

Commentary on Frank S. Robinson's "How Old Is the Self?"

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Recently a coin collector named Frank S. Robinson wrote an article titled "Julian Jaynes: How Old Is The Self?," published in the magazine *Philosophy Now*, that contains a large number of egregious misunderstandings and misconceptions about Julian Jaynes's theory.

As I think I will show, Mr. Robinson clearly did not do his homework before writing this article. Because the article contains so many errors and misconceptions, tackling each one paragraph by paragraph will be easier than responding in essay form. Rather than fully expanding on each argument with all of the related evidence (which would quickly turn this into a book-length project), I will instead refer readers to the original research.

While some may question whether an article with this many errors is even worth responding to, I feel that it is important to address misconceptions whenever possible. If one person has these misunderstandings, chances are there are others who do as well. Furthermore, biased, one-sided articles may seem persuasive to readers unfamiliar with the subject matter unless a clarification is available. I've selected what I felt were the top 15 misconceptions from the article and addressed each one below.

I quote each critique above my response, but for those who want to read the original article in its entirety it is posted here: <http://fsrcoin.com/Jaynes.htm>

You can also read (as well as comment on) Mr. Robinson's related blog post here: <http://rationaloptimist.wordpress.com/2013/09/15/julian-jaynes-how-old-is-the-self>

Critique 1 - Consciousness and the Self

“... it does appear fairly certain that the self is not a particularized or localized brain module, but rather an emergent property of the system as a whole. It doesn't arise in computers because their system complexity is still actually orders of magnitude below ours. Jaynes is nevertheless arguing that you could have our level of complex mental functioning without the emergent property of self. Yet that's contradicted by the evidence of our own example, wherein the complexity does produce a self. Now, you might say a single example is weak evidence. However, it's actually seven billion examples. Complexity of mental functioning obviously varies greatly among humans; many don't read philosophy magazines, but even those people have a sense of self – virtually every single one, some of them dumb as boards. This is powerful evidence that mental complexity above a certain level must induce consciousness, and rebuts Jaynes's thesis that earlier people could have had one without the other.”

Response: Here Robinson advocates the view that introspective consciousness and the self (which he uses more or less interchangeably) are biologically based – something that many people tacitly believe despite the fact that there is no evidence to support it. He seems to be under the impression that all humans have a more or less identical, biologically based self-concept. He appears to be unaware that there is a large range of differences in the concept of the self among different populations. Consciousness and the self differ widely in, for example, various pre-literate societies, young children prior to full language acquisition, children who don't acquire language until a late age (i.e. Helen Keller, Genie, etc.), and autistic savants (i.e. Kim Peek), to name a few. It is not simply “system complexity” that produces consciousness, but language and culture. For a discussion of the relevant evidence for a cultural-linguistic basis for consciousness and the self, please see Brian McVeigh, “The Self As Interiorized Social Relations” and John Limber, “Language and Consciousness,” in [Reflections on the Dawn of Consciousness](#); my Introduction and Jaynes's “Imagination and the Dance of the Self” in [The Julian Jaynes Collection](#); David Foulkes, [Children's Dreaming and the Development of Consciousness](#), and Philip Zelazo, “The Development of Consciousness,” in *The Cambridge Handbook of Consciousness*.

Critique 2 - The Iliad

"... Jaynes's take on The Iliad seems wrong. He stresses how Achilles vacillated over killing Agamemnon until the Goddess Athena told him to. But what was this vacillation if not the working of his own mind? Was Achilles vacillating because a god told him to vacillate? Further, Jaynes says the vacillating is depicted physiologically – "gut churning," etc. – rather than mentally. But I think the Greeks understood such imagery as conveying something ultimately mental. I don't see Achilles portrayed as lacking a self."

Response: This last line is really just a statement of personal opinion or belief. The work of other scholars, such as the philosopher Jan Sleutels (see his "Greek Zombies" in [Reflections on the Dawn of Consciousness](#)) and Judith Weissman (see "Old Fathers and Absent Kings" in *Of Two Minds: Poets Who Hear Voices*) support Jaynes's view. Hesitation before taking action is not necessarily indicative of introspection – animals frequently hesitate between two or more options. The important point to Jaynes's theory is the general lack of introspection in the *Iliad*, and the prominent role of the gods in decision-making.

