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Consciousness and Dreams

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In *The Origin of Consciousness in the Breakdown of the Bicameral Mind*, Julian Jaynes discusses a variety of forms of evidence for the transition from a bicameral mentality to consciousness. The study of dreams provides another window through which to examine this transition. By extension, historical changes in the nature of dreams support the idea that consciousness is in a learned process based on language and not biologically innate.

Conscious vs. Bicameral Dreams

There is a common assumption that the nature of dreams has been consistent throughout recorded history, yet this is not the case. If we analyze the first recorded accounts of dreams and compare these accounts with modern dreams, we see a stark contrast.

Hector appears to Aeneas in a dream telling him to leave Troy (*Vatican Vergil*, circa 400 c.e., in Wright [1993]).

In modern conscious dreams, we see ourselves acting out events in other places and from various perspectives. According to Jaynes, conscious dreams are both vicarial and translocative. Vicarial means that in your dream you are doing something other than lying in your bed sleeping — you have an analog 'I' that can move around and do things. For example, if you imagine yourself playing tennis, that is vicarial, as you are not really playing tennis. Translocative means that in your dream you are in another location. If in your dream you are anywhere other than in your bed, that is translocative. Contemporary dreams are both vicarial and translocative, and, according to Jaynes, that requires consciousness. Thus dreaming is the operation of consciousness during sleep.

By contrast, the earliest recorded dreams are not vicarial or translocative. They are bicameral dreams that typically consist of the dreamer having the feeling of being asleep in bed and then being visited by a god or spirit who issues a warning or command.

Descriptions of dreams in the ancient world can be found in E.R. Dodds's *The Greeks and the Irrational* (1951). Dodds notes that:

> Most of the dreams recorded in Assyrian, Hittite, and ancient Egyptian literature are 'divine dreams' in which a god appears and delivers a plain message to the sleeper, sometimes predicting the future, sometimes demanding cult.

Oxford University classicist Charles Stewart (2005) notes that dreams in the *Iliad* were "generally conceived as a personified force that travelled from the realm of the

gods to the beds of humans." Historian William Harris (2009) describes how many dreams in antiquity were "described as what we can call *epiphanies*: an authority figure visited the sleeper and made a significant pronouncement, and that was the [entire] dream." In contrast to epiphanies, he describes modern dreams as "episodes."

An example of a bicameral dream is Agamemnon's dream in the beginning of Book II of the *Iliad*. In this dream Agamemnon is visited by Onieros, who appears in his dream as Nestor (one of the generals of the army) and tells him to start the Trojan War.

This is not an isolated example — the ancient literature "is full of these 'godsent' dreams in which a single dream-figure presents itself, as in Homer, to the sleeper, and gives him prophecy, advice, or warning" (Dodds, 1951).

Classicist William Messer (1918), describing Agamemnon's dream, comments:

> …Note the entire externality, the complete objectivity, of the dream. The dream is an entity. There is no statement that Agamemnon *dreamed* that Nestor appeared, or that he beheld him in *sleep*. … In all its acts, then, the dream is objective and personal. It is … portrayed as an external entity, with power of moving, thinking, and speaking, like to any herald sent by the gods, a genuine dream daimon.

Another example, reminiscent of Homer, can be found in Vergil's *Aeneid*, where Hector, dead and covered in wounds inflicted by Achilles, appears to Aeneas in a dream and urges him to take the "household gods" or idols (*penates* in Latin) and flee Troy (Kyriakou, 1999). Later, the *penates* appear to Aeneas in a dream and call on him to leave Crete and go to Italy. Those familiar with Jaynes's theory will note the similarity of these dreams to the waking auditory hallucinations — often elicited by idols — commonly experienced at this time. These scenes were later illustrated in the *Vatican Vergil*, one of the oldest illustrated manuscript books known, created in Rome and dating to around the fifth century (Wright, 1993).

The household gods or *penates* appear to Aeneas in a dream and call for him to leave Crete for Italy (*Vatican Vergil*, circa 400 c.e., in Wright [1993]).

During the early conscious period in Greece (from roughly 1200–200 BCE), dreams slowly begin to be attributed to internal states rather than direct commands from the gods; however they continue to be seen as a source of prophecy. And while Aristotle (384–322 BCE) was skeptical of this and articulated a modern view of dreams in his *On Prophecy in Sleep*, "the general population continued to hold that dreams could be interpreted to forecast the future" (Stewart, 2005).

During this period of slow transition from bicamerality to consciousness — which also saw the emergence of omens, oracles, prayer, and divination — the Greek diviner Artemidorus "differentiated so-called 'state dreams' (*enypnia*) — produced by current worries, feelings, or wishes — from prophetic dreams (*oneiroi*) that could literally or allegorically tell the future" (Stewart 2005).

Dreams in Preliterate Societies

In *Primitive Mentality* (1923), Lucien Lévy-Bruhl describes the same type of bicameral dream in pre-literate cultures worldwide. Like the dream reports from ancient civilizations, the dreams of pre-modern peoples are non-vicarial, non-translocative, and are either of a prophetic nature or involve the conveyance of direct orders. For example:

> The Azande of the Upper Congo believe that during the night the dead make their wishes known to the living. Dreams are quite authentic to them, and they are convinced that when they see a dead rela-

> tive in a dream they really have a conversation with his ghost, and in its course he gives advice, expresses satisfaction or displeasure, and states his aspirations and desires.
>
> 'The Iroquois … have, strictly speaking, but one divinity, which is the dream; they submit to it and follow all its orders most implicitly.' ... It is not simply a question of advice, hints, friendly suggestions, official warnings conveyed by dreams; it is nearly always definite orders, and nothing can prevent the Indian from obeying them.

