

The Legacy of Julian Jaynes

by Dan Hartwig

Introduction

*He stands and harks: what does he hear?
What sound is ringing in his ear?
What struck him down? What mortal fear?
Who once wore chains, will always think
That he is followed by their clink.*

Nietzsche, "The Unfree Man"¹

O, what a world of unseen visions and heard silences, this insubstantial country of the mind! What ineffable essences, these touchless rememberings and unshowable reveries! And the privacy of it all! A secret theater of speechless monologue and prevenient counsel, an invisible mansion of all moods, musings, and mysteries, an infinite resort of disappointments and discoveries. A whole kingdom where each of us reigns reclusively alone, questioning what we will, commanding what we can. A hidden hermitage where we may study out the troubled book of what we have done and yet may do. An introcosm that is more myself than anything I can find in a mirror. This consciousness that is myself of selves, that is everything, and yet nothing at all—what is it?

And where did it come from?
And why?²

And with this Julian Jaynes began his magnum opus, *The Origin of Consciousness in the Breakdown of the Bicameral Mind* (1976). In this fascinating and controversial book, Jaynes set forth the bold hypothesis that the ancients were little more than unconscious automatons who, unable to introspect, acted on the voices of gods originating in their own minds. Only around 1000 B.C. did the 'bicameral mind' as he called it breakdown and what we call consciousness arise. A product not of Darwinian or organic evolution, consciousness was a cultural and linguistic invention. Sound a bit outrageous? It was. Jaynes' theory stirred up considerable controversy among researchers and scholars alike. To this day, Jaynes' theories of the bicameral mind and the evolution of consciousness remain points of contention.

In this essay, I take a look at this amazing hypothesis and its peculiar author.

¹ "Joke, Cunning, and Revenge," prelude to *The Gay Science*, trans. by Walter Kaufmann, (New York: Vintage Books, 1974), 53.

² Julian Jaynes, *The Origin of Consciousness in the Breakdown of the Bicameral Mind*, (Boston: Houghton Mifflin, 1976), 1. Hereafter referred to simply as *The Origin*.

For the most part, then, my project will embody two interconnected narratives. One is largely biographical, telling the story of the man and his primary work. Not only will I examine the personal and intellectual development of this maverick psychologist, but, given the title of the essay, plus the fact that *The Origin* was Jaynes' claim to fame, devote considerable attention to exploring the book's genesis, structure and personal repercussions. The second narrative will discuss the reception and controversy surrounding *The Origin* itself. Here I will examine a number of reviews³ and short articles on *The Origin*, with an eye on assessing what scholars and experts have had to say about the book over the years.

In the end, my story is one not only of Jaynes and *The Origin*, but also a tale of the scientific enterprise at large. For Jaynes' *Origin* is more a case study in the history, philosophy and sociology of science. Indeed, it is a unique episode in what counts as explanation and evidence in the marshaling and communication of scientific theories. In short, Jaynes' origin serves as a means of examining how scientists and scholars assess these criteria in quite different ways.

Before I began this research, I had had some knowledge of *The Origin*. Having read a little of it, and having read discussion of it in other works, I must admit that I was interested in learning more about this strange work and its author. I was also somewhat sympathetic to Jaynes' theory, for it certainly was bold, if not in some sense strangely plausible. Having finished my research, I still find myself intrigued by Jaynes' incredible vision and his extended, almost exhausting argument. Yet, as a historian and amateur scientist, I find Jaynes' case study unfortunate. What once appeared as credible historical and scientific evidence turns out to be an amalgam of just-so stories, misinterpretations, and seemingly unfalsifiable claims and conjectures. Nevertheless, the theory still holds some certain power over me. Then again, maybe those are just the voices in my head.

³ In my research I turned up around 60 reviews of the book. I was able to locate, examine and incorporate approximately one half of those, along with a number of articles, short works, and interviews concerning *The Origin*. More than one-half of the reviews (14/26) were positive if not glowing reviews of the book. A little less than one-third, (7/26), were negative, bordering on polemical—e.g. W.T. Jones and an anonymous reviewer in *Book Forum*. The remaining, (5/26), were even-handed, do little more than present Jaynes' ideas in an unreflective manner. As a whole, then, the book seems to have been warmly, albeit somewhat grudgingly, accepted by the popular press. Yet, as we will see, such welcomed acceptance among non-academic circles could not stem the tide of criticism and outright hostility to the book among many experts and scientists.

The Origin of *The Origin*

*What is done
by what is called myself is, I feel,
done by something greater
than myself in me.*

James Clerk Maxwell, on his deathbed, 1879

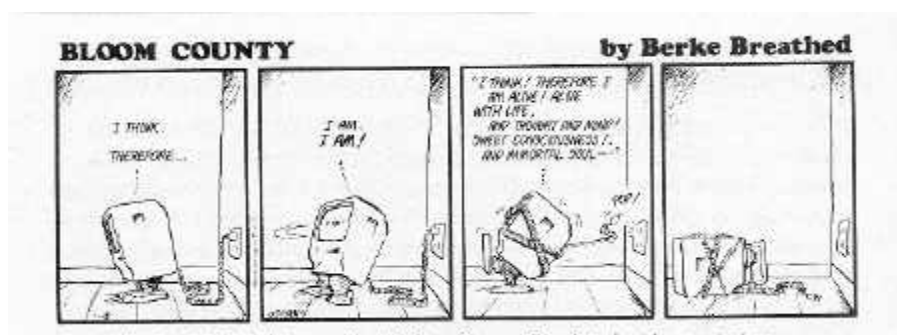


Figure I.

Copyright 1985 Washington Post Writers Group. Reprinted in Richard M. Caplan, *Exploring the Concept of Mind*, (Iowa City: University of Iowa Press, 1986), 12.

Julian Jaynes was born February 27, 1923, in West Newton, Mass. He was the son of Unitarian minister Julian Clifford and Clara Merrithew (Bullard) Jaynes, and was the brother of the late Helen Jaynes Bryant and Robert Bullard Jaynes. From an early age, the mystery and awe of consciousness struck Julian. “As a child, I was fascinated by the inner world I alone could see, and I wondered what was the difference between seeing inwardly and outwardly.”⁴ At the age of six, Jaynes remembers a particular episode when he was staring at a yellow forsythia bush thinking, “How do I know that other people see the same yellow I see?” He remembers, “I had the idea that there was a space in everyone else’s head that I couldn’t get to. How did that space get there?”⁵ This early curiosity would lead Julian on a lifetime quest to answer these simple yet profound questions.

Julian began his monomaniac search for the grail of consciousness as an undergraduate in philosophy and literature at Harvard University in 1940. After two years of study at Harvard, Jaynes transferred to McGill University, Montreal, in 1943, later completing his B.A. there in 1944. He had gone into philosophy with the hope that he might one day understand the “interior

⁴ Julian Jaynes, quoted in Sam Keen, “Julian Jaynes: Portrait of the Psychologist as a Maverick Theorizer,” *Psychology Today* 11 (1977): 66.

space” of consciousness. But after reading Kant’s *Critique of Pure Reason* and other epistemologies, he felt that one had to “be out in the world gathering data to get anywhere.”⁶ Julian thus switched to the study of psychology in the hope of encountering an approach to consciousness that had the rigor and precision of physics.⁷

After a brief stint as a reader in psychology at the University of Toronto from 1944-5, Jaynes began graduate studies at Yale in human physiology and animal behavior. Jaynes started out in the guise of a traditional comparative psychobiologist, hoping that by isolating the relationship between the brain and behavior he could capture the meaning of consciousness.⁸ Looking at the physiological and biological basis of mind quickly led him to ideas of its evolution. His approach was to chart the evolution of consciousness by studying learning and brain function in various species, all the way from the protozoa to reptiles and cats. He even once tested to see whether plants and worms have consciousness, sadly coming up empty-handed. “I began running little T-mazes, all in the blissfully absurd notion that I was reaching consciousness.”⁹

In his graduate training at Yale, Jaynes claims that the faculty didn’t quite know what to do with him. The mood of academic psychology at the time was behavioristic, not really biological, and he was determined to study the whole evolution of the mind.¹⁰

As a student of consciousness, then, Jaynes ultimately found the behaviorist approach unsatisfactory. He says,

It was only much later that I realized what a false trail that was, and that the problem of consciousness required a great deal more thinking than simply having fun in a lab with the first experiment that came to mind.¹¹

As a result, Jaynes irked many psychologists with his opinion that guiding rats through mazes had little to do with psychology.

He changed directions and began an examination of consciousness through historical analysis, introspection, and the study of language and metaphor. Along the way, the more Jaynes studied the history of the efforts to understand consciousness, the more he became convinced

⁵ Julian Jaynes, quoted in “The Lost Voices of the Gods,” *Time* (14 March 1977): 51.

⁶ Sam Keen, “Voices of the Gods: An Interview with Julian Jaynes,” *Psychology Today* 11 (1977): 60.

⁷ Keen, “Julian Jaynes,” 66.

⁸ *Ibid.*

⁹ Keen, “The Voices of the Gods,” 60.