Furthermore, there is a great deal of evidence for bicameralism beyond the *Iliad*, much of which is outlined by Jaynes, as well as in later articles and follow-up works. If the Mycenaean Greeks were psychologically identical to us, there would be no need for gods, oracles, divination, etc. For example, see Herodotus, Book 6, and Phidippides' encounter with the god Pan, which was taken literally (not metaphorically); accounts of gods in the Epic Cycle; etc. There are accounts of interactions with gods cross-culturally throughout the ancient world that are taken literally by those who experience them – the gods are not just a "literary device" in the *Iliad*. For example, the evidence for bicameralism in the Old Testament (see James Cohn, [The Minds of the Bible](#)), personal gods that were ubiquitous in Mesopotamia, the appeals to the gods in the *Ludlul Bel Nemeqi*, references to gods in *The Epic of Gilgamesh* and various Sumerian texts, etc. In [The Intellectual Adventures of Ancient Man](#), Jacobsen notes, "The basic estate, the main temple with all its lands, was owned and run by the city god, who himself gave all important orders." In [Everyday Life in Babylon and Assyria](#), Georges Contenau describes how "wars were all started at the gods' command." Jean Bottero, in [Religion in Ancient Mesopotamia](#), describes how each person had a "personal god or goddess;" "the gods constantly intervened everywhere and participated in everything"; and "the gods expressed their will through their 'words' (amatu) and

their ‘commandments’ (qibitu).” For a modern example that is strikingly similar to what Jaynes describes in the ancient world, see Russell Hurlbert, “A Schizophrenic Woman who Heard Voices of the Gods” in [Gods, Voices, and the Bicameral Mind](#).

Critique 3 - Schizophrenia/Hearing Voices

“As to schizophrenia and the like, normal human consciousness is a phenomenon of such subtle complexity that it’s a wonder we can sustain it so stably through life, and easy to envision how it can be disrupted or go on the fritz, akin to a computer program getting corrupted. That doesn’t tell us the program evolved from a state of primordial corruptedness. Schizophrenia and hypnosis are both special mental states considerably removed from normal functioning. While it’s true that normal minds can hold delusions (as in religious beliefs), mass pervasive hallucination simply is not part of human experience. Likewise, though many believe God in some way directs their lives, that’s a far cry from being the veritable puppets of gods that Jaynesian bicamerals would have considered themselves.”

Response: Here Robinson articulates an outdated view of the auditory hallucinations commonly associated with schizophrenia – as the result of the normal brain going haywire. The discovery over the past three decades that auditory hallucinations are far more prevalent than was previously known, documented in a wide variety of populations and circumstances, and found on a spectrum throughout society (and not just in the mentally ill) no longer supports this view. Robinson appears to be completely unfamiliar with the past several decades of research on auditory hallucinations. For the relevant studies, please see my chapter in [Reflections on the Dawn of Consciousness](#); all of the books by Marius Romme & Sandra Escher; John Watkins, [Hearing Voices: A Common Human Experience](#); articles by Dirk Corstens; the Hearing Voices Network; and the articles on [auditory hallucinations](#) listed in the Supporting Research section of this website.

The fact that auditory hallucinations are now known to be widespread supports Jaynes’s theory that they previously served a functional role. Robinson also seems unfamiliar with the pervasive role that the gods played in the daily lives of ancient man. For example, all of the major decisions in ancient Mesopotamia were made by the gods. For more on this, see Frankfort [Kingship and the Gods](#), Frankfort, Wilson, Jacobsen, et al. [The Intellectual Adventure of Ancient](#)

[Man](#), Bottero, [Religion in Ancient Mesopotamia](#), and the selected quotes from these books in the previous response. The evidence Jaynes describes suggests that people did not attribute bicameral hallucinations to themselves. Modern voice hearers, although they have learned consciousness and developed a self, also frequently do not attribute their voices to themselves. This is thought to be because the voices are associated with the language areas in the right or non-dominant temporal lobe, rather than the left. For more on the experience of hearing voices, see Stevens and Graham [When Self Consciousness Breaks: Alien Voices and Inserted Thoughts](#).

Critique 4 - Hypnosis

“And while some people can be hypnotized, it’s absurd to hypothesize an entire population going about in that manner, outside of a zombie film.”