Dreams in Children

The study of dreams in ancient civilizations and pre-literate societies demonstrate that dreams can be used as an indication of the level of consciousness in a given culture. Similarly, children's dreams provide evidence that dreams can be used as an indication of the level of consciousness in a developing child. In *Children's Dreaming and the Development of Consciousness* (2002), child psychologist and dream expert David Foulkes challenges the popular misconception that dreaming is "a given" in human experience. In a section on the development of consciousness in children that sounds surprisingly reminiscent of Jaynes, Foulkes writes: "I hypothesize that dreaming is simply the operation of consciousness in sleep … that consciousness develops, and that it does so more slowly and later than is generally believed" (Foulkes, 2002).

"I hypothesize that dreaming is simply the operation of consciousness in sleep … that consciousness develops, and that it does so more slowly and later than is generally believed."

According to Foulkes, the nature and content of children's dreams changes dramatically over time. For example, during the preschool years, "dreams are brief and infrequent; they focus on body states; their imagery is static." Dreams slowly transform to those experienced in adulthood between the ages of 5 and 9:

> First, dream reports become longer, but not more frequent, and now describe social interaction and the kind of movement that suggests kinematic rather than static imaging; still lacking, however, is active participation in dream events by the dreamer herself or himself. Next, dream reports become more frequent as well as longer and narratively more complex, and active self-participation becomes a general possibility, along with, for the first time, the reliable attribution to the self of feelings and thoughts occurring in the dream in response to dream events (Foulkes, 2002).

The dreamer does not regularly appear as an active participant in his or her dreams — according to Jaynes, one of the hallmarks of conscious dreams — until between the ages of 7 and 9. Conscious dreams, therefore, seem to be infrequent until some time after the child has developed consciousness in waking life.

The content of dreams provide another method to gauge the level of consciousness in a given culture or individual. If language had no effect on consciousness — or if consciousness developed far back in our evolutionary past and has remained unchanged since — we would expect dreams to remain unchanged both throughout recorded history and throughout an individual's development. Instead, dreams reflect developmental stages in mentality from preconscious to conscious, brought about by changes both culturally as well as in the linguistic sophistication of the dreamer.

Dreams in bicameral cultures lack consciousness — an analog 'I' narratizing in a mind-space, and mimic the waking experience of receiving behavioral commands from gods. In contrast, the dreams of conscious individuals reflect conscious narratization during sleep.

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BOOK REVIEW

Language Lateralization and Psychosis

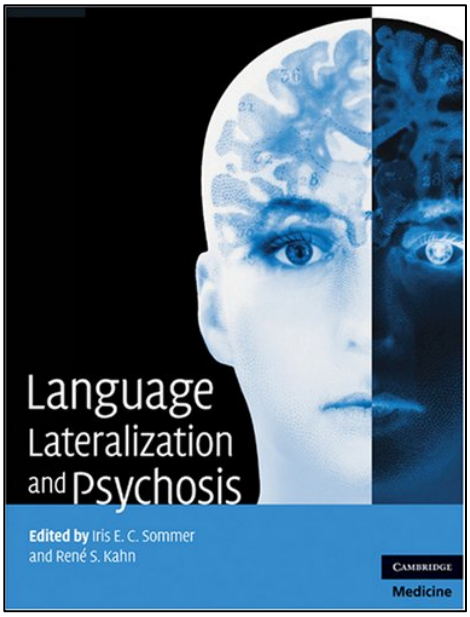
Iris E.C . Sommer and René S. Kahn (Editors)
Cambridge University Press, 2009
216 pgs., 978-052188284-2

Beginning in 1999 with an article in *Lancet* by Dr. Belinda Lennox and her colleagues, a growing number of studies have provided strong evidence for Julian Jaynes's neurological model of the bicameral mind (i.e. auditory hallucinations generated by the right temporal lobe language areas and experienced or "heard" in the left temporal lobe language areas). Using fMRI, these studies consistently show activation of the right temporal lobe during auditory hallucinations, followed by or coinciding with activation of the left temporal lobe. Several of these studies were published by the co-editor of this volume, Dr. Iris E.C. Sommer of the University Medical Center Utrecht in the Netherlands. The new research presented in *Language Lateralization and Psychosis* provides additional support for Jaynes's neurological model.

The first half of this book focuses on asymmetry, handedness, and language lateralization, while the second half focuses on the issue of language lateralization and psychosis. In the chapter "Auditory Verbal Hallucinations and Language Lateralization" (which begins with a quote from Jaynes), Dr. Sommer and co-author Kelly Diederen report the results of a new study which looks at brain activation in patients while experiencing auditory hallucinations as opposed to when they generated words silently. Patients indicated an auditory hallucination by squeezing a balloon with their right hand. They report that:

> Group analysis for AVH [auditory verbal hallucinations] revealed activation in the right homolog of Broca's area, bilateral insula, bilateral supramarginal gyri, right superior temporal gyrus, and in motor related areas (associated with squeezing the balloon).

This once again confirms what Jaynes predicted more than 30 years ago. The authors suggest that auditory hallucinations result from the failure of the dominant (usually



left) hemisphere to completely suppress the languages areas of the non-dominant (usually right) hemisphere — a conclusion that is also very much in line with Jaynes's thinking (see *The Origin,* pages 427–430).

Other chapters of interest include "Functional Imaging Studies on Language Lateralization in Schizophrenia Patients" by Annick Razafimandimby, Olivier Maïza, and Sonia Dollfus, which describes decreased language lateralization as a possible "trait marker for psychosis;" "The Role of the Right Hemisphere for Language in Schizophrenia" by Alexander Rapp, which reviews the differences in the lateralization of non-literal language in normals vs. schizophrenia patients; and "The Genetic Basis of Lateralization" by Marian Annett.

