynes says, “New situations are selectively perceived as part of this ongoing [autobiographical] story, perceptions that do not fit into it being unnoticed or at least unremembered. More important, situations are chosen which are congruent to this ongoing story, until the picture I have of myself in my life story determines how I am to act and choose in novel situations as they arise” (1976, p. 64).

²⁸Based on evidence from the embodied/embedded paradigm in cognitive science, Michael Anderson’s “massive redeployment” hypothesis predicts that redeployment of existing circuits and exploiting evolutionary older brain areas for new functions is common. I take this to be compatible with Jaynes’ hypothesis that “[T]here is nothing in consciousness that is not an analog of something that was in behavior first” (1976, p. 66).

²⁹Recent defenders of social-constructivist approaches to conscious self-hood include Charles Taylor (1985, 1989), Daniel Dennett (1986, 1991), Tor Norretranders (1991/1998), J. D. Velleman (2006), Daniel Hutto (2008), John Protevi (2009), and James Austin (2009). For an overview of how Dennett’s “abstract” narrative-self theory overlooks the underlying “embodied self”, see Menary (2008). Also, see John Dewey (1925/1958) and for a progenitor of social-linguistic constructivism.

All three forms of mentality (reactive, bicameral, J-conscious) “possess” Block and Nagel’s sense of phenomenal-consciousness as a “what-it-is-like”, but for reasons soon to be explained, only J-consciousness should be considered *conscious* and poised for the control of action and speech through rational articulation and narrative practice within a workspace of reason-giving and reflective imagination. For Jaynes, Block’s notion of “phenomenal-consciousness” or “what-it-is-like” does not equate with “consciousness”. A better phrase might be “nonconscious phenomenal experience” or “automatic organic reactivity”. Phenomenal, yes; conscious, no.³⁰ When looked at from this perspective, the mysterious “seemings” of phenomenal experience do not seem so mysterious because, for most animals, “what-it-is-like” is merely the experience of acting on autopilot without autobiographical memory and can be explained behaviorally through ecological psychology.

With these distinctions in place, we can then define J-consciousness more precisely as being that mentality wherein deliberate, reflective introspection by an “analog I” upon an analogically generated “mind-space” or introspectable “landscape” is possible. An analog is a type of model wherein it is generated at every point by that which it is an analog of e.g. a map. In the case of the conscious mind-space, it is an analog of the physical world and “mental actions” by the analog “I” are analogs of our bodily actions in the physical world.³¹ The most dominant

³⁰Unfortunately, even thinkers within the externalist paradigm for perception have overlooked this important point, placing the “mystery” of consciousness in terms of explaining the nonconscious what-it-is-like of phenomenal sensory experience. So while I agree with Alva Noë (2004, 2009) when he argues that visual perception is a process of enactive exploration of the world enabled by automatic sensorimotor skills, when he claims that this body-world interaction fully constitutes the conscious mind, he too is falling into the trap of confusing consciousness with cognition, mistakenly thinking that the latter subsumes the entirety of the former. Moreover, this conflation is so rampant that even when Andy Clark (2009) argues against the notion that we can explain consciousness by recourse to an enactive account of perception, he still buys into the original claim that what needs explaining about the conscious mind is “the elusive ‘what-it-is-likeness’ that seems to characterize a subject’s experience of a certain kind of redness, of a certain voice, or of a pain in her stomach” (p. 1-2). If Jaynes is right, then such what-it-is-likeness is *not* what needs explaining in coming to terms with the “mystery” of consciousness. Instead, what needs explaining is narratizing within a functional mind-space through cultural-linguistic conditioning in childhood.