¹⁰ *Ibid.*

¹¹ *Ibid.*

that psychology was “bad poetry disguised as science.”¹² “Studying history showed me that every age had a different metaphor for consciousness, and that the metaphors for what goes on within the mind came from the ‘external’ world.”¹³ Jaynes had begun to suspect that consciousness was a much smaller part of our mental life than we assumed.

Jaynes eventually completed his M.A. at Yale in 1948. Interestingly, although he remained at Yale as a student and research associate for some ten years, he eventually left without formally completing the requirements for the Ph.D. For, as it was obvious throughout his career, Jaynes was an academic iconoclast. He had refused his doctorate on principle as a “ridiculous badge,” as a mere academic union card, saying instead, “My brains are my credentials.”¹⁴ Ironically, almost thirty years later, in 1978, Jaynes finally accepted his degree, after much prodding by his colleagues.¹⁵

Jaynes would remain critical throughout his career of such an apprenticeship system, in which he felt students were imbued with the prejudices of their professors and received degrees for furthering unoriginal research. The reason for his criticism may stem from the fact that he was once part of one of the major schools of behaviorism, where his interest in questions regarding the nature and origin of consciousness was not considered legitimate, and where he found text after text that attempted to hide such unwanted problems for the student’s view. Undaunted by his training, he continued to seek answers to questions regarding

This world of unseen visions and heard silences, this unsubstantial country of the mind...A whole kingdom where each of us reigns reclusively alone...A hidden hermitage...An introcosm...This consciousness that is myself of selves, that is everything, and yet nothing at all.¹⁶

Jaynes began his formal academic career as a research associate at Princeton in 1964, later becoming a research psychologist in 1966. Jaynes’ published a number of works during these years, ranging from topics on imprinting in birds to the neural mediation of mating in the behavior of cats.¹⁷ Yet, these early excursions did not hold Jaynes’ attention for very long. He was looking to do something much larger, something much more revolutionary.

¹² Keen, “Julian Jaynes,” 66.

¹³ Ibid.

¹⁴ John Gliedman, “Julian Jaynes and the Ancient Gods,” *Science Digest* 90 (April 1982): 85.

¹⁵ Yale conferred Jaynes with the Ph.D., based upon the expansion of his earlier research into a Dissertation entitled, *Imprinting: The Interaction of Learned and Innate Behavior*, Dissertation Abstracts International, (January 1979), 38(7-B): 3458.

¹⁶ Jaynes, *The Origin*, 1.

¹⁷ See attached list of Jaynes’ major publications.

Jaynes claims that his biggest insight into consciousness came one night in 1967, when he realized that if evolution had confined speech areas to the left side of the brain, corresponding parts of the right side must have been cleared for some other powerful function—perhaps the ancient voices.¹⁸ He remembered that neurosurgeon Wilder Penfield¹⁹ had done some classic tests on the right side of the brain. Jaynes says, “I had a key to the Psychology library, and I rushed down there at midnight.” “I got Penfield’s article, and I almost fainted. There it was, when you stimulate certain parts of the right side, you get feelings of unreality, often music, and strange voices always ordering people to do something. Later the split-brain research came out, and I knew I had something big.”²⁰ Indeed he did. Jaynes would use this key insight to forge his radical theory on the evolution of human consciousness.

From there, Jaynes thus attempted to trace back in human history the mind-body problem as a way of alleviating the confusion surrounding consciousness itself. He claims, “I traced it back until it disappeared in some of the works ascribed to Aristotle, then in some of the pre-Socratics, and then vanished in the *Iliad*.”²¹ Here, Jaynes claims came his second major insight.

I felt for a long time like someone in a dark room, stumbling about, bumping into strange unrecognized objects while feeling for a light switch or chain, not even knowing if there was a light. And then it happened and the light went on. Consciousness is learned on the basis of language...And so many things were suddenly clear. It was not biologically evolved. Other ideas about the metaphoric nature of consciousness, which I had been harboring for a long time, joined up with that and the theory began.²²

These two critical insights—a neurological basis for the divine and the understanding that consciousness was the product of cultural and linguistic evolution—led Jaynes to begin coordinating the research he had already done into an impossibly ambitious project of tracking and explaining the evolution of consciousness. Jaynes now felt he had the key to unlocking this most profound of mysteries.

In 1976 Jaynes unleashed his provocative ideas in *The Origin of Consciousness in the Breakdown of the Bicameral Mind*. Nominated for National Book Award in 1978 (it was runner-up), *The Origin* was based on exhaustive research in multiple disciplines, encapsulating psychology, neurology, anthropology, history, philology, philosophy, religion, and literary

¹⁸ “The Lost voices of the Gods,” *Time* (14 March 1977): 52.

¹⁹ For an overview of Penfield’s work, see R. Freedman and J. Morriss, *The Brains of Animals and Man*, (New York: Holiday House, Inc., 1972), 52-4, 114-16.

²⁰ “The Lost Voices of the Gods,” 52.

²¹ Jaynes, Open Discussion, *Canadian Psychology*, 27:2 (1986): 146.

²² *Ibid*.

studies. To prepare the book, Jaynes learned Greek, interviewed schizophrenics, debated etymology with rabbis, chewed and inhaled the smoke of laurel leaves, and even once invaded a Princeton bar at midnight to apply a psychological test to startled drinkers.²³ All these facets were woven into an extended, almost polymathic grand narrative. Jaynes had left no leaf unturned, no avenue unexplored.

In the end, Jaynes called his project bridging the “awesome chasm” between mere inert matter and the inwardness of a conscious being—wanting to know the conditions under which there happened to come to be conscious entities.

The Origin of Consciousness in the Breakdown of the Bicameral Mind

*One thinks that it [consciousness] is the **kernel** of man; what is abiding, eternal, ultimate, and most original in him...[O]ne denies its growth and its intermittences.*

Nietzsche, “Consciousness”²⁴

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

Jaynes, *The Origin of Consciousness*, p. 23.

First put forth publicly to the American Psychological Association in Washington in 1969, Jaynes’ provocative theory in *The Origin* was this: 3000 years ago, man was not yet conscious, not able to “think” as we do today. He writes:

If our reasonings have been correct, it is perfectly possible that there could have existed a race of men who spoke, judged, reasoned, solved problems, indeed did most of the things that we do, but who were not conscious at all.²⁵

In ancient times, then, there was no consciousness, no notion of the ‘I’, no idea that people had a mental space inside them.²⁶ Individuals had no free will; they did not even have will, in our sense of the term. Unable to introspect, they experienced auditory hallucinations²⁷—voices of gods—which, coming from the brains right hemisphere, told a person what to do in

²³ “The Lost Voices of the Gods,” 53.

²⁴ *The Gay Science*, #11, p. 85.

²⁵ Jaynes, *The Origin*, 47.

²⁶ Jaynes also claims that the Incas lacked consciousness until subdued by the Spanish conquistadors in the 16th century. (The main evidence being the ease with which the Incas were conquered by the Spanish.)

²⁷ ‘Hallucination’ is derived from the Greek “hyalein,” which means “to wander in mind.” The word ‘hallucination’ was first used by Lavater in 1572 to describe encounters with “ghostes and spirites walking by nyght,” that is, apparitions. See Leonard George, *Alternative Realities*, (New York: Facts on File, 1995), p. 117.

circumstances of novelty or stress. Unable to disobey these voices, ancient life and society ran according to the will of the gods.

Jaynes thinks that man developed the inner voices to solve problems. Without consciousness, man was guided mostly by habit. Accordingly, new situations produced stress, which resulted in unconscious decisions in the form of audible commands. These voices, a side effect of language and a primitive form of will, enable man to keep at his tasks longer. Gradually, man's brain evolved to accommodate the voices. Humans became bicameral.

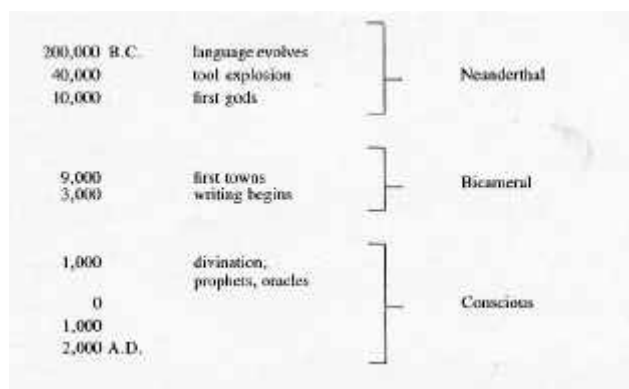


Figure II.

Diagram of the Evolution of Language. In Julian Jaynes, "Consciousness and the Voices of the Mind," *Canadian Psychology* 27:2 (1986): 133.

For Jaynes, then, the origin of consciousness was a historical process, one that can be traced in the evidence surviving from the oldest civilizations. In sum, consciousness is a relatively new invention, a historical phenomenon of the not too distant past.

I. The Bicameral Mind

According to Jaynes, the human mind was bicameral—comprised of two chambers, corresponding to the right and left hemispheres of the brain. All the nonlinguistic activity in the right half of the brain was passed on to the left half of the brain in the form of voices—Gods—talking inside people's heads. According to Jaynes, then, human mentality was composed of two parts, a decision-making part and a follower part, and neither part was conscious.