This is an important book both for psychiatrists and neuroscientists interested in the neurology of auditory hallucinations as well as those specifically interested in the latest research confirming this aspect of Jaynes's theory. It is hoped that a more widespread understanding of the validity of Jaynes's neurological model will lead to more effective treatments for persistent auditory hallucinations by specifically targeting these areas of the right temporal lobe.

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ARTICLE ANNOUNCEMENTS

Abstracts of recent scholarly articles relevant to Julian Jaynes's theory.

The Consciousness of John's Gospel: A Prolegomenon to a Jaynesian-Jamesonian Approach

Jonathan Bernier
The Bible and Critical Theory, Vol. 6, No. 10, 2010

This article is concerned with what I call the consciousness of John's Gospel. This term needs to be clarified: I am concerned not with the psychological biography of the evangelist, nor am I interested in performing psychoanalysis upon this saint, now long dead. The possibilities of and for such historical psycho-biography and/or psycho-analysis remain open but, thankfully, need not be addressed herein. This article is concerned rather with what I call the 'cognitive form(s)' immanent within John's gospel, including consciousness, construed primarily through exegetical engagement with the prologue (1:1-18) and the Johannine Jesus' interactions with the Samaritan woman (ch. 4). The theories advanced by the late psychologist Julian Jaynes will largely inform the understandings of cognition and consciousness presupposed in this article, with Jaynes' theories brought into dialogue with Fredric Jameson's historical materialist hermeneutics. Hence, this is something of an experiment (what genuine exegesis is not?), an exploration of certain homologies between Jaynes' thought and Jameson's, wherein Jaynes provides a grammar for commentary upon Jameson and Jameson a grammar for commentary upon Jaynes. This commentarial dialectic in turn constitutes a grammar for commentary upon John's Gospel in a (hopefully) innovative and enlightening fashion. It is thus a prolegomenon (and claims to be no more than that) to possible future directions in the study not only of John's Gospel but also early Christianity and the history-of-religions more generally.

The Brain's Voices: Comparing Nonclinical Auditory Hallucinations and Imagery

David E.J. Linden, Katy Thornton, Carissa N. Kuswanto, Stephen J. Johnston, Vincent van de Ven, Michael C. Jackson
Cerebral Cortex, 2010

Although auditory verbal hallucinations are often thought to denote mental illness, the majority of voice hearers do not satisfy the criteria for a psychiatric disorder. Here, we report the first functional imaging study of such nonclinical hallucinations in 7 healthy voice hearers comparing them with auditory imagery. The human voice area in the superior temporal sulcus was activated during both hallucinations and imagery. Other brain areas supporting both hallucinations and imagery included fronto temporal language areas in the left hemisphere and their contralateral homologues and the supplementary motor area (SMA). Hallucinations are critically distinguished from imagery by lack of voluntary control. We expected this difference to be reflected in the relative timing of prefrontal and sensory areas. Activity of the SMA indeed preceded that of auditory areas during imagery, whereas during hallucinations, the 2 processes occurred instantaneously. Voluntary control was thus represented in the relative timing of prefrontal and sensory activation, whereas the sense of reality of the sensory experience may be a product of the voice area activation. Our results reveal mechanisms of the generation of sensory experience in the absence of external stimulation and suggest new approaches to the investigation of the neurobiology of psychopathology.

The Emergence of the Modern Concept of Introspection: A Quantitative Linguistic Analysis

I. Raskovsky, D.F. Slezak, C.G. Diuk & G.A. Cecchi,
Young Investigators Workshop on Computational Approaches to Languages of the Americas: Proceedings of the Workshop,
June 6, 2010, pgs. 68-75

The evolution of literary styles in the western tradition has been the subject of extended research that arguably has spanned centuries. In particular, previous work has conjectured the existence of a gradual yet persistent increase of the degree of self-awareness or introspection, i.e. that capacity to expound on one's own thought processes and behaviors, reflected in the chronology of the classical literary texts. This type of question has been traditionally addressed by qualitative studies in philology and literary theory. In this paper, we describe preliminary results based on the application of computational linguistics techniques to quantitatively analyze this hypothesis. We evaluate the appearance of introspection in texts by searching words related to it, and focus on simple studies on the Bible. These preliminary results are highly positive, indicating that it is indeed possible to statistically discriminate between texts based on a semantic core centered around introspection, chronologically and culturally belonging to different phases. In our opinion, the rigorous extension of our analysis can provide not only a stricter statistical measure of the evolution of introspection, but also means to investigate subtle differences in aesthetic styles and cognitive structures across cultures, authors, and literary forms.

Making Sense of Voices: An Exploration of Meaningfulness in Auditory Hallucinations in Schizophrenia

Rochelle Suri
Journal of Humanistic Psychology, July 2010

This article is a qualitative exploration of how auditory hallucinations have been experienced as meaningful to individuals diagnosed with schizophrenia. This theoretical perspective is supported by the survey of the literature, which suggests that for many centuries, individuals experiencing auditory hallucinations have been given much more credence than their counterparts in modern society. Most recent studies on auditory hallucinations indicate that auditory hallucinations themselves are not debilitating. Romme proposes instead that the fear of not being able to control or manage the auditory hallucinations can be disabling to the individual. Using a case example from the author's own work, as well as drawing from other researchers and theorists, the article provides concrete illustrations of how individuals have derived insight from their auditory hallucinations. It is expected that the article may help clinicians better understand auditory hallucinations in schizophrenia, particularly with regard to clinical treatment, as well as shed light on the phenomena of auditory hallucinations.