³¹For an excellent overview of empirical research in the psychology of metaphor and the cognitive basis for figurative understanding in general, see Gibbs (1994).

metaphor structuring the operation of the analog “I” is that of visual perception and how we perceive the surrounding environs in our everyday coping.³²

Furthermore, Jaynes speculates that the transition from behavioral reactivity to bicamerality (i.e. human civilization) occurred when humans started to cognitively specialize in what is called foveal or “sustained” attention. Foveal attention is focused attention. It is not particular to humans, but humans are unique in their sheer *capacity* for excessively sustained, voluntary attention – what is called “spotlight attention”, in contrast to “floodlight attention”. Floodlight attention is that which enables us to drive a car or play the piano effortlessly. Cognitive scientists often refer to floodlight attention as our “cognitive subconscious”, which is “vast and intricately structured. It includes not only all our automatic cognitive operations, but also all our implicit knowledge” (Lakoff & Johnson, 1999, p. 13). It is the basis of habit and our dynamic, on-the-fly *intra*-action with the environment, what Alva Noë calls our “wide mind” (2009). Indeed, “Insofar as we are skillful and expert, we are not deliberate in what we do. Our skill enables us to respond appropriately to the world and in an automatic way” (ibid., p. 127). In our everyday mode of being, we are then “bundles of habits” as William James said. This is what Heidegger called being “lost” in the everyday concerns of life i.e. “absorbed circumspection”.

In contrast, spotlight attention is narrowly focused and selective. Spotlight attention is familiar to everyone who has ever sat through a tedious lecture and been vividly snapped to attention when our parents or teachers told us to “Wake up!” Upon reflection, it is easy to see how the specialization in spotlight attention by our species is at the heart of perhaps our most

³²We quite naturally say that “My mind wanders” as if the mind were a person in a terrestrial environment, walking aimlessly along. We often understand ourselves as thinking “step-by-step”, *linearly*, with ideas and mental contents being separated in space, spatialized in time, and “in” or “on” our minds as if the mind were a storage container for thoughts, with some thoughts being “contained” in the “back” of our minds, or on the “top” of our minds (closer to the “surface” of conscious awareness). Complex ideas can go “over our head”; we can hold an idea “in” our minds as if it were being examined like a physical object, from “all sides” as it were. I would wager that practically anywhere you find a description of consciousness or mental life, you will find a metaphor of space and time lurking “within”.

important cultural achievement: tool construction. In fact, one could say, with only a little exaggeration, that the entire success of our civilization is on account of our capacities for excessively sustained, voluntary attention. As William James said, “The faculty of voluntarily bringing back a wandering attention, over and over, again, is the very root of judgment, character, and will” (1890/1950, p. 424) .

Jaynes speculates that it this connection between sustained attention and a voluntary will that provided our species with some of our most remarkable leaps in cultural development by means of a special purpose attention-module based on linguistic cognition. It was this development of sustained attention that opened up the enormous functional gap between basic perceptual reactivity and the narratization of our own cognitive skill set. By essentially telling ourselves through a linguistically structured neural command to “keep at it” when engaged in a time consuming task (such as sharpening rocks), humans were able to develop cultural skills unparalleled throughout the rest of the animal world. Moreover, Jaynes hypothesizes that through the internalization of a tribal chieftain’s admonitory command, humans would have been able to follow social commands outside the limited range of vocalization, enabling time delayed missions. Jaynes hypothesizes that such internalization operated by means of a linguistically scaffolded hallucinatory control mechanism that offered new possibilities of *enduring* behavioral control through a “keep at it” neural command mechanism experienced as an external auditory verbal hallucination.³³ These humans would not have been conscious but nevertheless capable of

³³While hallucinatory control initially sounds outlandish on the functional level, there is actually growing empirical support for establishing the existence of vestigial features of such “bicamerality” within our own neuropsychology. Looking at modern neuroimaging data on schizophrenics and auditory hallucination, Olin (1999) says “Jaynes’ bold hypothesis on schizophrenia has been revived.” In a cautious, multidisciplinary overview of the theory, Cavanna et al. (2007) provide empirical support for Jaynes theory of bicameral brain structure. Jaynes’ theory of bicameral control is also shaped and corroborated by classic research on “split-brain” patients (Gazzaniga, 1970; Roser & Gazzaniga, 2004). Moreover, see Sher (2000) and Kuijsten (2009) for an overview of the empirical evidence for Jaynes’ neuroscientific hypotheses, particularly in respect to his implication of the right temporal cortex as the seat

remarkable cultural skills through aptic control schemas. And because such creatures were not capable of truly voluntary will, the novelty of behavior afforded by accelerations of spotlight attention still had to be mediated nonconsciously through bicamerality. Strictly speaking, bicamerality is defined as a neural internalization of admonitory social control through a nonconscious process of auditory verbal hallucination similar to schizophrenic command hallucinations.³⁴ For bicameral minds, *this* substitutes for conscious access, for reasoned *will*. Indeed, in a bicameral mentality, "...volition came as a voice that was in the nature of a neurological command, in which the command and the action were not separated, in which to hear was to obey" (Jaynes, 1976, p. 99).³⁵ With a simple example, Jaynes illustrates the profound cultural possibilities opened up by this new behavioral control schema:

Let us consider a man commanded by himself or his chief to set up a fish weir upstream from a campsite. If he is not conscious, and cannot therefore narratize the situation and so hold his analog "I" in a spatialized time with its consequences fully imagined, how does he do it? It is only language, I think, that can keep him at this time-consuming all-afternoon work. A Middle Pleistocene man would forget what he was doing. But lingual man would have language to remind him, either repeated by himself, which would require a type of volition which I do not think he was capable of, or, as seems more likely, by a repeated 'internal' verbal hallucination telling him what to do. (Jaynes, 1976, p. 134)

Here we see how the novel behavior characteristic of human culture can be accomplished within a bicameral neuropsychology. If special types of attention suddenly develop the power to direct behavior in new ways through a linguistic scaffold of hallucinatory control structured by complex personality matrixes capable of advanced synthetic processing, then I do not think it

of the god-function. That such a function is innate and potential in modern humans is also evidenced in the ubiquity of hallucinated playmates in children. Also, see Kuijsten (2006).

³⁴While it is often thought that auditory verbal hallucinations occur only in cases of mental illness, empirical research indicates that they are surprisingly common in nonpsychotics (Ohayon, 2000), especially children. See Mertin & Hartwig (2004).

³⁵One group of researchers (Lee, Chong, & Chan, 2004) found that 53% of schizophrenics experiencing auditory hallucinations hear command hallucinations and reported that rates of behavioral compliance have been found to be between 39% to 84%. On hearing voices, see Jaynes (1986c).

would be entirely implausible that powers of reason, technology, judgement, writing, problem solving, etc. could develop within an entirely nonconscious society.³⁶

Metaphor as Mark of the Mental

Before moving on, we need to further clarify our definitions.³⁷ For Block, J-consciousness is simply the “ability to think, plan, want, hope, deceive, and the like” (1981, p. 81). However, by carefully reading *The Origin of Consciousness in the Breakdown of the Bicameral Mind* (1976), we can see that Block has misinterpreted Jaynes’ definition of J-consciousness. Jaynes emphasizes that thinking can and does occur automatically and without conscious control, as anyone who has ever tried to close his eyes at night and stop the surge of thoughts can attest. And planning, in terms of synthetic problem solving and novel behavioral flexibility, occurs on a nonconscious level as demonstrated above. Additionally, wanting goes on nonconsciously as with wanting-to-eat or wanting-to-stay-alive, but it can also obtain consciously e.g. explicitly desiring something to happen in terms of articulate reasonings. The only things Block gets right about J-consciousness is that deception and hoping are usually conscious. Accordingly, it would be rash to dismiss social constructivism as “preposterous” before gaining a firm grasp on what exactly is claimed to be a construction.

As we said above, J-consciousness is grounded by narrative practice and structured in terms of lexical metaphors and analogical reason. Moreover, “The essence of metaphor is understanding and experiencing one kind of thing in terms of another” (Lakoff & Johnson, 1980, p. 5) and humans use metaphors in order to understand something less well-known in terms of

³⁶Those who doubt something as complicated as writing could be executed nonconsciously need only recall the nineteenth century experiments on automatic writing and occult possession.