As mentioned above, in their everyday lives bicameral man was essentially a creature of habit. But when some problem arose that needed a new decision or a more complicated solution

than habit could produce, that stress was sufficient to instigate an auditory hallucination. Because such individuals had no mind space in which to question or rebel, such voices had to be obeyed.

Jaynes points to evidence from written texts, personal idols, cylinder seals, and the construction of personal names as suggesting that every individual had a personal God. Furthermore, Jaynes claims that a part of our innate bicameral heritage can be found in the modern phenomena of hypnosis, possession, imaginary playmates, and schizophrenia.²⁸ Just as schizophrenics can hear voices when there are none, for example, so too the ancients could hear the gods speaking inside them, telling them what to do.

II. The Breakdown of the Bicameral Mind

According to Jaynes, three interrelated factors led to the breakdown of the bicameral mind. One factor was increasing overpopulation and complexity. Here, given a time of social and political instability, Jaynes claims bicamerality came crashing down like a house of cards. Second, and related to the first factor, was catastrophe and cataclysm. Jaynes claims that major natural catastrophes, such as the Thera eruption, engulfed the Mediterranean world in the second millennium B.C. Jaynes claims entire nations were destroyed or dislodged, resulting in large migrations of people invading other countries, looking for a place to settle down with their gods and start another bicameral civilization.²⁹ What ensued was an extended period of conflict and chaos. Third was the invention and spread of writing itself. Here, the growing use of writing helped to undermine the unquestioned authority of the godlike voices. For, as Jaynes asserts, once something is written, you can turn away from it and it no longer has power over you, in contrast to an auditory hallucination which you cannot shut out.³⁰

These were hard times in the penultimate millennium B.C. Natural disasters, wars, and mass migration led to upheaval and chaos throughout the civilizations of the Middle East. People became acquainted with other peoples or races, written language weakened the power of speech, the old wisdom that had been expressed in the speech of the gods had grown too old; the world was being transformed. In the long run, the gods deserted man. “My God has forsaken me,” runs

²⁸ Interestingly, ‘schizophrenia’ is derived from Greek, and literally means “split-brain.”

²⁹ Jaynes, “Consciousness and the Voices of the Mind,” *Canadian Psychology*. 27:2 (1986): 136.

³⁰ Ibid.

one of the oldest surviving texts from Mesopotamia.³¹ In the end, Jaynes asserts mankind to was forced to “learn” consciousness.³²

III. The Origin of Consciousness

And thus began the development of a new way of making decisions, a ‘proto-consciousness’ according to Jaynes. After the breakdown, after hallucinated voices no longer told people what to do, there seems to have arisen other ways of discerning messages from the gods to make decisions. Jaynes here traces the beginning of consciousness from the bicameral Linear B Tablets in Greece, through to the *Iliad* and *Odyssey*, and on through the lyric and elegiac poetry of the next two centuries³³, until he gets to Solon in 600 B.C. Solon, according to Jaynes, is the first person who “seems like us, who talks about the mind in the same way we might. He is the person who said ‘know thyself’.”³⁴ In Greece, then, Jaynes claims one can see in detail the invention and learning of consciousness on the basis of metaphor and analogy, on the “transference of objective referents to mental functions.”³⁵

During the transformation from the bicameral mind to the conscious mind, a long period of transition occurred, in which the voices of the gods may not have spoken through very many people but many listened to anyone who could still hear them. “Greek oracles were the central method of making important decisions for over 1000 years after the breakdown of the bicameral mind,” Jaynes writes.³⁶ Jaynes here thinks that the explanation for this amazing influence is a general pattern in which a common faith is expressed through specially chosen individuals, who can, through rituals and trances, establish contact with powers (in themselves) with which other people are no longer in contact. In Jaynes’ view, the whole range of sorcerers, medicine men, oracles, witches, fortune-tellers, and their modern successors express a longing for the contact with the bicameral mind had with the gods.

³¹ The *Ludlul Bel Nemequi*, which Jaynes sees as a possible origin of the Book of Job. Ibid.

³² According to Jaynes, consciousness is learned on the basis of language and taught to others. It is a cultural invention rather than a biological necessity. Jaynes would later say: “Natural selection is not what I wish to emphasize, but rather learning. If you had a child in the bicameral world and brought it up in our culture, I think he would be like you or me. I think if you took any child today, and could give me an island and 200 actors and let me construct a culture with a expectation of hearing voices the way I described it, that I could bring up a modern child to be bicameral.” From “Response to Discussants,” *Canadian Psychology*. 27:2 (1986): 170.

³³ e.g. Sappho and Archilochus.

³⁴ Jaynes, “Consciousness and the Voices of the Mind,” 136–7.

³⁵ Ibid., 137.

³⁶ Jaynes, *The Origin*, 321.

For Jaynes, the history of consciousness can thus be broken up into three periods. First, there was a *precursor phase*—humans lack free will but act directly and without reflection upon the gods’ commands. This phase corresponds to bicameral or God-run man. Secondly, there existed a *socially conscious phase*—human free will is regulated via a social context (e.g. the Ten Commandments) pronounced by a human being (i.e. Moses) with special abilities to hear God. Thirdly, there was a *personally conscious phase*, where the relation between God and man is again internal but now conscious. Here, and after the advent of consciousness, man was ‘given’ free will—to a certain extent. The problem of ethics arose, suddenly there was something to think about: how one ought to act.

IV. Evidence and Arguments

Jaynes’ project presents four major arguments. First is the claim that consciousness arises from the power of language to make metaphors and analogies. According to Jaynes, this can be empirically studied in the learning of consciousness in children, as well as in the study of changes of consciousness in recent history. Second is the hypothesis of the bicameral mind. Jaynes asserts that this can be studied directly in ancient texts and indirectly in modern schizophrenia. Third, Jaynes argues that consciousness followed the bicameral mind (somewhere between 1400 and 600 B.C.). This can be studied in the artifacts and texts of history. Fourth is the assertion of the neurological model for the bicameral mind, based on the hemispherical structure of the brain. This, according to Jaynes, can be studied in laterality differences.

Jaynes’ theory thus appears not to be some just-so story, devoid of empirically testable or applicable ideas as has often been argued against him. Jaynes claims to be telling the historical truth as best as he can figure it out. Thus, he offers four areas where specific empirical evidence bears on the validity of his sweeping claims. Careful to avoid the stigma of mere speculation or flight of fancy, Jaynes therefore points to a means of sounding out the authenticity of his enterprise.

A. The Nature of Consciousness

To support his claims, Jaynes explains that consciousness, understood as an awareness of ourselves as selves, is not so essential to a human’s functioning as is thought. He continues,

“how simple that is to say; how difficult to appreciate!” Jaynes gives an interesting analogy to make his point:

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.³⁷

Jaynes here points out the problem of just how much of the time we are conscious. Just like the flashlight that can only see when it is lit, we can only know we are conscious at a given moment if we were conscious.

According to Jaynes, consciousness is not necessary for perceiving, learning and thinking; it does not copy experience; and the phenomenal location of consciousness is arbitrary.³⁸ From these claims, Jaynes goes on to define consciousness as “an analogy of what is called the real world...built up with a vocabulary or lexical field whose terms are all metaphors or analogs of behavior in the physical world.”³⁹ Further, Jaynes maintains that consciousness is “an operator rather than a thing or repository.”⁴⁰

Because of its covert and semi-private nature, Jaynes claims self-consciousness mind can only be understood metaphorically in terms of something else that is publicly understood—actions performed in the world. According to Jaynes’ theory, then, we must look to human history after language has evolved and ask when in history did an analog ‘I’ narratizing in a mind space begin?

B. Archeology and Ancient Literature

Jaynes finds signs of the origin of consciousness in many civilizations: the Greek, the Indian, the Chinese, and the Egyptian. Of all the remarkable cultural breakthroughs that occurred in many cultures about half a millennium B.C., in Jaynes’ view it is the Old Testament that contains the best textual description of the origin of consciousness. There the whole story is told in one go, from the disappearance of the gods to the taking over of the mind by consciousness.

Proclaiming the Book of Amos the oldest (written around 800 B.C.), and the Book of Ecclesiastes the most recent (written around 200 B.C.), Jaynes suspects that such prophets as

³⁷ Jaynes, *The Origin*, 23.

³⁸ Jaynes, “How Old is Consciousness,” in Richard M. Caplan, *Exploring the Concept of Mind*, (Iowa City: University of Iowa Press, 1986), 53–6.

³⁹ Jaynes, *The Origin*, 55.

⁴⁰ *Ibid.*

Amos represent pure bicameral speech. Amos does not think, or ponder his words. His thought is done for him, “Thus speaks the Lord.” By contrast, Ecclesiastes is very subjective. “He ‘sees’ that wisdom is better than folly...He spatializes time (i.e. “To everything there is a season”), he ponders about life...in a way that Amos could never do.”⁴¹

The great epics of ancient Greece too, Homer’s *Iliad* and *Odyssey*, are about people who do not possess consciousness; instead, they resemble automatons that act on the basis of the God’s speech through them. In the *Iliad*, Jaynes claims that there is no consciousness—no decision-making, no introspecting, no reminiscing. Jaynes asserts that whenever a significant choice is made, a voice comes in telling people what to do. Moreover, these voices are referred to as Gods.