Response: Here Robinson is confusing Jaynes’s discussion of hypnosis *as a vestige of the bicameral mind*, and instead equating it with the bicameral mind. This is just poor scholarship or reading comprehension on his part. *Jaynes never suggests that people in bicameral civilizations were living in a hypnotized state.* I have already covered this misconception on the “[Myths vs. Facts](#)” page. Jaynes discusses hypnosis to illustrate that consciousness can be easily altered through language (and thus is likely to be a cultural and not a biological adaptation), and that we seem predisposed to relinquish control to an external, guiding voice (“the relationship of subject to operator in hypnosis is a vestige of an earlier relationship to a bicameral voice”). For more on this subject, and an expansion of Jaynes’s evidence that hypnosis is a vestige of the bicameral mind, see my article, “Hypnosis as a Vestige of the Bicameral Mind” in *Contemporary Hypnosis* (Vol. 29, Issue 3).

Critique 5 – Schizophrenia

“Bizarrely, Jaynes speculates that schizophrenia itself is an evolutionary adaptation, conferring certain alleged advantages on sufferers. But surely, from a survival and reproductive standpoint, it’s more advantageous to see the real world rather than a hallucinated one.”

Response: Jaynes accurately states that there is a genetic basis for schizophrenia, and discusses evidence for traits associated with schizophrenia that may convey evolutionary advantages (such

as greater stamina, sensory perception, etc.). For a related discussion, see Tim Crow, “Schizophrenia as the price that homo sapiens pays for language.” Here Robinson misleadingly implies that Jaynes suggests that being in a delusional state is advantageous to being in a rational state. He is either being intentionally deceptive and setting up a straw man to bolster his weak argument, or he is again confused and is equating the bicameral mind with schizophrenia, which Jaynes suggests is a *vestige* of the bicameral mind (similar to his confusing hypnosis as a vestige of the bicameral mind with the bicameral mind in Critique 4). I have also previously refuted this misconception on the [“Myths vs. Facts”](#) page.

Jaynes argues that the bicameral mind had a functional role prior to the development of introspective consciousness (to focus attention and as a form of social control); what is often termed schizophrenia (or more specifically, the auditory hallucinations and other phenomena commonly associated with the label of schizophrenia), is a *vestige* of this former mentality (or a “partial relapse”) in a modern, conscious person. They are two different things, and Jaynes is quite clear on this issue: “...the relapse is only partial. The learnings that make up a subjective consciousness are powerful and never totally suppressed.”

There is a great deal of evidence to suggest that auditory hallucinations are in fact a vestige of the bicameral mind: that they often comment on or command behavior, that they are often of religious or political leaders, that they emanate from the language areas of the non-dominant hemisphere and are perceived by the language areas in the dominant hemisphere (the neurological model for the bicameral mind), etc. I discuss this evidence in much greater detail in both [Reflections on the Dawn of Consciousness](#) and [The Julian Jaynes Collection](#).

Critique 6 - Hallucinations vs. Internal Dialogue 1

“Moreover, Jaynes is wrong to talk in terms of “hallucinations.” His ancients “hearing voices” were hearing their own thoughts, which were real, and that’s different from hallucinating nonexistent voices coming from outside (even though, obviously, they also originate within the person’s mind). Possibly one could imagine believing a “voices of gods” notion concerning inner voices that arrive suddenly, out of the blue, after a lifetime of silence (as with the hallucinated voices of schizophrenics). But in contrast normal people become aware of their own thoughts in early childhood, at least as soon as they learn language. And, from such an early age, when we

talk to ourselves, we know who is doing the talking, and do not ascribe the interior chatter to "the gods." Certainly humans would have been capable of such minimal mental sophistication long before 1000 BC."

Response: Again, Robinson is just stating his personal beliefs. Texts indicate that in the ancient world, individuals often experienced auditory and visual hallucinations that they did not attribute to their internal thoughts. The early Biblical prophets, Muhammad, and, more recently, Emanuel Swedenborg and Joseph Smith all had this experience. The evidence of personal gods, idols, and descriptions in ancient texts in Egypt, Mesopotamia, and elsewhere suggest that this experience was widespread. Similarly, the inhabitants of ancient civilizations experienced commands in what has been termed visitation dreams, which differed greatly from our modern, conscious dreams (see my Introduction and Jaynes's "The Dream of Agamemnon" in [The Julian Jaynes Collection](#)). We see evidence for both hallucinations and visitation dreams among preliterate tribes as well (see Levy-Bruhl, [Primitive Mentality](#)). For more on the external quality and often commanding nature of auditory hallucinations, see my chapter in [Reflections on the Dawn of Consciousness](#), Stevens and Graham [When Self Consciousness Breaks: Alien Voices and Inserted Thoughts](#), Russell Hurlbert, "A Schizophrenic Woman who Heard Voices of the Gods," Ralf Erkwoh, et al., "Command Hallucinations: Who Obeys and Who Resists When?", etc. Additional articles on command hallucinations can be found on the [Command Hallucinations](#) page in the Supporting Research section of the Julian Jaynes Society website.