What Is It Like To Be Nonconscious? A Defense of Julian Jaynes

Gary Williams
Phenomenology and the Cognitive Sciences, October 2010

I respond to Ned Block's claim that it is "ridiculous" to suppose that consciousness is a cultural construction based on language and learned 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 learned 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.

ESSAY

Why Did the Unconscious Appear in History When It Did? A Jaynesian Explanation[1]

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The unconscious has arguably manifested its ghostly presence in the corners of the edifice of Western thought since the time of the classical Greeks. Nevertheless, it has not received sustained attention throughout the centuries. We must ask why, then, the idea of "unconscious mental processes was … conceivable around 1700, topical around 1800," and widespread by around 1900 (Whyte, 1978).

In order to explain why the unconscious emerged as a topical issue in the nineteenth century, I employ the theories of Julian Jaynes (1976/1990). Specifically, I propose three interlinked points. First, the real mystery is not the unconscious, but rather consciousness itself, since it often appears unnecessary for human activity. Therefore, in order to understand unconscious processes, we must first appreciate the nature of conscious interiorization. After all, if people throughout history did not explicitly theorize about what is introspectable (consciousness), then there was little need to consider what was not introspectable (unconsciousness). This brings us to the second point: how can conscious interiorization be described? This can be done by breaking it down into its constituent features; I will list these in a moment. The final point: what exactly is the purpose of conscious interiorization? Answer: it is a cultural adaptation that has increased in intensity in response to sociopolitical pressures over the centuries. Conscious interiority has increased, especially during the 1800s, to accommodate growing social complexity due to industrialism, e.g., larger demographic units, more social roles, steeper hierarchies, and techno-scientific advances. By understanding the historical emergence of the unconscious, then, we are able to delineate the nature of consciousness.

Upgraded Cognition: Features of Conscious Interiority

(1) *Spatialization of Psyche*. This is the most elementary feature of conscious interiority. Linguistic expressions metaphorically hollow out the body and lay the groundwork for psychological interiority (internal organs, e.g., "heart"). Such interiorization generates an "introcosm" in opposition to both the immediate person (microcosm) and the external physical world (macrocosm).

(2) *Introception*. The ability to experience the introcosm as an inner place modeled after the perceptual, physical world. From this introscape is generated an "I," analogous to one's physical person, that can introspect upon inner quasi-sensory experiences.

(3) *Excerption*. The inner "I" excerpts from the "collection of possible attentions to a thing which comprises our knowledge of it … Actually we are never conscious of things in their true nature, only of the excerpts we make of them." This feature is "distinct from memory. An excerpt of a thing is in consciousness the representative of the thing or event to which memories adhere, and by which we can retrieve memories." Reminiscence is a "succession of excerptions." Interiority is the "instance of selection that picks and chooses among the many options" that the psyche provides for us (Jaynes 1976/1990).

(4) *Self-narratization*. Excerptions and mental sceneries, once unmoored from the limitations of physical reality, provide the "I" not just with a panorama of past and present events, but with imaginary "could be's." Now introspectable due to spatialization, such hypotheticals form a linear temporality leading to future possibilities upon which one's "I" moves as protagonist.

(5) *Self-autonomy*. Individual narratization leads to a sense of control over one's self and destiny. Intentionality and responsibility are attributed to the "I" ("inner person") rather than divine powers, social groupings, or natural forces.

[1] Based on a talk delivered at the 2010 Toward a Science of Consciousness Conference in Tucson, AZ, April 8–12, 2010.

(6) *Self-authorization*. One's own person ("I"), rather than external gods or ancestors, has immediate control over one's behavior ("me").

(7) *Conciliation*. A "slightly ambiguous perceived object is made to conform to some previously learned schema." Consilience (or assimilation) is "doing in mind-space what narratization does in our mind-time or spatialized time. It brings things together as conscious objects just as narratization brings episodes together as a story" (Jaynes 1976/1990).

(8) *Individuation*. In the same way that one's "I" is differentiated and comes to appear unique when set against the backdrop of interiorized excerptions, the individual's personal traits are highlighted and privileged within larger collectivities.

(9) *Self-reflexivity*. This is the most difficult feature to describe. It occurs because the ability to excerpt, to "see" one's self ("I") in an interiorized place minus physical limitations, and to narratize not-yet versions of our future selves, all generate an "I" that introspects upon a "me." Such self-introspection causes a recursively regressive mirroring effect (self observing self). This leads to a keenly-felt existentialist perspective of a highly individuated selfness that exists in opposition to others and the world.

Historical Perspective on Invisible Cognition

Mental activity below the radar screen of experience has variously been called unconscious, subconscious, and preconscious, but I use "nonconscious" to avoid any unfortunate and unnecessary Freudian associations.

Theoretical work on nonconscious cognition began in the nineteenth century when two counterintuitive and inconvenient facts became clear. First, interiority does not reflect experiences we have of the external world; or "Your consciousness is not identical to what your senses perceive." Second, the "I" of our subjective interiorized experience is not the initiator of our actions (our nonconscious psyche is); or the self of our interiority "portrays itself as the initiator, but it is not, as events have already started by the time consciousness occurs" (Nørretranders 1998).

The failure to appreciate the difference between conscious interiority (a small product of cognition) and nonconsciousness (most of cognition) has generated much confusion. Unfortunately early researchers "equated cognition with conscious cognition." They "have been cleaning up after this misconception ever since." Some intellectual historical perspective is needed to illustrate how researchers, incapable of "seeing" mental activity while introspecting, were forced to look "behind" and "below" interiority for invisible mental processes.

"The failure to appreciate the difference between conscious interiority (a small product of cognition) and nonconsciousness (most of cognition) has generated much confusion."