Figure III.

Edith Hamilton, *Mythology*, (New York: Penguin, 1969), figure 1, p. 15.

⁴¹ Jaynes, quoted in “The Voices of the Gods,” 60.

But the *Odyssey*, on the other hand, was written during the period in which consciousness began to mark human life. Decision-making, introspection, reminiscing, and deceit all characterize the wily Odysseus

C. Brain Lateralization

Having proposed the bicameral mind, Jaynes finds a neurological home for it in the lateralization of the brain. Jaynes here seeks a brain structure that is both relatively recent and apparently without function. He settles on the equivalent of Wernicke's area in the right hemisphere.

My hypothesis in the strongest form was that the speech of the gods was organized in the right hemisphere, in what corresponds to Wernicke's area in the left hemisphere, and was 'spoken' or 'heard' over the anterior commissures to, or by, the auditory areas of the left temporal lobe.⁴²

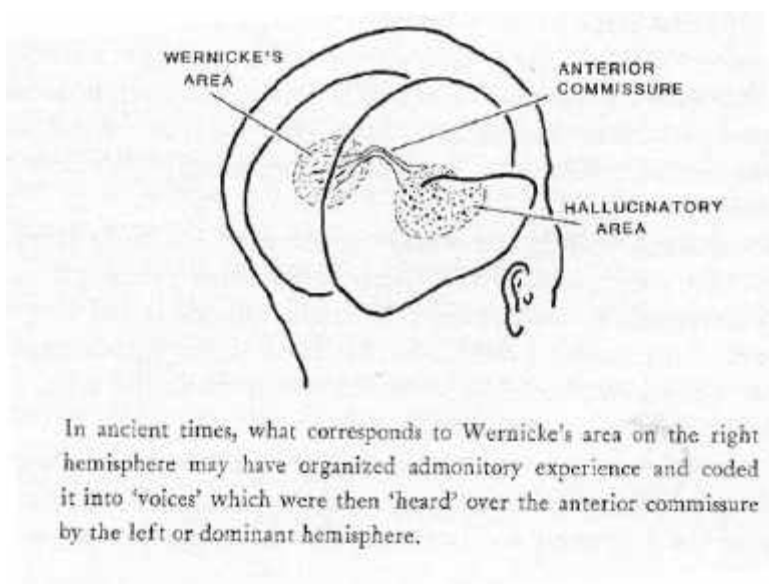


Figure IV.

Diagram of brain lateralization, including Jaynes' comments. From *The Origin of Consciousness in the Breakdown of the Bicameral Mind*, (Boston: Houghton Mifflin Company, 1976), p. 104.

Jaynes supports this claim with two pieces of evidence. One is that the two sides of the human brain—the two cerebral hemispheres—are specialized to perform quite different tasks. The other piece of evidence is the aforementioned Penfield research on temporal lobe stimulation.

⁴² Jaynes, quoted in "The Voices of the Gods," 138.

D. Vestiges of Bicamerality

Jaynes also supports his argument by examining so-called vestiges of pre-consciousness in contemporary life. Jaynes here surveys such contemporary phenomenon as schizophrenia, hypnosis, possession, speaking in tongues, mediums, imaginary playmates, and even artistic expression, exploring each as a direct remnant of bicameral mentality. As one would expect, Jaynes here sees religion as “the most obvious and important carry-over from the previous mentality of bicamerality.”⁴³

Jaynes claims that the long journey from the oracles and prophets through centuries of superstitions and ‘isms’⁴⁴, including the pilgrimage of science in its search for final answers, can all be viewed as attempts to regain the ‘divine’ certainty which was lost when the voices of the gods fell silent and were supplanted by the privacy and aloneness of conscious introspection.

Thus, as the slow withdrawing tide of divine voices and presences strands more and more of each population on the sands of subjective uncertainties, the variety of technique by which man attempts to make contact with his lost ocean of authority becomes extended. Prophets, poets, oracles, diviners, state cults, mediums, astrologers, inspired saints, demon possession, tarot cards, Ouija boards, popes, and peyote all are the residue of bicamerality that was progressively narrowed down as uncertainties piled upon uncertainties.⁴⁵

In the end, Jaynes claims that although the voices fell silent, our thirst for divine authority remains.

The Reception of The Origin of Consciousness

Unfortunately, many of the things that people write about consciousness are almost as puzzling as consciousness itself.

Steven Pinker, *How the Mind Works*, (NY: 1997), p. 133.

“It is a while since a philosophical book made me laugh out loud.”

Mike Holderness, in *New Scientist*⁴⁶

“This book and this man’s ideas may be the most influential, not to say controversial, of the second half of the twentieth century. It renders whole shelves of books obsolete.”

William Harrington, in *Columbus Dispatch*

“The weight of original thought in it is so great that it makes me uneasy for the author’s well-being: the human mind is not built to support such a burden.”

D.C. Stove, in *Encounter*⁴⁷

⁴³ Jaynes, *The Origin*, 317-8.

⁴⁴ e.g. Freudianism, Behaviorism and Marxism.

⁴⁵ *Ibid.*, 320.

⁴⁶ Holderness, 39.

Jaynes' book was a sensation when it came out, arousing quite a deal of attention—and opposition! Academics were and remain mixed in their opinions of the book. Berkeley Psychologist Frank Beach calls it “highly original, provocative and stimulating.” Northwestern University Psychologist Carl Duncan is more caustic: “Jaynes is extremely clever to think up this thing. I only wish he would put that cleverness to some more serviceable use.”⁴⁸ Ruth Campbell calls it “a brilliant display of thin-ice skating...hoping that the applause which greets his feats will conceal the sound of ice cracking.”⁴⁹

A number of scholars nevertheless were more forgiving of Jaynes' work, proclaiming it an important monument in the historical literature. Partisans of the theory claim that it explains everything you always wanted to know about consciousness but couldn't find anybody to ask. Jay Ingram, in *The Toronto Star*, calls it “one of the most intriguing, almost unbelievable, books about the brain published this century.”⁵⁰ D.C. Stove goes so far as to say, “Jaynes' theory, though it may not be as good as Darwin's, is about ten times more original than Darwin's was.”⁵¹ Here, it seems some of Jaynes' disciples have taken his ideas a bit too far overlooking some of their obvious weaknesses.

Jaynes was able to garner some impressive supporters in the scholarly world. Both Endel Tulving, the University of Toronto's distinguished memory theorist, and Yale University professor of psychology Jerome Singer confidently defended the value of Jaynes' work. Later, philosopher Daniel Dennett of Tufts University, a leader in attempts to understand consciousness by integrating the findings of psychology and computer science with philosophy, argued that the scientific community should take Jaynes' ideas seriously.⁵² According to Dennett, *The Origin* is to be taken seriously precisely because “it asked some important questions that had never been properly asked before and boldly proposed answers to them.”⁵³

Other notable supporters of Jaynes' ideas include the Danish researcher Tor Norretranders, who devotes a section of his *The User Illusion*⁵⁴ to Jaynes' theory of

⁴⁷ D.C. Stove, “The Oracles and Their Cessation: A Tribute to Julian Jaynes,” *Encounter* 72:4 (April 1989): 30.

⁴⁸ Both quoted in “The Lost Voices of the Gods,” 52.

⁴⁹ Ruth Campbell, Review, *British Journal of Psychology* 71 (August 1980): 443.

⁵⁰ Jay Ingram, Review, “Did ‘Voices’ of Gods guide the Ancients?” *The Toronto Star* (25 September 1994): E10

⁵¹ Stove, 34.

⁵² See Daniel Dennett, “Julian Jaynes' Software Archeology,” *Canadian Psychology* 27 (1986): 149-I will hereafter refer to the reprint of the article in Dennett's *Brainchildren*, (Cambridge, Mass.: The MIT Press, 1998), 121-30.

⁵³ *Ibid.*, 121. Dennett is sympathetic to Jaynes' claim that consciousness is largely a product of cultural evolution.

⁵⁴ Tor Norretranders, *The User Illusion*, (New York: Viking, 1998).

consciousness; Douglas Hofstadter, professor of Mathematics and Computer Science, Judith Weissman⁵⁵; and William Woodward. Woodward, a professor of psychology at the University of New Hampshire, reviewed Jaynes' *The Origin for Isis*, concluding it was an important contribution to the history of science through "its plausible conjecture that consciousness, and hence science, originates much more suddenly and 'behavioristically' than has hitherto been expected."⁵⁶

Early on, reviews of the work were also somewhat favorable. True, there were a few notable exceptions, which I will discuss below, but, for the most part, Jaynes' ideas were accepted enthusiastically. Most praised Jaynes for his vision, calling his book "fascinating" or "remarkable" or "stunning." Jaynes became the subject of in-depth article in major publications such as *Time*⁵⁷ and *Psychology Today*⁵⁸.