Critique 7 - Imaginary Companions

"Jaynesian bicameralism would have had to start with a child's earliest thinking. That would bespeak a rather severe form of mental disorder for which there is no present-day parallel."

Response: Here Robinson appears to be completely unaware of the phenomena of imaginary companions, although Jaynes discusses the topic on pages 396-397. Robinson is probably also unaware of what have been termed "conscience-related" imaginary companions, which direct children's behavior (similar to the children's character Jiminy Cricket, and to voices that guided behavior in the bicameral era). So, contrary to Robinson's claim, there is a present-day parallel to bicameralism in children. Robinson also ignores Jaynes's arguments about the importance of culture or what he terms "the collective cognitive imperative" in whether or not the bicameral

paradigm is activated – parents today typically discourage their children’s voice-hearing. Apart from Jaynes’s theory, there is no compelling explanation for the continued widespread occurrence of imaginary (or hallucinated) companions in children. For a discussion of conscience-related imaginary companions, see Hilgard, [Personality and Hypnosis: A Study of Imaginative Involvement](#) and my article, “Hypnosis as a Vestige of the Bicameral Mind” in *Contemporary Hypnosis* (Vol. 29, Issue 3). For more research on imaginary companions, see my Introduction to [The Julian Jaynes Collection](#) and the [Imaginary Companions](#) page in the Supporting Evidence section of the Julian Jaynes Society website.

Critique 8 - Hallucinations vs. Internal Dialogue 2

“But even if Jaynes were right about all the hallucinating he postulates, he fails to explain why that would have been inconsistent with consciousness as we know it. While he does put much weight on deficits in the sense of self that schizophrenics often report, they don’t lack it entirely; even hallucinators are conscious and introspective to a considerable degree. Jaynes’s hypothesis, however, has hallucination *substituting* for a sense of self.”

Response: Again Robinson conflates modern voice hearers, who have learned consciousness but nonetheless hear voices, with the bicameral mind. Jaynes characterizes schizophrenia as a vestige of the bicameral mind, not as synonymous with the bicameral mind. Jaynes presents evidence for the lack of introspection in the ancient world through the analysis of ancient texts and the etymology of words that came to be associated with introspection. Michael Carr has documented a similar transition in Chinese words that initially had bodily referents and later came to have meanings related to introspection (see “The Shi ‘Corpse/Personator’ Ceremony in Early China” in [Reflections on the Dawn of Consciousness](#)). On this subject, see also Bruno Snell, [The Discovery of the Mind](#).

Critique 9 - Non-Conscious Decision Making

“How non-material thoughts translate into physical actions has also preoccupied philosophers. But when you decide to raise your arm, there’s at least a physical interconnection between your brain neurons and the nervous system transmitting signals to muscles. Notice that Jaynes’s

bicameral model lacks that interconnection between the god voices, supposedly directing action, and the muscles carrying it out. There'd have to be an intermediary – brain neurons that hear the god voice and decide to obey it, transmitting the command to the muscles. But what's really the difference between a god voice instantiating action, via a decision to obey it, and a thought doing essentially the same thing? Either way, there's a decision. And who is the decider? It still has to be a self, even if a self that's heeding god voices. Jaynes thus ultimately fails to banish the self after all. In his model, you'd still have had one, only you didn't know it. That's even more implausible than the idea of not having it at all. I think people would have been smart enough to figure it out pretty fast."

Response: Here Robinson seems to fall prey to the fallacy that consciousness makes up all mentality. Jaynes uses the example of a flashlight in a dark room to illustrate this point: wherever the flashlight points, it sees light, so assumes the entire room is lit. Similarly, we have the illusion that consciousness is involved in everything, while in reality it is only a very small portion of our mentality. The majority of behavior, then and now, is habitual and driven by the unconscious. Jaynes explains that consciousness actually *gets in the way* of most physical actions. On this point see also Tor Norretranders, [*The User Illusion: Cutting Consciousness Down to Size*](#).

In bicameralism, there is a god-side (associated with the right hemisphere) and a man-side (associated with the left hemisphere), and neither part is conscious. A person can respond to a command hallucination without introspection in the same way that an animal can respond to stimuli without introspection, or a person today can respond to an unconscious impulse without introspection, or a hypnotized person can respond to a suggestion without introspection. The evidence from split-brain research suggests that much of our decision making is unconscious, with consciousness often rationalizing behavior after the fact.