If the nonconscious became one of the great leitmotifs of the nineteenth century, the question is why it has not received more sustained attention throughout the centuries. The answer is that if people did not theorize about interiority (what is introspectable), then there was little need to consider what was not introspectable (despite its influence on behavior).

A tradition of inquiry into what we might call nonconscious mental processes can arguably be traced back to St. Augustine, who wrote of "a vast and boundless subterranean shrine. Who has ever reached the bottom of it? … Imagine the plains, caverns, and abysses of my memory; they are innumerable and are innumerably full of innumerable kinds of things." Well over a millennium later the philosopher Leibnitz (1646–1716) wrote about *"petities perceptions,"* or countless imperceptible experiences that though obscure and unconsciously registered, taken together constitute mind. In English "unconscious" first appeared in 1712, meaning "unaware, lacking conscious thought"; in 1860 the meaning of "temporarily insensible, knocked out," was added (the noun "unconscious" appeared in 1884). "Subconscious," meaning "not wholly conscious," was first used in 1823. Its more familiar sense as a noun appeared in 1886 (though "subcons-

ciousness" was used from 1874). "Preconscious" was used from 1860.

In the nineteenth century much of the earlier research on nonconscious cognition was rooted in physiological studies and questions about sensations. Other insights came from methodological problems associated with "introspectionism" and psychological self-examination. The philosopher J.F. Herbart (1876–1841) and the philosopher and physicist G.T. Fechner (1801–87) wrote about the "limen of consciousness" and the physiologist and physicist Hermann von Helmholtz (1821–94) noted what he called "unconscious inferences." In his *Mental Physiology* (1874) W.B. Carpenter (1813–1885) spoke of "unconscious cerebration." In 1911 the Danish philosopher and psychologist Harald Høffding wrote that an "activity which would otherwise take place with consciousness can, when consciousness is absorbed in something else simultaneously, occur below the threshold of consciousness."

The prolific philosopher Karl Von Hartmann (1842–1906) wrote the *Philosophy of the Unconscious* (1884). This pre-Freudian work had an "influence throughout Europe that has sometimes been underestimated." But it was through Freud, who is mistakenly credited with "discovering the subconscious," that the Western world has come to know the unconscious as something framed within the psychoanalytic paradigm. Somewhat later C.S. Peirce and J. Jastrow used the notion of "abduction," which "draws on unconscious powers" in negotiating through everyday life (1884). This notion resonates with the recognition that most of what takes place mentally is not conscious. Note should also be made of William L. Bryan and Noble Harter's work on the automatization of telegraphic skills (1897, 1899); William James thoughts on "habit" (1890); Leon Solomons and Gertrude Stein on automatic writing (1886), and the "subconsciousness and attentive consciousness" of G.F. Stout (1929). The entire theoretical thrust of the Würzburg School — established by the philosopher and psychologist Oswald Külpe (1862–1917) — that centered on "imageless thought," may be interpreted as the recognition that much thinking is not introspectable. A member of the Würzburg School, the philosopher August Messer (1867–1937), believed consciousness was only the visible tip of the iceberg. Also relevant is the work of the neurologists J.M. Charcot (1825–1893) and Morton H. Prince (1854–1929), as well as the sadly overlooked and underestimated psychologist Pierre Janet (1859–1947). They all explored the nonconscious aspects of hysteria, dissociative disorders, and other pathologies.

Closer to our own times is Otakar Machotka's *The Unconscious in Social Relations* (1964); the distinction that F.S. Perls, R.F. Hefferline and P. Goodman make between "figure and ground" (1951); E.T. Gendlin's discussion of "fringe and focusing" (1962); the distinction R.M. Shiffrin and W. Schneider make between "automatic" and "controlled information processing" (1977); E.E. Smith's notions of "prestorage" and "computation" (1978); Wilfrid Sellars' discussion of "Humean and Aristotelian" inferences (1981); and Ulric Neisser's ideas on "nonpictorial imagery" (1972).

Beginning in the late 1950s the "cognitive revolution," which acknowledged invisible processes, eventually rectified this bizarre view of the human condition (though psychology has paid a heavy methodological price). Though the situation has been greatly rectified among some researchers, the average person still believes in the folk psychology of "my-mind's-eye-can-see-my-own-mental-activity" and "conscious-is-a-copy-of-perceptual-experience."

From Duality to a Tripartite

After an explicit recognition of interiority in the seventeenth century, it would take several centuries of mystified thinking until we realized that the introspectable space we call conscious interiority was not the mind in its entirety, but only a small chamber of a much larger edifice. Invisibility and a spatiality of depth characterize this grand structure, with its unknown palatial halls, concealed quarters, and hidden rooms connected by secret passages that lead to even deeper unexplored caverns. And yet strangely, despite all the evidence for nonconscious cognition, "researchers have been made to jump through methodological hoops to establish nonconsciousness beyond any reasonable doubt. It might be a step forward for social psychology to adopt the same level of

healthy skepticism for models that include a role for conscious mediation" (Bargh, 1997). The stubbornness of research psychology illustrates the sway of folk psychology over those who should know better.

In order to make the centrality of nonconscious mental processes more clear, I suggest that we discard Cartesian mind–body dualism, and replace it with a more fruitful tripartite of: (1) conscious mind; (2) nonconscious mind; and (3) body. Concomitant with this, we should discard the dualistic spatial metaphor of inner and outer, and employ the visual trope of: (1) introspectable mental processes (interiority witnessed by the "mind's eye"); (2) invisible mental processes (nonconscious cognition); and (3) the visible world (body and environment). Recent work in cognitive science demonstrates that most thinking is done nonconsciously, or invisible to the mind's eye of interiority. By recognizing a third element (invisible mental processes), an entire world of encyclopedic knowledge and complicated processes is acknowledged that accounts for the tremendous amount of labor going on within our minds. These invisible mental processes also account for the apparent automaticity, spontaneity, and unthinkingness of much of our actions.