Still, Jaynes' academic and scientific supporters were and remain few. For his part, Jaynes realized he had rewritten most of human history and expected to be attacked by all kinds of academics.⁵⁹ He was. In fact, the majority of academics reviled his just-so creations, calling his work preposterous and him the Velikovsky of the psychological world.⁶⁰

To his detractors, then, Jaynes is a dilettante who ranges over many fields in which he lacks expertise, picking and choosing facts that can't be woven into his narrative. Terms often bandied about in discussion of *The Origin* include: 'crack pot,' absurd, 'a flash in the pan,' a 'flight of the imagination,' and science fiction. When all was said and done, many experts thought it was nonsense, unconvincing and seriously flawed.

Most took issue with Jaynes' factual claims, revealing their simplicity if not outright falsity. One reviewer writes: "Unhappily, both factually and intuitively, there exists a veritable conspiracy of the mundane and obvious against Jaynes' elegantly integrative flight of the

⁵⁵ Weissman uses Jaynes' theory of the suppressed poetic capacity of the brain as a means of literary criticism, examining the themes of vision, madness and morality in the works of Milton, Blake, Wordsworth, Coleridge, and a number of other romantic poets. See Weissman, "Vision, Madness, and Morality: Poetry and the Theory of the Bicameral Mind," *The Georgia Review* 33 (Spring 1977): 118-48.

⁵⁶ William Woodward, Review of *The Origin of Consciousness*, *Isis* 70 (June 1979), 293.

⁵⁷ "The Lost Voices of the Gods." *Time* 109 (14 March 1977): 51-3.

⁵⁸ "Julian Jaynes: Portrait of the Psychologist as a Maverick Theorizer," by Sam Keen, *Psychology Today* 11 (November 1977): 66-7. Also by Keen, "The Voices of the Gods: An Interview with Julian Jaynes," pp. 58-60+.

⁵⁹ He would say, "If you're an archeologist who has spent a lifetime working with a little brush at ancient sites, you won't want to hear from some psychologist that you have it all wrong." From "The Lost Voices of the Gods," 52.

⁶⁰ One anonymous reviewer here writes: "Because Jaynes evidently means every word he says, we are probably witnessing the makings of another Velikovsky case, which anthropologists and their colleagues will ignore as long as they possibly can." Anon., Review, *Book Forum* 4 (Summer 1978): 248-9.

imagination.”⁶¹ Others claim Jaynes only utilizes, distorts and often misconstrues key evidence. One anonymous reviewer claims Jaynes is “no better than von Daniken in interpreting some of his visual evidence.”⁶² More specifically, this particular reviewer questions Jaynes’ authority, pointing out several mistakes.⁶³

More important than certain misspellings or chronological errors in the text, the above-mentioned anonymous reviewer notes egregious misinterpretations placed on archeological and philological evidence which ‘would have left his manuscript in shambles had a competent scholar read it.’⁶⁴ One misinterpretation lies in the manner in which Jaynes dismisses or rationalizes any evidence for consciousness dating back before his idea of the onset of consciousness. The reviewer thus points to several clear instances in which Jaynes misconstrues or neglects contradictory evidence.⁶⁵

With respect to his archeological evidence, Jaynes also treads on thin ice. I’ll examine just two of a number of criticisms levied against Jaynes’ interpretations. First, Jaynes claims no extensive breakdown of society ever happens in southern Mesopotamia, when, in fact, as the reviewer claims, “one of the greatest mysteries of ancient Near Eastern archeology is what *did* happen in the very obvious breakdown ca. 3000 B.C., when the highly developed Uruk culture gave way to the Jamdat-Nasr culture.”⁶⁶ Second, because Jaynes needs a colossal natural disaster at the end instead of in the middle of the second millennium, Jaynes chooses the lower of two possible dates (1470 B.C. and 1180/70 B.C.) for the Thera eruption.⁶⁷ Yet, the reviewer posits that the archeological evidence of the well-known paintings found on Thera argues for the earlier date.⁶⁸

⁶¹ Kinsbourne, 802.

⁶² Anon., Review, *Book Forum 4* (Summer 1978): 249.

⁶³ For example, misspellings of *matsaba* for mastaba, *Amatrian* for Amratan, and *Mycanae* for Mycenae; referring to the period of political disruption between Old Kingdom Egypt as the Intermediate period, when it is unquestionably the first of three in any standard chronology; and the dating of Plutarch (c. 50–120) to three different eras (i.e. 1st century B.C., at 60 A.D., and in the 2nd century A.D.). See Anon., Review, *Book Forum 4* (Summer 1978): 248–9. Ronald Hayes, a scholar of classical languages and of psychology, points out another factual inconsistency. Crucial to Jaynes’ hypothesis is that the compilation of the third chapter of Genesis be dated somewhere between Amos and Ecclesiastes (i.e. between 800 and 200 B.C. according to Jaynes). But, as the best Biblical scholarship reveals, the third chapter of Genesis dates at least 200-600 years prior to Amos. See Ronald L. Hayes, “Lobe’s Labors Lost,” *The Washington Post* (24 April 1977), sec. E3: 9.

⁶⁴ Anon., Review, *Book Forum 4* (Summer 1978): 249.

⁶⁵ *Ibid.*, 249–50.

⁶⁶ *Ibid.*, 250.

⁶⁷ *Ibid.*

⁶⁸ *Ibid.*

The reviewer goes on to call Jaynes' project "toying with reality and fact," a "convenient rearrangement of facts into an imaginative dream sequence," a "clever counterfeit of evidence," a "very dangerous kind of anarchy of fact."⁶⁹ The reviewer concludes his polemic with the following:

This book is no holistic approach to Western history; it's a travesty of the interdisciplinary approach that so many educators are crying out for today, and it will be soaked up with great eagerness if it is not looked upon with baleful eyes from a number of places.⁷⁰

This rather polemical review represents a minority opinion among the major reviews that I examined. Nonetheless, it does voice the errors and misinterpretations raised by other scholars in their examination of the text. These, others, though, do not go as far as this particular reviewer with such vehement criticism does. I will explore the possible reasons for this broad spectrum of opinions below in my discussion of the legacy of Jaynes' *Origin*.

More than a few scholars, including Jonathan Miller, former research fellow at the University of Sussex, and David Gelernter, professor of computer science at Harvard, dispute Jaynes' claim that ancient life was in fact different than our own.⁷¹ Some claim Jaynes has ignored the fieldwork of cultural anthropologists, since it is their uniform conclusion that native peoples are rather like ourselves in the most fundamental modes of consciousness.⁷² Others, including Ned Block, a philosopher from MIT, and Marcel Kinsbourne, professor of pediatrics and psychology at the University of Toronto, point out influential animal studies, which intimate some form of consciousness in chimpanzees (i.e. the ability to plan, and deceive).⁷³ Block here asks, "Can anyone take seriously the idea that almost any zoo animal contains creatures higher on the consciousness hierarchy than Homer and Hammurabi?"⁷⁴

Other scholars dispute Jaynes' definition of consciousness. One camp addresses Jaynes' historical treatment of consciousness; the other his philosophical account. On the one hand, scholars argue that the ancient texts Jaynes appeals to as typically bicameral are rife with anger, vengeance, plans, hopes, and deceit—the very things Jaynes claims to be signs of

⁶⁹ Ibid., 251.

⁷⁰ Ibid.

⁷¹ See Jonathan Miller, "Primitive Thoughts.," *Canadian Psychology* 27:2 (1986): 155–7. David Gelernter, *The Muse in the Machine*, (New York: The Free Press, 1994).

⁷² Miller, 156. Gelernter, 105.

⁷³ Ned Block, Review of *The Origin of Consciousness, Cognition and Brain Theory* 4 (1981): 81–3; Marcel Kinsbourne, "Bicameral Mind and the Narcissian Conspiracy," *Contemporary Psychology* 22:11 (November 1977): 801–2.

⁷⁴ Block, 82.

consciousness.⁷⁵ Further, it is claimed that Jaynes is only able to maintain his general claims about bicameral literature by constantly asserting that certain potentially damning or conflicting passages are mistranslated or represent intrusions from post-bicameral authors.⁷⁶

Perhaps one of the more damning objections here comes from the aforementioned philosopher Ned Block. Block maintains that Jaynes has confused the historical development of the theory of consciousness in written literature with the actual emergence of consciousness in real life.⁷⁷ Block here accuses Jaynes of a huge ‘use-mention error’—confusing a phenomenon with either the name of the phenomenon or the concept of the phenomenon. In other words, Block maintains that “even if everything Jaynes said about historical events was correct, all he would have shown was not that consciousness arrived in 1400 B.C., but that the concept of consciousness arrived in 1400 B.C.”⁷⁸ Thus, according to Block, the primary historical evidence for the existence of a bicameral period—the testimony of ancient texts—may merely reflect changing ways of thinking about consciousness.⁷⁹

UC Santa Cruz philosopher David Chalmers has also recently disputed Jaynes’ elaborate theory of consciousness.⁸⁰ According to Chalmers, Jaynes’ theory of consciousness is only concerned with our awareness of our own thoughts and says nothing about the phenomena of perception.⁸¹ Thus, so claims Chalmers, such a theory could not hope to be a theory of awareness in general, let alone a theory of phenomenal consciousness.⁸²

Even more scholars dispute the neurological basis of Jaynes’ theory (i.e. the localization of conscious experiences in the two hemispheres). Hayes⁸³, Michael Fox⁸⁴, G. Asaad and B. Shapiro⁸⁵, and Kinsbourne⁸⁶ point out that there are no data to suggest Jaynes’ interpretation of

⁷⁵ Kinsbourne, 801.