³⁷For Jaynes, any attempt to “find” consciousness in the brain through neural correlation will inevitably fail unless you know what you are looking for in the first place. In other words, the study of consciousness must begin from the top rather than the bottom. Jaynes would thus disagree with Crick and Koch (1998) on the issue of defining consciousness before attempting to explain it.

something more well-known. This is the basic structure of analogical modeling. For example, we understand abstract states such as joy (less well-known) in terms of spatial orientation (very well-known). “Life is looking *up*.” “I’m feeling *down* in the dumps.” Jaynes introduces some necessary technical jargon in order to deal with the structure of analogical reason; the metaphier, the metaphrand, the paraphier, and the paraphrand. In the above example, joy is the metaphrand, spatial orientation is the metaphier, the paraphiers are everything associated with spatial orientation (prone means sleepy, erect means alert), and the paraphrands include the conceptual constructs of “*high spirits*”, “*depression*”, etc. To illustrate further (and this is crucial),

...suppose we express the fact that we have obtained the solution by exclaiming that at last we “see” what the answer is, namely, a triangle...The metaphrand is obtaining the solution, the metaphier is sight with the eyes, and the paraphiers are all those things associated with vision that then create paraphrands, such as the mind’s “eye”, “seeing the solution *clearly*”, etc., *and, most important, the paraphrand of “space” in which the “seeing” is going on, or what I am calling mindspace, and “objects” to “see”*. (Jaynes, 1976, p. 58, emphasis added).

Accordingly, J-consciousness

...is the work of lexical metaphor. It is spun out of the concrete metaphiers of expression and their paraphiers, projecting paraphrands that *exist only in the functional sense*. Moreover, it goes on generating itself, each new paraphrand capable of being a metaphrand on its own, resulting in new metaphiers, with their paraphiers, and so on. (ibid., emphasis added)

Upon careful reading then, J-consciousness is defined by Jaynes much more narrowly than Block insinuates. J-consciousness is not simply thinking, reasoning, hoping, and wanting, but rather, those things done in a very particular – analogically constructed and narratively structured – manner, with special functional paraphrands of “interior mind-space” being paradigmatically constitutive of conscious experience. J-consciousness

... is an operation rather than a thing, a repository, or a function. It operates by way of analogy, by way of constructing an analog space with an analog “I” that can observe that space, and move metaphorically in it. It operates on any reactivity, [consciously selects] relevant aspects, narratizes and [assimilates] them together in a metaphorical space where

such meanings can be manipulated like things in space. Conscious mind is a spatial analog of the world and mental acts are analogs of bodily acts.³⁸ (ibid., p. 65)

And again, since definitions are extremely important, J-consciousness

... is an analog of what is called the real world. It is built up with a vocabulary or lexical field whose terms are all metaphors or analogs of behavior in the physical world. Its reality is of the same order as mathematics. It allows us to shortcut behavioral processes and arrive at more adequate decisions. Like mathematics, it is an operator rather than a thing or repository. And it is intimately bound up with volition and decision. (ibid., p. 55)³⁹

What we prereflectively understood very well through bicamerality (the synthetic decision making and *enduring* tasks opened up by means of linguistically coded neural commands experienced as auditory verbal hallucinations) becomes an analog for truly voluntary (i.e. consciously narratized) thinking, planning, reasoning, etc. This enables a type of linguistic cognition wherein deliberate, epistemic action is possible (Clark, 2008). Behavior is transformed as we become capable of consciously manipulating experiential content as if it were a physical object in the environment. When the cognitive unconscious is no longer sufficient for handling the problem, the analog “I” is able to consciously narratize alternatives for action, leading to novel behaviors such as deception, thought-monitoring, private speech, theory of mind (helpful when encountering others in trading and cataclysmic dispersion), imagination, explicit planning, autobiographical memory, subvocal rehearsal, etc. For Jaynes, it was this functionality that provided a quasi-selection pressure for the emergence of J-consciousness out of the breakdown of the bicameral mind.

³⁸Thomas Metzinger’s notion of a phenomenal self-model (2003, 2009) seems to have many structural similarities to Jayne’s notion of the analog “I” and the conscious mind in general.

³⁹And because J-consciousness is a culturally learned event, “balanced over the suppressed vestiges of an earlier mentality, then we can see that consciousness, in part, can be culturally unlearned or arrested” (ibid., p. 393) e.g. hypnosis, shamanic trance states, religious/ritualistic possession and glossolalia, poetic inspiration, “flow”, schizophrenic boundary dissolutions (Sass, 1987), etc. Moreover, “It is only by rejecting the genetic hypothesis and treating consciousness as a learned cultural ability over the vestigial substrate of an earlier more authoritarian type of behavioral control that such alterations of mind can begin to seem orderly” (ibid., p. 380).