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Recent Quotes

"... I sympathize with Julian Jaynes's claim that something of great import may have happened to the human mind during the relatively brief interval of time between the events narrated in the *Iliad* and those that make up the *Odyssey*."

— Antonio Damasio, Ph.D., Professor of Neuroscience, Psychology and Neurology, University of Southern California, in *Self Comes to Mind: Constructing the Conscious Brain*

"... Scientific interest in [Jaynes's] work has been re-awakened by the consistent findings of right-sided activation patterns in the brain, as retrieved with the aid of neuroimaging studies in individuals with verbal auditory hallucinations."

— Jan Dirk Blom, M.D, Ph.D., in *A Dictionary of Hallucinations*

ESSAY

Voices from the Other Side: Neuroscience, Attachment Theory, and the Creative Self[1]

Carole Brooks Platt

In the late nineteenth and early twentieth centuries there was great interest in dissociative illness as well as in spiritualism. Many important psychologists frequented mediums to gain insights into the newly "discovered" unconscious and the possibility of the survival of death. Pierre Janet discovered a separate stream of unconsciousness in his patients either through hypnosis or mediumship. Carl Jung participated in and encouraged his own cousin's séances, analyzing her case for his doctoral dissertation.

Jung, following Janet, said that dissociative personality fragments were built up through suggestion and constant questioning, an act of creation between therapist and patient. Psychologist Théodore Flournoy spent seven years attending the séances of Hélène Smith, who spun reincarnation tales saying he had been her son in a former life and her husband in another. Both Jung and Flournoy recognized the role of childhood trauma in the women's dissociation, but neither mentioned the role of the right hemisphere.

Yet, clinical observation, taking the whole body into account, is telling. In a trance state, Hélène acted out her past lives and said she heard her spirit guide, "Leopold," speaking into her *left* ear. "Leopold" also tapped out separate messages to Flournoy on the table using Hélène's *left* hand. When speaking "through" Hélène, he used a deep, male, Italian-accented voice. He also recited poetry, made commands, and wrote in different handwriting, all suggesting right-hemispheric involvement. The doctors attributed unknowable facts uncovered in trance to forgotten memories. But Jung would later theorize the existence of the collective unconscious and telepathy as possible sources. Flournoy remained firm in the hidden memory hypothesis, despite some uncanny revelations that might otherwise be attributable to an unconscious transfer of information between therapist and patient.

As everyone reading this newsletter must know, Julian Jaynes's seminal work said that alien voices, interpreted as divine, came from the right hemisphere. Poetry was originally the language of the gods, produced in times of stress, giving commands to act. By the fourth century BCE, both oracles and poets had to enter trance states for revelations to occur. In modern times, poetry was produced consciously, with a handful of poets still able to access it dissociatively. The neuroscientist V.S. Ramachandran later broke down language function into left-hemispheric speech production, syntax and semantics versus right-hemispheric metaphor, allegory and ambiguity so crucial for poetry, myth, and drama. Neuroscientist Michael Persinger showed in his "Muse Factor" experiment that college students interested in creative writing and poetry were more inclined to have experienced a sense of presence, attributed to intense verbal meaningfulness triggering synchronous firing in the left and right temporal lobes.

But, since poetry is right-hemispheric language, as Julie Kane, both poet and professor, argued so persuasively in an article in the *Journal of Consciousness Studies* (2004), the students would have already tended towards enhanced right-hemispheric functioning. British psychiatrist Iain McGilchrist (2009) says that our most basic, and important, sense of self is in the right hemisphere, yet the left hemisphere dominates, converting the right's broader perceptions into logic, language, and linearity. If the right hemisphere is damaged, the sense of self is compromised. McGilchrist sees dissociation as a left-hemisphere disorder

[1] Based on a talk presented at the 2010 Towards a Science of Consciousness Conference in Tucson, which was based on my two articles in the *Journal of Consciousness Studies*: "Poetry, Presence, and the Collaborative Right Hemisphere" (Vol. 14, 3, 2007), and "The Medium and the Matrix: Unconscious Information and the Therapeutic Dyad" (Vol. 16, 9, 2009). This version contains additional research on atypical laterialization.

because of its fragmented sense of self vs. the right's whole sense of self. More likely, as we saw with Hélène Smith, the left hemisphere confabulates the dissociative story, but the different accents, gestures, left-handedness and shifting handwriting shows the right-hemispheric provenance of the separate personalities. Recent studies theorize that separate neural networks can differ to the point that one personality may be blind while another sees (Berlin & Koch 2009). A visible example can be seen in American poet and medium Jane Roberts who normally needed glasses, but tore them off and gesticulated wildly with her left hand in the guise of her more knowledgeable male alter. (See videos on my website: www.carolebrooksplatt.com.)

Diagnosing great poets posthumously, Kay Redfield Jamison attributed their exceptional poetic creativity to genetically acquired bipolar disorder in *Touched with Fire*. Her only reference to the right hemisphere is a review of twenty-five neuropsychological studies showing a pattern of right-hemispheric (or non-dominant) impairment for visuo-spatial and nonverbal tasks in bipolars and their at-risk children. Julie Kane cites a study of living poets at the Iowa Writers' Workshop showing a high incidence of bipolar disorder. But she also provides considerable scientific evidence that temporary reversals of left-hemispheric dominance occur during the manic state. This reversion to the right could explain the exceptional poetic fluency of Jamison's bipolar poets.