⁷⁶ Ibid., 802. Block, 82.

⁷⁷ Block, 83.

⁷⁸ Ibid.

⁷⁹ Ibid. For his part, Dennett takes issue with this criticism and convincingly undermines Block’s position. Dennett agrees with Jaynes that you can’t have consciousness until you have the concept of consciousness. The example Dennett gives is that history was invented or discovered before Herodotus. So, Dennett maintains, history itself, or having histories, is in part a function of our recognizing this fact. Consciousness thus mirrors history in this sense. See Dennett, p. 125–7

⁸⁰ David J. Chalmers, *The Conscious Mind*, (New York: Oxford University Press, 1996).

⁸¹ Ibid., 30.

⁸² Ibid.

⁸³ Hayes, p.

⁸⁴ Michael Fox, “The Strange Career of the Brain,” *Queen’s Quarterly* (1977): 527-32.

⁸⁵ Ghazi Asaad and Bruce Shapiro, Letter to the Editor, *American Journal of Psychiatry* 144:5 (May 1987), (no page given).

⁸⁶ Kinsbourne, 802.

hemispheric function is correct.⁸⁷ Furthermore, Miller adds that, even admitting there is a division of labor between the right and left halves of the brain, it is unnecessary to assume that the right hemisphere communicates with the left hemisphere in terms of natural language.⁸⁸ Miller here claims that the cross talk could just as well occur without the person's overhearing the exchange.⁸⁹ Moreover, Fox asserts that locating the cause of consciousness is not the same as locating consciousness itself.⁹⁰ He declares:

Jaynes' neurological speculations advance us no further toward an adequate characterization of consciousness than Jean-Paul Sartre's celebrated definition of it as 'a being such that it in its being, its being is in question insofar as this being implies a being other than itself'^{91, 92}

In the end, then, most specialists agree that Jaynes' hypothesis and the conclusion he draws from it have little or no basis in neuroscientific fact.⁹³

Still other scholars take odds with the centrality of hallucinations in Jaynes' hypothesis. Some claim it false to assume that unusual experiences of any kind, particularly hallucinations, are probable signs of the onset of schizophrenia.⁹⁴ Others see it as unnecessary and misleading to suggest that the emergence of consciousness coincided with the extinction of auditory hallucination.⁹⁵

One of the more interesting polemical attacks comes from the aforementioned W.T. Jones, a professor of Humanities and Social Sciences at Caltech.⁹⁶ Jones goes so far as to connect Jaynes with the ilk of Pop Psychology, calling Jaynes' *Origin* a piece of "secular theology," accepted by those of a differing "cosmological orientation."⁹⁷ Jones claims it is not so

⁸⁷ George Ojemann, a professor of neurological surgery at the University of Washington, also disputes Jaynes' grand claims, but does admit the possible neurological basis of a few of Jaynes' less grandiose theses. See George Ojemann, "Brain Mechanisms for Consciousness and Conscious Experience," *Canadian Psychology* 27:2 (1986): 158–68.

⁸⁸ Miller, 155.

⁸⁹ Ibid.

⁹⁰ Fox, 527–8.

⁹¹ Jean-Paul Sartre, *Being and Nothingness*, trans. by Hazel E. Barnes, (New York: Washington Square Press, 1992), 24.

⁹² Fox, 528.

⁹³ Curiously, Jaynes would later claim that his model of the brain could be dispersed wit; every mention of the brain could be taken out of the book and everything else could still stand. See Jaynes, "Response to Discussants," 169.

⁹⁴ George, 256.

⁹⁵ Miller, 156–7. Dennett, 126.

⁹⁶ W.T. Jones, "Julian Jaynes and the Bicameral Mind: A Case Study in the Sociology of Belief," *Philosophy of the Social Sciences* 12 (1982): 153–71.

⁹⁷ Ibid., 170. Jones lists three different cosmological orientations represented by Jaynes' *Origin*: "(1) Jaynes has a preference for abrupt, dramatic and radical change—a bias against gradualism and for discontinuity; (2) Jaynes has a bias against narrative, spatialization, the 'analog "I"' and the 'metaphor "me"'—and a corresponding bias in

much that Jaynes' generalizations are grand and overarching, as that they are remote from any body of generalizations of lesser scope.⁹⁸

Though they have the look of scientific generalizations, they are not scientific generalizations at all. They are products not of the scientific world view, but of an altogether different worldview, one that can best be characterized as poetic or religious in nature.⁹⁹

Jones thus characterizes the book as a prose poem offering a vision that satisfies some deep and extra-cognitive need.¹⁰⁰

Jones goes on to conclude that the very reason for the book's success is that it is a new gospel, a world picture which attracts those who resonate with the romantic primitivism and cosmological orientation expressed in Jaynes' longing for 'lost bicamerality'.¹⁰¹ In general, then, Jones claims that people who participate in this climate of opinion—e.g. the readers of Nietzsche, Dostoyevsky, Sartre, and Lawrence; and the "low and middle to low brow culture" of Zen, TM, sensitivity training, and other counter-cultural phenomena that arose in the 1960s—are likely to identify with the thesis that "consciousness is a late, dateable, and on the whole regrettable arrival on the human scene."¹⁰²

Here, Jones and the eminent Northrup Frye recognized in Jaynes the description of introspection as a sort of pathological development in human history, a longing for a return to bicamerality. For instance, instead of describing humanity's move to consciousness as liberating, Jaynes calls it, "the slow inexorable profaning of our species."¹⁰³ W.T. Jones goes so far as to say that Jaynes' discussion of schizophrenia is reminiscent of R.D. Laing's thesis that schizophrenics are the only sane people in our insane world.¹⁰⁴ Jones further claims, "Jaynes, it would seem, holds that we would all be better off if everyone were once again schizophrenic, if we could somehow return to a bicameral society which had not yet been infected by the disease of thinking."¹⁰⁵

favor of the unconscious state that he calls bicamerality; and (3) Jaynes' desire for a sweeping, all-inclusive formula that explains everything that has happened." See Jones, 165–7.

⁹⁸ Ibid., 169.

⁹⁹ Ibid.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

¹⁰² Ibid., 171.

¹⁰³ Jaynes, *The Origin*, 437.

¹⁰⁴ Jones, 166.

¹⁰⁵ Ibid., 167.

Frye¹⁰⁶, as well, recognized this tendency to disvalue consciousness. After examining Jaynes' argument and admitting the fascination of that argument's appeal, Frye points out that Jaynes' ideas provoke a disturbing reflection: "Seeing what a ghastly mess our egocentric consciousness has got us into, perhaps the sooner we get back to...hallucinations the better."¹⁰⁷ Frye goes on to consider the cultural ramifications of this way of thinking, what he terms "one of the major cultural trends of our time":

It is widely felt that our present form of consciousness, with its ego center, has become increasingly psychotic, incapable of dealing with the world, and that we must develop a more intensified form of consciousness, recapturing many of Jaynes' 'bicameral' features, if we are to survive the present century.¹⁰⁸

This curious element within Jaynes' narrative does arise at times, leaving the reader a bit startled. Jones, although he comes off a bit polemical, does have a point here in his assessment of the wide reception of Jaynes' book. For it has been the case that certain people have more or less accepted it for its extra-cognitive elements. Although it might be natural here to discuss this important question, I will leave that to my discussion of Jaynes' legacy below. For the moment, then, let me examine Jaynes' reaction to this climate of opinion.

For his part, Jaynes was the first person to acknowledge that his theory fell short of proof. Jaynes even admitted in 1986 that there could be no controlled experiments to prove his contention of the recent evolution of consciousness and granted that the circumstantial evidence of the sort he musters from linguistics, archeology, theology, anthropology, literary studies, mythology and other disciplines would have to be the major means of persuasion.

Yet, at the same time, Jaynes had little patience for many of his critics. In an interview he boldly proclaims:

The great majority of scientists are rather skeptical about my theory, and that's quite the proper attitude for people to have. I have made a very impressionistic start, and in no sense do I think it's a finished theory. But when someone dismisses my theory out of hand and says there's nothing in it, I know perfectly well that they've never read my book. I run into this all the time. I'm afraid that I've had major reviews of my book written by people who never opened the book at all but just read other reviews, got what they felt were the major ideas and discussed these ideas. It's a sorry state of letters when this happens.¹⁰⁹

¹⁰⁶ Northrup Frye, "The View from Here," *Myth and Metaphor*, ed. by R.D. Denham, (Charlottesville: University Press of Virginia, 1990).

¹⁰⁷ *Ibid.*, 74.

¹⁰⁸ *Ibid.*

¹⁰⁹ Julian Jaynes, quoted in Gliedman, 114.