In review, J-consciousness is structured by several key features: an analog “I” which manipulates mental content (the analog of the body), an autobiographical analog “me” imaginable by the analog “I” (our self-concept), a narrative mechanism that filters the world in terms of folk psychological “stories”, a reconstructive component wherein what we are conscious of is always a selection or *excerpt*, concentration (the analog of sensory attention), and thought suppression. Moreover, it is by means of the internally viewable analog “me” that we might have been able to develop robust theories of mind for both ourselves and others.⁴⁰ This process is not haphazard. “The world is organized, highly organized, and the concrete metaphors that are generating consciousness thus generate consciousness in an organized way” (Jaynes, 1976, p. 59). It is this highly functional microcosm of mental interiority, “the pure paraphrase that we have of the world and its objects that is made to seem like a space when we introspect” (ibid., p. 420), that is at the heart of Jaynes’ distinction between conscious and nonconscious mentality. Thus, denying ancestral humans consciousness does not lead to absurd claims about early civilizations lacking conceptual content or synthetic thought. Rather, such a view stipulates only that such capacities were not spun out of special kinds of lexical metaphors.⁴¹

It is striking that Jaynes’ 1976 conception of J-consciousness is compatible with contemporary research on human cognition, particular in respect to working memory, executive control, mind-wandering,⁴² inner speech, and the “theater models” of conscious access. Baars, in describing his Global Workspace Theory, similarly uses a classic theater or “spotlight” metaphor for first-person interiority. According to research in this direction, “conscious information

⁴⁰For an overview of social cognitive processes, see Lieberman (2006). On the importance of language for the development of theory of mind, see Pyers & Senghas (2009).

⁴¹It is only on account of our species’ extreme tendency for anthropomorphic projection that we automatically assume an interiority of mind-space in our preconscious ancestors.

⁴²For competing explanations of the role of executive control in mind-wandering, see Christoff et al. (2009) and McVay & Kane (2010). Also see Baars (2010).

processing...is associated with a *distinct internal space* [mind-space], buffered from fast fluctuations in sensory inputs, where information can be shared across a broad variety of processes including evaluation, verbal report, planning and long-term memory” (Dehaene et al., 2006, emphasis and bracketed comment added). Baddeley’s theory of working memory (2000) is also compatible with J-consciousness, particularly the claim that the visual-spatial sketchpad, phonological loop, and episodic buffer depend on conscious access. Like contemporary functionalists, Jaynes insists that the executive must be understood as existing purely in a functional sense, structured by embodied experience and analogical reason.⁴³

Through analogical reason based on lexical metaphors, the operation of conscious introspection generates paraphrands of executive function in terms of interior spatiality and narratization by an analog “I”. We can, for example, consciously analyze and reconstruct a conversation in our heads, imagining different possibilities. Such introspection is done through an autobiographical filter structured by various folk psychological metaphors (See Lakoff & Johnson, 1980; 1999). While Jaynes’ treatise was published in 1976, it is not hard to imagine how these various features of J-consciousness could be fleshed out in terms of contemporary neuropsychological research on both enactive perception and theater-based models of consciousness.⁴⁴ I leave such work to future research.

⁴³In addition, executive control itself is a strikingly Jaynesian concept. Defined as “‘higher-level’ cognitive functions involved in the control and regulation of ‘lower-level’ cognitive processes and goal-directed, future-oriented behavior” (Alvarez & Emory, 2006, p. 17), executive control has been neurologically associated with voluntary inhibition and switching, sustained and selective attention, working memory, conscious planning, problem solving, and abstract thinking. Such functions are at the heart of J-consciousness.

⁴⁴It is worth noting that Daniel Hutto, on independent but complementary grounds argues that “children only come by the requisite framework for [understanding intentional actions in terms of reasons] and master its practical application by being exposed to and engaging in a distinctive kind of narrative practice” (2008, p. x). Moreover, like Jaynes, Hutto argues that folk psychological narrative practice is a “late-developing socioculturally acquired skill” rather than “some kind of ancient endowment” (ibid., p. xvi). In fact, reading Hutto in terms of Jaynes offers the best framework in which to make sense of his otherwise radical claims about self-hood being a social-linguistic construct.