In early childhood, the right hemisphere rules before written language is acquired. Neuropsychologist Allan Schore says the core sense of self is laid down in the critical period of ten to eighteen months in the right hemisphere-to-right hemisphere communication of mother and child, especially the mother's affirming gaze, sing-song speech and body contact. Neglect, abandonment, trauma, or an overbearing maternal presence will injure that sense of self, damaging the right orbitofrontal cortex and predisposing the child to dissociation and other mental disorders. In fact, in the male poets I have studied, I see a pattern of maternal lack, while women poets and mediums more often suffer sexual abuse or later loss of a significant father figure. Schore, along with Philip Bromberg, a psychiatrist specializing in dissociation, say that therapist and patient also communicate via their right hemispheres for transference, counter-transference, and healing to occur.

My thesis, which broadens Jaynes's original insight, is that genetic predisposition to atypical lateralization for language, complicated by early childhood trauma, which can make manifest the merely predisposed, enhances right-hemispheric dominance along with dissociative tendencies, magical thinking, religiosity, and poetic proclivities in a highly creative mind. Voracious reading provides the input for the creative output. Accessing the dissociative voices will require close collaboration with supportive others, as in Jaynes's collective cognitive imperative.

In the nineteenth century, Frederic Myers had credited right-hemispheric or mixed dominance with easier access to the spirits of the dead and a greater capacity for telepathy. Recent research also connects the right hemisphere with the paranormal. Dissociative identity disorder specialist Colin Ross frequently hears paranormal claims in his dissociative patients. Fleck et al. (2008) used baseline EEG to test their subjects predisposition to "transliminality," the transfer of unconscious thought and external stimulation into conscious awareness. They connected high transliminality to magical ideation, creative personality traits, belief in the paranormal, and manic and/or mystical experience, which they attributed to reduced left-hemispheric lateralization for language and less internal synchronization within a hyperactive right hemisphere.

Brief Poet Bios

In an engraving, William Blake depicted Milton's star falling into his left foot. He may actually have felt this right hemisphere-driven entry point for his inspirational predecessor, since alien limb phenomena are more likely to occur on the left side of the body, according to V.S. Ramachandran. In childhood, Blake was already surrounded by angelic visions. A solitary and incessant reader, his most important book remained the Bible. Both a poet and an artist, he claimed to have conversed with angels, ancient poets, and prophets, and said that his dead brother told him how to create an important etching technique.

Keats suffered tragic losses: a baby brother, his father at age eight, his mother's remarriage, her death when he was

fourteen, and later his beloved grandmother. His tendency was to merge rather than split, calling himself the chameleon poet. Not dissociative like Blake, his creative process nonetheless favored right-brain associations over labored analysis. His friend Brown watching him work, says he wrote about fifty lines of poetry a day, writing as easily as though he were writing letters.

Photos taken of Victor Hugo show him supporting his head with his left hand or arms folded with his left hand up, suggesting right-hemisphere dominance. Highly creative, he was a poet, novelist, and dramatist as well as an artist. Hugo suffered separation from his mother during the pivotal time of eight to seventeen months old. Abandonment, humiliation, parental separation, and exposure to war marked his entire childhood. His daughter's death at nineteen was another major wound to his psyche. During his political exile, he spent two years in séances with his family and friends talking to the spirits of the dead using table tipping. Ancient poets, biblical prophets, as well as Shakespeare, Molière, and many others came to the table. They command him to write, insist the questions be posed in poetry, and reveal that he will found a new religion based on reincarnation. Rarely touching the table himself, all of the messages sounded like Hugo, whether or not he was present. The collaborative atmosphere — with some who had suffered childhood trauma, others loss of loved ones — and the whole exile experience most likely enabled the unusual phenomenon to occur.

Rainer Maria Rilke was closely guarded by his mother, then raised as a girl until he was five years old, seemingly to replace a new-born sister who had died before his arrival. After his parent's separation he was abandoned to a maid. He only attracted his mother's attention when dressing as a girl, when ill, or when dedicating himself to poetry and religiosity. At age ten, he again felt abandoned as his father sent him to military school. As an adult, he attended séances and enjoyed the support of a rich princess, who was like a surrogate mother to him. At her castle, he claimed an angel spoke to him, dictating the first line of his *Duino Elegies*. The line was more likely the sound of the wind converted into speech by the environmentally attuned right hemisphere. Rilke then wrote the rest in a dissociative rush. Jaynes saw this connection between the sound of wind and waves and poetic voices.

Yeats was doubly predisposed to poetry and anomalous experiences. His mother was a silent depressive. Depressed mothers are more likely to give birth to mix-handed children with bilateral hemispheric organization and schizotypal personality traits (Anthes 2010; Somers 2009). In photos, his handedness is unclear. More telling is his probable dyslexia (he was still unable to read at nine years old), which suggests impaired left-hemispheric language functioning. His father, also slow to learn to read, had bullied him into learning, but also read poetry aloud to him — a positive environmental influence. Exiled in England alone with his father at ten, he will long for his mother and his Irish home. He eventually becomes a voracious reader, a sign that he relies on the right hemisphere (Shaywitz 2005), and intensely identified with Blake and the occult. He also hears an external voice in moments of crisis. He collaborates with his wife, a left-handed artist who had just lost her father, to access esoteric knowledge through her automatic handwriting or speech while asleep. *A Vision*, his metaphysical work based on their scripts, proposes a new spiritualist religion based on reincarnation. He claims the spirits said they came to bring him metaphors for poetry.

James Merrill suffered his parents divorce and the loss of his beloved governess when he needed her most. Both Rilke's and Yeats's work had a major influence on him. He spends twenty years using a home-made Ouija board with his partner David Jackson getting messages from dead poets, lost loved ones, and a familiar spirit from a broken home, finally writing a magisterial 600-page poem, part of which will be awarded the Pulitzer Prize. Merrill's Ouija board reincarnation scheme promotes a new religion where science, music, and poetry rule under "God Biology."