To rebut the growing criticism surrounding the work, Jaynes had planned a follow up volume, *The Consequences of Consciousness* to be published in 1984. It was to have examined the neurological theory of aptic structure and what makes an organism apt to behave in a certain way under certain conditions. Unfortunately, the book did not materialize. For his part, Jaynes did continue to work on consciousness and publish related articles. But no sustained counteroffensive was ever mounted to stem the tide of hostility within academe.

In the end, both supporters and critics tend to agree that Jaynes has at least broken new ground and advanced a fascinating avenue of research into the study of consciousness. As the Stanford University psychologist Ernest Hilgard noted, even as the skeptic marshals arguments against Jaynes' theory, "he has to think about matters he never thought of before, or, if he has thought of them, he must think about them in contexts and relationships that are strikingly new."¹¹⁰ Campbell concludes her analogy of Jaynes' thin-ice skating saying, "perhaps it is pointless to try to identify the speedily pirouetting figure and it is enough to relax and enjoy the spectacle—there are few such shows of dazzle and versatility in current psychology."¹¹¹ Sam Keen, philosopher and contributor to *Psychology Today*, writes:

You will argue with Jaynes on every page, even as you become more conscious of what your own consciousness is and is not. He will stretch your mind. His ideas crawl into your right hemisphere and you will see how patterns and watch the dance of evidence creating a new vision.¹¹²

Thus, although many hardheaded scientists look down upon such an enterprise, it is certainly one that at least a few scholars defend as a valuable part of our scientific enterprise more largely seen.

In sum, it is safe to say that Jaynes' *Origin* was attacked not only because it changes our understanding of consciousness, but also because it changes our understanding of a whole range of events in historic time. Jaynes reinterprets no less than the history of mankind, with the origin of consciousness as a central theme.

¹¹⁰ Ernest Hilgard, quoted in *ibid.*, 115.

¹¹¹ Campbell, 444.

¹¹² Keen, "Julian Jaynes," 67.

Jaynes' Legacy

“Ah yes, Julian Jaynes,” smiled the assistant in the book shop, “Have you tried under Alternative?”

“The public easily confuses people who fish in muddy waters with those who draw from deep wells.”

Nietzsche

In his review of *The Origin*, Mike Holderness asks, “How many students of cognitive science have read this deeply unfashionable book under, as it were, the bed-covers?”¹¹³ Well, it seems someone is certainly reading it, prompting Penguin to issue a third paperback edition in 1993. So just who is reading it?

Despite the reservation of the experts, and the audacity of the thesis, Jaynes' book has thus had a surprisingly long life in some respects. To this day, Jaynes continues to be cited in scholarly books and articles. Ranging from scientific studies on schizophrenia and hallucinations, to philosophy and psychology, Jaynes' views seem more or less to have held their ground in the face of such widespread condemnation. Moreover, you'll see it in bookstores and discussed on a number of websites.¹¹⁴ You certainly can't say that about many books about the brain that are drawing near twenty years of age.

Moreover, Jaynes' book and ideas have been the subject of at least two symposiums over the years. One was organized by the psychologist Sandra Witelson, and held at McMaster University in Hamilton, Ontario, in November 1983.¹¹⁵ The participants included Dennett, Miller, Ojemann, and Jaynes himself. The second, “Exploring the Concept of the Mind,” was held at the University of Iowa, in Iowa City, Iowa, in 1986.¹¹⁶ The participants included Richard Caplan, a DEO in Medical Humanities, Hilary Putnam, the respected philosopher, Antonio Damasio, the world-renowned neurologist, David Morris, former professor of English, Doris Grumbach, novelist and literary critic, D.N. Perkins, senior research associate in Education, and Maxine Greene, professor of philosophy.

¹¹³ Holderness, 39.

¹¹⁴ In fact, one book review site lists *The Origin* as the most well-liked book on consciousness in the last 20+ years (9.6/10)—above notable authors such as Dennett, Searle, Pinker, etc. Unfortunately, I lost the address.

¹¹⁵ The proceedings were published in *Canadian Psychology* 27:2 (1986).

¹¹⁶ The proceedings were published in *Exploring the Concept of Mind*, ed. by Richard M. Caplan, (Iowa City: University of Iowa Press, 1986).

One interesting aspect of Jaynes' theory, which has been studied and adopted by at least a few researchers, is the neurological base of religion. I came across a few researchers, including V.S. Ramachandran¹¹⁷ and Michael Persinger¹¹⁸, who adopt Jaynes' view of a brain-based God.¹¹⁹

Ramachandran claims he has always suspected that the temporal lobes, especially the left, are somehow involved in religious experience.¹²⁰ He further speculates that humans may have evolved specialized neural circuitry for the sole purpose of mediating religious experience. He claims that human belief in the supernatural is so widespread in all societies all over the world that it is tempting to ask whether the propensity for such beliefs might have a biological base.¹²¹ In the end, Ramachandran concludes:

We are still a long way from showing that there is a 'God module' in the brain that might be genetically specified, but to me the exciting idea is that one can even begin to address questions about God and spirituality scientifically.¹²²

Michael Persinger has also performed a number of experiments, which purport to have found a neurological basis for feelings of otherness akin to alien encounters and the presence of God. Persinger even stimulated parts of his own temporal lobes and found to his amazement that he experienced God for the first time.

Another area of research where Jaynes' influence is still felt is in the study of hallucinations. Here, Jaynes' pioneering work continues to be cited and studied—perhaps his most enduring scientific legacy. The Yale anthropologist Weston La Barre goes so far as to argue that, “a surprisingly good case could be made that much of culture is hallucination,” and that “the whole intent and function of ritual appears to be...[a] group wish to hallucinate reality.”¹²³ Louis

¹¹⁷ Neurologist Vilayanur S. Ramachandran, M.D., believes that somewhere in the brain's temporal lobe there may be neural circuitry for religious experience. He points to the fact that about 25% of patients with temporal lobe epilepsy are obsessed with religion. See Jamie Talan, “Religion: Is It All Head?,” *Psychology Today* 31:2 (April 1998): 8 ; and V.S. Ramachandran and Sandra Blakeslee, *Phantoms in the Brain* (New York: William Morrow and Company, Inc., 1998).

¹¹⁸ A professor of Psychology at Laurentian University, Sudbury, Ontario, Michael Persinger has written the book *Neuropsychological Bases of God Beliefs*, (Praeger Publishers: 1987). See also “Geophysical Variables and Behavior: LV. Predicting the Details of Visitor Experiences and the Personality of Experiments: The Temporal Lobe Factor,” *Perceptual and Motor Skills* 68 (1989): 55–65.

¹¹⁹ See also K. Dewhurst and A.W. Beard, “Sudden Religious Conversions in Temporal Lobe Epilepsy,” *British Journal of Psychiatry* 117 (1970): 497-507.

¹²⁰ Ramachandran and Blakeslee, 175.

¹²¹ *Ibid.* Similar views have been put forth by Francis Crick, *The Astonishing Hypothesis*, (New York: Charles Scribner, 1993); M. Ridley, *The Origins of Virtue*, (New York: Viking Penguin, 1997); and R. Wright, *The Moral Animal*, (New York: Random House, 1994). These authors, however, do not invoke specialized structures in the temporal lobes.

¹²² *Ibid.*, 188.

¹²³ Weston La Barre, quoted in *The Demon Haunted World*, by Carl Sagan, (New York: Random House, 1996), 105.

J. West, former medical director of the Neuropsychiatric Clinic at the University of California, Los Angeles, claims:

It appears that all human behavior and experience (normal as well as abnormal) is well attended by illusory and hallucinatory phenomena...Greater understanding of illusions and hallucinations among normal people may provide explanations for experiments otherwise relegated to the uncanny, “extra-sensory”, or supernatural.¹²⁴

Jaynes’ work has even been popularized in a few philosophical works, such as those of Dennett and Norretranders. For his part, Dennett incorporates Jaynes’ ideas into his own widely influential philosophy of mind and cognition. Dennett, who professes a fondness for the way Jaynes “carves up consciousness,” finds in Jaynes an elegant defense of the ‘top-down approach’ to consciousness. Moreover, Dennett sees in Jaynes the claim that for us to be the way we are now there has to have been a revolution—almost certainly not an organic revolution, but a “software revolution”—in the organization of our information processing systems.¹²⁵ Dennett thereby concludes that if this is Jaynes’ theory, as he believes it is, then it is no wonder that Jaynes had to be bold in his interpretation:

This is *software archeology*, and software doesn’t leave much of a fossil record. Software, after all, is a just concept. It is abstract, and yet, of course, once it is embodied has very real effects. So if you want to find a record of major ‘software’ changes in archeological history, what are you going to have to look at?¹²⁶

Jaynes has also been the subject of less scholarly and scientific works. Neal Stephensen, for example, has used the notions presented in *The Origin* in at least two science fiction novels: *The Big U* and *Snow Crash*. In *The Big U*, undergraduates revert to bicamerality under the influence of campus architecture.

Jaynes supporters now even have their own society, The Julian Jaynes Society, and website.¹²⁷ The society claims to be an international, multidisciplinary organization of over one hundred professors, scholars, students and others interested in the life and work of Jaynes. For a nominal \$5.00 fee, one can become a member and gain access to articles, essays, a Julian Jaynes chatroom (!), and other materials.