Closing the Gap

Having distinguished between perceptual cognition and conscious thought, and shown that consciousness is not necessary for perceptual behavior, the internalist might still ask about the “explanatory gap” (Levine, 1983; Nagel, 1974) i.e. why the neural basis for particular instantiations of sensation feel the way they do and not, say, like some other experience or no experience at all. The immediate problem with this line of thought is that Levine’s idea of a “neural basis” assumes that a “physical story” of perception would involve, as he says, “talk about the various wave-lengths detectable by the retina, and the receptors and processors that discriminate among them” (Levine, 1983, p. 357) i.e. in terms of internalism. However, if we assume that a “physical story” of perception would also involve a description of our directedness towards ecological stimulus information contained in the environment specified by invariant properties of the external world according to objective, perceiver-relative laws, then the appearance of a “Hard” explanatory gap for perceptual “seemings” is diminished. That is, if we assume that the mental content of perception includes ecological stimulus information for-the-sake-of behavior in the public world, then the hypothetical detachability of an experience of the public world from its neural instantiation becomes less plausible precisely because neural activity is always directed towards the world (or itself) in terms of nonconscious reactivity. In other words, if the object of visual perception is not the retina, but rather, the always-already-there environs surrounding the organism, then the “what-it-is-like” to see a red apple is not, strictly speaking, what-it-is-like to experience retinal impulses (as in Levine’s “physical story”). Rather, the prereflective experience of engaging with a red apple is primarily characterized by a

means/end behavioral reactivity *towards* the real apple.⁴⁵ And if this is the case, it becomes specious to suppose that the subjective experience of a red apple could, hypothetically, be separated from the neural instantiation specified by or in resonance with the invariant physical properties of the apple itself.

Recall, what-it-is-like to experience the environment as a human animal is essentially wrapped up in nonconscious behavioral reactivity i.e. what has been called “online intelligence”. “A creature displays online intelligence just when it produces a suite of fluid and flexible real-time adaptive responses to incoming sensory stimuli” (Wheeler, 2007, p. 12). While there is no doubt that giving a physicalist explanation of online intelligence constitutes a steep challenge, such a task is not philosophically problematic in the way Levine and company argue. Furthermore, if our above distinction between cognition and consciousness holds, then conscious human operations are *offline* in the sense that they are removed from the immediate reactivity of online intelligence. Examples include: weighing options, explicitly planning for the future, narratizing through a spatialization of time, reconstructing memories and conversations, etc. Given its dependence upon online intelligence for a cognitive foundation, there again seems to be no *a priori* reason why offline intelligence (i.e. metacognition) is explanatorily problematic in the way internalists assume. Accordingly, I can see no theoretical reason as to why these two interwoven phenomena could not, in principle, be explained by a very complex “physical story” that includes an account of real-time behavioral responses to ecological information (online intelligence), and some instantiation of metacognition operating at a higher order than incoming

⁴⁵Accordingly, the mental content for pain includes the picking up of meaningful stimulus information regarding the external environment (“Does that thing hurt or not?”) and not just “the firing of c-fibers” as Levine assumes. The latter is a fact of *anatomy*, not *psychology*. And moreover, the perception of heat or cold in an object entails not just the “motion of molecules”, but meaningful information about that object in relation to our bodies given there is a directional flow of heat at the skin by radiation or conduction in relation to our own (stable) body temperature. Similarly, I agree with Nigel Thomas when he says that “colors (and all other experienced qualities) really exist out there in the world, just as do shape, size, and motion (or whatever properties are sanctioned by the latest physical theories)”(2001, p. 143).

sensory stimuli, structured through multilevel processes of analogical reason and some sort of representational workspace processing (offline intelligence).