The evidence Jaynes describes suggests that people did not attribute bicameral hallucinations to themselves, but to their chief, king, or the gods. Similarly, modern voice hearers, although they have learned consciousness and developed a self, also typically do not attribute their voices to themselves, but to external sources – often contemporary religious and political leaders. See Stevens and Graham [*When Self Consciousness Breaks: Alien Voices and Inserted Thoughts*](#) and the literature on [command hallucinations](#). On the complex subject of non-conscious decision

making and action outside of awareness, I recommend reviewing the split-brain research by Gazzaniga and Bogen in Robert Ornstein, [*The Nature of Human Consciousness: A Book of Readings*](#) and Tor Norretranders, [*The User Illusion: Cutting Consciousness Down to Size*](#).

Critique 10 - Pre-Bicameral Mentality & Art

Jaynes seems to say that bicameral minds, with hallucinations of god talk, actually emerged at the beginnings of civilization (around 10,000 years ago), as a form of social control as communities became larger than tribal bands, with the god voices evolving from the actual voices of kings, and then of dead kings (who merged into gods). This begs the question of what sort of mental life *preceded* bicameralism, and on this Jaynes is remarkably silent. If people had selves before bicameralism, is it reasonable to suppose they'd give up those selves and their understanding that their inner voices were their own? And if so then obviously Jaynes can't claim a later origin for introspective consciousness. One is left to infer that before civilization, people were not even bicameral, with consciousness even more impoverished than that. Yet archaeological evidence shows that even pre-agriculture and pre-civilization, humans led quite sophisticated lives with plenty of technology and artisanship. Language goes back tens of thousands of years, and it's hard to imagine the people who developed and used it didn't know when they were talking to themselves. We've found jewelry 80,000 years old, and it's hard to understand such adornment if wearers had no sense of self."

Response: Jaynes suggests that the bicameral mind most likely evolved along with the evolution of language in the late Pleistocene, beginning around 50,000 BC (see Jaynes, "The Evolution of Language in the Late Pleistocene," in [*The Julian Jaynes Collection*](#)). Jaynes briefly addresses the question of whether humans could have lost consciousness prior to bicamerality on pages 346-347 of [*The Julian Jaynes Collection*](#), suggesting that all of the relevant evidence makes this scenario highly improbable. Earlier, pre-linguistic people would have been intelligent and able to problem-solve, but lacked language or an introspectible mind-space. Jaynes outlines quite clearly how consciousness is not necessary for tool making, cave art, or even problem solving. On the evidence for consciousness being unnecessary for cave art, see Nicolas Humphrey "Cave Art, Autism, and the Evolution of the Human Mind" and Julian Jaynes, "Paleolithic Cave Paintings as

Eidetic Images" in [The Julian Jaynes Collection](#). See also Helen Keller's autobiography, [The World I Live In](#), for descriptions of mental life before language.

Critique 11 - Bicameralism in Other Cultures

"Importantly, Jaynes is also conspicuously silent about any human communities outside the Near East and Mediterranean areas (apart from a throw-away speculation that the Spaniards so easily rolled the Incas because the latter were still non-conscious bicamerals). But as for how the Chinese, black Africans, and many other peoples, became conscious, Jaynes has no answer. Certainly his arguments invoking social upheavals 3,000 years ago would have no applicability in those other regions with very different histories."

Response: Jaynes focused much of his research on Egypt, Greece, and Mesopotamia. Evidence for bicameralism can be seen worldwide, for example in Mesoamerica and places like Eastern Island, with the large (and otherwise inexplicable) *moai* serving as hallucinatory aids. Different cultures likely transitioned to consciousness at different times. Jaynes did not speak Chinese, but the sinologist Michael Carr has meticulously documented the evidence for bicameralism in early China in a series of articles (available in the Member's Area) and in a lengthy chapter titled "The *Shi* 'Corpse/Personator' Ceremony in Early China" in [Reflections on the Dawn of Consciousness](#). Here again, Robinson failed to do his homework.