Ted Hughes's mother had paranormal experiences and he will claim his own. Her distance left him craving ever-renewed female collaboration. He fancied himself a shaman and was in thrall to Robert Graves's notion of inspiration through a woman possessed by the White Goddess. Hughes wrote an entire book on Shakespeare, whom he claimed accessed creativity through dissociative splits. Hughes knew about the metaphor-making right hemisphere and also held the paranormal belief that a poet's fu-

ture self could dictate to him in the present. His wife, Sylvia Plath, suffered from depression, the early death of her father, mental collapse, and suicide attempts, and committed suicide after Hughes left her for another woman. She also wrote her best poetry in a rush of manic creativity before her untimely end.

Ann Sexton claims she was an unwanted child whose mother humiliated her nightly. She suffered two suicidal post-partum depressions. Her psychiatrist suggested she reconnect with her earlier poetry writing. She composed in many drafts, but some poems were "totally given" to her. She became a highly acclaimed poet but reportedly told her analyst she was not a poet herself, but that a poet alter did the writing for her. Years later, she turned to God after an elderly, sympathetic priest told her "God is in your typewriter." Maxine Kumin, a poet and close friend, said that Sexton's poetry reflected a quest for a male authority figure to love and trust. In her final days before succumbing to suicide, she wrote poems in a manic rush.

Jane Roberts's parents divorced when she was three. Her invalid mother abused her verbally. Roberts writes poetry in childhood and both poetry and science fiction as an adult. She and her artist husband contact "Seth" through a Ouija board and then through trance states for an audience of devotees. Both her poetry and her dissociative messages combine religion and science. She believed in reincarnation, but said all incarnations exist simultaneously.

Finally, Dr. Annie G. Rogers, a severely abused child who later became a therapist for the similarly abused, claimed to have had a guardian angel as a child and several alter personalities who helped her cope with trauma, which in her case had a more serious psychotic outcome, requiring hospitalization, medication, and electroshock treatment. Identified with Joan of Arc, Rogers's delusions show reincarnationalist undercurrents and she writes poetry. St. Augustine, Heidegger, Rilke, and Virginia Woolf inspire her. Details of her close relationship to an unconventional therapist and her young patients suggest the importance of this collaboration in her own healing.

We have seen the role of enhanced right-hemispheric linguistic dominance through genetic predisposition and/or the effects of childhood trauma. The resultant atypical lateralization triggers religion and poetry, paranormal claims, and a belief in reincarnation, stabilized and supported through important collaborative experiences. Voracious reading and identification with admired predecessors provide content and authorization for creativity. Jaynes's insight into the vestigial remnants of the bicameral mind can be understood more thoroughly through these specific examples of great poets and accomplished mediums that created, under the aegis of right-hemispheric "Others," modern reminders of the poetry-speaking gods of the past.

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THE JAYNESIAN

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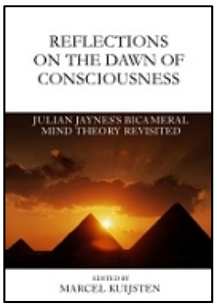
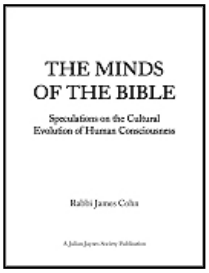


Reflections on the Dawn of Consciousness :Julian Jaynes's Bicameral Mind Theory Revisited

Edited by Marcel Kuijsten, 2007

Why are gods and idols ubiquitous throughout the ancient world? What is the relationship of consciousness and language? How is it that oracles came to influence entire nations such as Greece? If consciousness arose far back in human evolution, how can it so easily be altered in hypnosis and "possession"? Is modern schizophrenia a vestige of an earlier mentality? These are just some of the difficult questions addressed by Julian Jaynes's influential and controversial theory of the origin of subjective consciousness or the "modern mind." This book includes an in-depth biography of Julian Jaynes, essays by Jaynes, and the discussion and analysis of Jaynes's theory from a variety of perspectives such as clinical psychology, philosophy, neuroscience, anthropology, linguistics, and ancient history.



The Minds of the Bible: Speculations on the Cultural Evolution of Human Consciousness

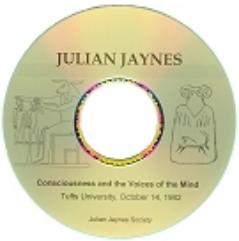
Rabbi James Cohn, 2007

In-depth discussion of the prevalence of auditory hallucinations and the rise of introspection in the Hebrew Bible.

Elephants in the Psychology Department: Overcoming Intellectual Barriers to Understanding Julian Jaynes's Theory

Brian J. McVeigh, Ph.D., 2007

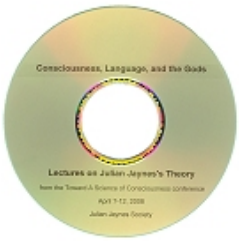
Identifies and explores six intellectual barriers to understanding Jaynes's theory.



Consciousness and the Voices of the Mind

Julian Jaynes

A 90-minute audio recording of a lecture by Julian Jaynes, titled "Consciousness and the Voices of the Mind," presented at Tufts University on October 14, 1982. Includes a question and answer session.



Consciousness, Language, and the Gods: Lectures on Julian Jaynes's Theory

Eight lectures on Jaynes's theory presented at the "Toward A Science of Consciousness" conference, April 2008 plus bonus material. Contains over 3 hours of lectures and interviews on Jaynes's theory. Each lecture has been carefully edited to improve the overall quality.