Block (2009), argues that the problem with this higher-order approach is that it simply mixes unconscious cognitive elements together and claims “*That’s* consciousness!”, without explaining why such a combination is conscious (given the explanatory gap). Block’s objection is motivated by cases in which someone (say, an autistic child) is phenomenally conscious without having higher-order thoughts about their phenomenal experience. In such a case, the child is experientially conscious in the sense of having a what-it-is-like, yet lacking in the metacognition necessary to qualify for having “conscious thought”. However, armed with the Jaynesian distinction between cognition and consciousness, the conceptual problem is avoided in this example. We can, without difficulty, claim that the child has phenomenal experience (in Nagel’s sense) yet is still J-nonconscious i.e. without internalized mental states structured in terms of lexical metaphors. Accordingly, Jaynesian theory avoids the problematic claim that autistic children are without phenomenal states while still retaining a robust conception of full-blown conscious phenomena that goes beyond mere embodied sensorimotor experience.⁴⁶

Conclusion

Ned Block is wrong to think that “Jaynes’ claim that the ancients lacked consciousness” is an “obvious absurdity” (1981, p. 82). Upon review, we can see that Block has misunderstood the nature of J-consciousness, and thus, misunderstood Jaynes’ hypothesis that consciousness is a learned, cultural-linguistic construction grounded by lexical metaphors. Moreover, when Block

⁴⁶In light of the distinction between cognition and consciousness, I think Dennett (1995) goes too far when he collapses the distinction between P-consciousness and A-consciousness. While I agree with Dennett that there is nothing philosophically “special” about P-consciousness, to dismiss the distinction altogether is to miss sight of the original phenomenological explanandum: an analog “I” narratizing in an introspective mind-space in distinction to mere nonconscious reactivity.

says that “Jaynes’ suggestion makes sense only as an account of the invention of the *theory* that people are conscious, not as an account of the invention of consciousness itself” (ibid.,p. 83), he has confused reactive cognition for J-consciousness and not realized that Jaynes was claiming that J-consciousness, not P-consciousness, is a culturally learned construct made possible through linguistic cognition. Moreover, the phenomenal what-it-is-like to be a preconscious bicameral mind is, roughly speaking, what-it-is-like to experience admonitory verbal hallucinations while suffering from a dissolution of conscious mind-space. Jaynes claimed that in times of stress, the bicameral man’s left hemisphere was under direct control by the language of the god-complex through a mechanism of synthetic decision-making in the right hemisphere. Clearly, Block has misunderstood Jaynes’ claims about both bicamerality and J-consciousness. Preconscious cultural zombies would be experiencing things but nevertheless stuck on autopilot, lacking consciousness proper without the possibility of narratization within an introspectable mind-space. Accordingly, a close inspection of Jaynes’ definition of J-consciousness alleviates the worry that his definition of consciousness must precede any possible conceptual structure upon which consciousness could possibly be constructed.

We also need to rethink the concept of a nonconscious zombie. It has long been assumed by many (but not all) philosophers that a nonconscious zombie could replicate our physical behavior while lacking a what-it-is-like. It has been the purpose of this paper to establish that there is indeed a what-it-is-like to be a nonconscious zombie and that, moreover, all animals from protozoa to higher mammals experience it: organic behavioral reactivity, “flow”, habitual automaticity, enactive transaction, etc. Accordingly, there is something-it-is-like to nonconsciously react to the world, namely, what-it-is-like to act on autopilot through the dynamic, real-time operations of the cognitive subconscious. This is an experience intimately

familiar to all habit oriented animals. It is suffused with an incredibly rich manifold of experiential content or “qualia”. *But this is not consciousness proper*. Consequently, the nonconscious what-it-is-like to perceive the environment (e.g. perceiving a red apple) is not explanatorily “Hard” in the sense David Chalmers famously argued for (1995, 1996). Under Jaynesian behaviorism, there is no mystery as to why experience goes along with behavior if we understand experience to include organic behavioral reactivity. Phenomenality is simply a different explanandum than J-consciousness.⁴⁷ To explain the origin of consciousness is to explain how the analog “I” began to narratize in a functional mind-space. For Jaynes, to understand the conscious mind requires that we see it as something fleeting rather than something always present. The constant phenomenality of what-it-is-like to be an organism is *not* equivalent to consciousness and, subsequently, consciousness must be thought in terms of the authentic *possibility* of consciousness rather than its continual presence. I hope that if this paper has established anything, it is the following lesson: consciousness is not necessary for cognition.

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⁴⁷As Jaynes often said, if you want to know what the contents of consciousness are, pick ten people randomly and ask them what they were just thinking about. The answers they give are referring to the denotative contents of consciousness.

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