In some respects, then, it might appear that Jones is correct when he says that partisans of Jaynes’ theories adopt less strict criteria of evaluation. For, it seems that Jaynes and the bicameral mind have suffered the fate of every popular intellectual fad: distortion and misuse by

¹²⁴ Louis J. West, quoted in Sagan, 105.

¹²⁵ Dennett, 130.

¹²⁶ Ibid.

people who misunderstand it outright or exaggerate what it says about science. This has been the case, for example, in the application of Jaynes' theories to the "new age" groups and studies of consciousness hitherto mentioned by Jones and found on a number of websites. Jaynes, it seems, has become the poster-boy for alternative thinking in regards to science, psychology and philosophy of mind. One anonymous author proclaims the following on their website: "A person could make an excellent bet by wagering a hundred ounces of gold that Julian Jaynes' book, *The Origin of Consciousness*, will someday rank among the 20 most important books ever written."¹²⁸ Really? And when?

Yet, *The Origin* has appealed to academics and specialists alike. To then say that only "low-brow culture" or those of an opposing "cosmological orientation" find the book captivating and appealing is a bit heavy-handed and self-serving. Sure, there are people who have adopted Jaynes' arguments and theories in a fashion unbecoming of science, nonetheless there are those others who do recognize its flaws and yet proclaim it an important document in the search for the seat of the soul. Are these people mere post-modernists, those Science Studies and Strong Program adherents who advocate the social construction of scientific knowledge? Certainly not. They are respected and distinguished scholars and scientists. True, they do not toe-the-line on each and every piece of evidence amassed in *The Origin*—hell, Jaynes recognized the audacity of some his claims—but, they do see in Jaynes the bold elements of a revolutionary perspective from which to approach consciousness. That is, most partisans of Jaynes' work find it a welcome first stab in the dark, a pioneering effort into a vast, unknown territory. Thus, Jaynes is seen by many as a pioneer, a trailblazer, whose efforts have broken new ground and set the stage for further study of consciousness.

Nevertheless, Jones' piece is engrossing and immensely useful in examining key episodes in the history of science where opinion does differ on matters of assessing evidence. Moreover, at least as it seems in this case, the principal participants tend to agree on the validity of Jaynes' evidence and arguments. Where they differ concerns not matters of cosmological orientation, but the usefulness of the work in question. For his part, then, Jones goes a bit far in relegating Jaynes' claims as unscientific or "secular theology." But, then again, I may just have a differing cosmological orientation. Or is it those damn voices?

¹²⁷ <http://home.sprintmail.com/~marcel1/index.html>

¹²⁸ <http://www.neo-tech.com/zonpower/book/chapters/chapter28.html>

In any case, Jaynes' example has served a broader and much more important purpose than picayune discussions of *The Origins* scientific claims. In boldly setting forth his controversial hypothesis, Jaynes cleared the way for others to tackle the murky subject of consciousness. Following Jaynes' lead, then, an enormous literature on consciousness has arisen in philosophy, psychology, and neuroscience. Today, it is not difficult to see signs of this new "consciousness wave."¹²⁹ Within the last decade, especially, several influential books have taken on the issue of consciousness: Dennett's *Consciousness Explained* (1991), Colin McGinn's *The Problem of Consciousness* (1991), Owen Flanagan's *Consciousness Reconsidered* (1992), John Searle's *The Rediscovery of the Mind* (1992), Paul Churchland's *The Engine of Reason, the Seat of the Soul* (1995), Michael Tye's *Ten Problems of Consciousness* (1995), William Lycan's *Consciousness and Experience* (1996), and Stephen Pinker's *How the Mind Works*, (1997), just to name a few. Moreover, an overwhelming number of new books exclusively on consciousness are in the works and waiting in the pipelines of respected publishers.¹³⁰ In contrast, there were far fewer such books published between the 1960s and 1980s. Thanks at least in some part to Jaynes, then, consciousness has become the topic of the moment in the study of the mind.

For the most part, then, Jaynes is recognized not as a seer or prophet, but as a pioneer or trailblazer. In sum, philosophers, psychologists, neuroscientists, even the lay alike, are now asking, and, to some extent, answering Jaynes' questions: "This consciousness that is myself of selves, that is everything, and yet nothing at all—what is it? And where did it come from? And why?"¹³¹

On a more personal level, Jaynes was a popular teacher in the Psychology Department at Princeton University from 1966 to 1990, directing research and teaching courses in the history of psychology. However, he was hardly renowned there. In fact, after nineteen years of teaching at Yale and Princeton, Jaynes held the humble title of Lecturer, largely because of his indifference to academic politics.

For much of his later career, he was an itinerant professor, holding numerous positions as Visiting Lecturer or Scholar in Residence in departments of philosophy, English, and archeology, as well as in a number of medical schools. He was a NSF Lecturer in the history of

¹²⁹ Guven Guzeldere, Preface, *The Nature of Consciousness*, ed. by Block, Owen Flanagan, and Guzeldere, (Cambridge, Mass.: The MIT Press, 1997), xi.

¹³⁰ Ibid.

¹³¹ Jaynes, *The Origin*, 1.

psychology at the University of New Hampshire in 1968; Adjunct Professor at Hunter College from 1971-2; Scholar in Residence at Skidmore College (1973), Carleton University (1975), University of Waterloo (1977), Villanova University (1978), Emory University (1978), Rhode Island College (1978), and California Institute of Technology (1978); Aramco Lecturer at Luther College in 1979; and IBM Lecturer in 1979.

Throughout his career, Jaynes also belonged to a number of organizations and foundations. He was a Trustee of Mental Health Research Development Foundation, Honor Studies in Man's Future, Brain and Biological Research Center, and Archives of History of American Psychology. He was a member of the Eastern Psychological Association, founding chairman and member of Cheiron (International Society for the History of the Behavioral and Social Sciences), and a member on the Commission of Brain Sciences panel of the NRC from 1972-7. Jaynes was also the associate editor of *Behavior and Brain Sciences* and on the editorial board of the *Journal of Mind and Behavior*.

Single throughout his life, Jaynes spent most of his time hiking and taking trips to lecture on consciousness. He was frequently invited to lecture and held positions at other universities in North American and abroad. Jaynes retired from academic life and his monomaniac quest in 1990, alternately spending his time in Princeton and Keppoch, Prince Edward Island, where he had spent his summers at his family's summer home since childhood.

Conclusion

Intro to Psychology: The theory of human behavior...Is there a split between mind and body, and, if so, which is better to have? Special consideration is given to a study of consciousness as opposed to unconsciousness, with many helpful hints on how to remain conscious.

Woody Allen, *Without Feathers*¹³²

In the end, Jaynes search for the grail of consciousness was truly monomaniacal, devoting close to fifty years of his life to its study. He claimed, "I've been trying to solve the problem of consciousness all my life. Everything, including my reputation among specialists is second to that."¹³³ Indeed it was. Jaynes became increasingly isolated within the psychological community following the reception of his book. Seen largely as an iconoclast, Jaynes had few

¹³² Woody Allen's hypothetical college course catalog, *Without Feathers*, (New York: Ballantine, 1983).

¹³³ Jaynes, quoted in "The Lost Voices of the Gods," 53.

personal colleagues, associates or students. At conferences and meetings of the various organizations he was associated with, Jaynes felt himself equally removed from his peers. As a result, Jaynes withdrew from academic life, suffering bouts of depression and may even have become an alcoholic. In a somewhat tragic sense, then, the hostility to his work and his ideas caused Jaynes a great deal of professional and emotional tension.

Jaynes, 77, died on November 21, 1997, at the Queen Elizabeth Hospital in Charlottetown, Prince Edward Island. He had suffered a stroke. This once celebrated maverick of the psychological community died a lonely iconoclast.

Today, Jaynes' supporters agree that there are at present no easy answers to the big questions, and it will take radical rethinking of the issues before people can be expected to reach a consensus about the meaning and nature of consciousness. Yet, the questions explored here are so mysterious, so deeply enigmatic, that most serious scientists have simply shied away from them. Most scientifically minded people remain reluctant and uncomfortable talking about consciousness. And yet, these are the very issues that fascinate us most. As Dennett sees it, it is not premature, and, in fact, there is no other alternative but to start looking as hard as we can at consciousness first. Dennett thus praises Jaynes for his boldness, and for his speculation which plays an enormous role in science whether we like it or not. This is the reason why Jaynes is important and will be remembered. Dennett concludes,

Many of the factual claims advanced in Julian Jaynes' 1976 cult classic, *The Origin of Consciousness in the Breakdown of the Bicameral Mind*, are false. May were no doubt known to be false in 1976 (by researchers more up-to-the-minute than Jaynes), and much more were at best known to be unknowable—now and probably forever. How could one take such a book seriously? Because it ask good questions that had never been properly asked before and boldly proposed answers to them.¹³⁴

In 1988, *Life* asked Jaynes to contribute a comment on the meaning of life. His answer:

This question has no answer except in the history of how it came to be asked. There is no answer because words have meaning, not life, or persons, or the understanding itself. Our search for certainty rests in our attempts at understanding the history of all individual selves and all civilizations. Beyond that, there is only awe.

¹³⁴ Dennett, 121.

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