Critique 12 - Transition from Bicamerality to Consciousness

"And even his discussion of historical upheavals in his own region of concern is cursory. He does cite some particulars, like the volcanic explosion of Thera (Santorini). Yes, that must have been devastating. Likewise wars and invasions. But life in ancient times was pervasively tumultuous, difficult, and much more violent than we are accustomed to. Jaynes fails to make a case that there was something so uniquely unsettling about the times around 1000 BC that it wrenched human minds into a whole new functionality. Jaynes asserts that introspective consciousness is something we learned at that juncture; thus it was not even biologically evolved. He's probably forced into this position because it's implausible that *biological*

evolution could have happened so fast (even with a “punctuated equilibrium” scenario). But it makes far more sense to see our consciousness as a biological adaptation occurring far earlier.”

Response: Jaynes derived his timing for the transition from bicamerality to introspective consciousness not based primarily on the pressures that would have precipitated this transition but on the evidence that this is when introspective consciousness emerged. This evidence includes: the “cognitive explosion” of Greek philosophy; the first emergence of introspective words and language; the emergence of historical thought (see Chester Starr, [*The Awakening of the Greek Historical Spirit*](#)); the Axial Age and the merging of many gods into the concept of one god (see Bellah, [*The Axial Age and Its Consequences*](#)); visitation or bicameral dreams transitioning to modern, conscious dreams (see Ch. 20, [*The Julian Jaynes Collection*](#); E.R. Dodds, [*The Greeks and The Irrational*](#); and William Vernon Harris, [*Dreams and Experience in Classical Antiquity*](#)); the emergence of sexual fantasy (see Ch. 14 of [*The Julian Jaynes Collection*](#)); etc. If introspective consciousness is biologically based (as Robinson suggests), what can account for the major psychological transition between 1200 – 1000 BC? Things like dreams and sexual fantasy would have remained unchanged, and historical, philosophical, and scientific thought should have emerged tens of thousands of years ago.

Critique 13 - Consciousness as Biological

“Again, while Jaynes theorizes that it was triggered by a spate of unusual stresses 3000 years ago, it was always a terrible struggle for early humans to stay alive. Creatures either evolve traits to cope with their environments or die out. Intelligence and consciousness are useful adaptations, evolved to at least some degree in many creatures; a sense of self helps because it makes the animal care what happens to it, and act accordingly. Homo Sapiens is simply the most extreme example of these adaptations. It seems likely that we evolved our especially big and introspective brains to facilitate the complex social cooperation that figured so large in survival for our early forbears. The environmental pressures propelling this uniquely extreme fluke of evolution must have been correspondingly extreme, for us creatures bereft of other assets. In other words, we got our minds to cope with a terribly hostile, danger-filled, stressful environment – long, long before 1000 BC.”

Response: This again is just a statement of belief, unsupported by evidence. Robinson again is overemphasizing the role of consciousness, or confusing Jaynes's definition of consciousness with more vague, broad definitions (i.e. sense perception, all learning, etc.). There is simply no evidence to support Robinson's belief that introspection is tens or hundreds of thousands of years old. Regardless of survival pressures, language had to evolve to a certain level of complexity to allow for the creation of a mind-space – a metaphorically-based analog of the physical world. For the vast differences between consciousness as described by Jaynes, Dennett, Carruthers, Vygotsky, and others – which is linguistically based and uniquely human – vs. non-linguistic animal cognition, see Peter Carruthers, [Language, Thought and Consciousness](#), Jose Luis Bermudez, Ch. 9, "The Limits of Thinking Without Words," in [Thinking without Words](#), Lev Vygotsky, [Thought and Language](#), Daniel Dennett, [Kinds of Minds](#), etc.

Critique 14 – Morality

"Perhaps most insufferable of all is Jaynes's suggestion that a human sense of morality could not have predated the first millennium BC, with "the true beginning of personal responsibility." He's off by a factor of hundreds. There is ample evidence that an instinct for morality, justice, and even altruism is deeply wired into us by evolution, an adaptation responsive to the environment faced by our earliest ancestors, where it would have been advantageous for group survival. Indeed, a rudimentary moral sense is even found in non-human animals."

Response: There are significant differences between innate concepts of right and wrong seen in primates and other animals and our modern conscious understanding of morality and ethics – and capacity for long term deception – which is the distinction that Jaynes makes. While some primates have a primitive sense of right and wrong, they cannot act morally or immorally. Only conscious human beings have that capacity. Robinson fails to see this distinction. For further discussion see pages 307-308 and 350-351 of [The Julian Jaynes Collection](#), pages 275 and 286-287 of [The Origin of Consciousness in the Breakdown of the Bicameral Mind](#), Chapter 5 in James Cohn, [The Minds of the Bible](#), and Daniel Dennett, "Julian Jaynes's Software Archeology."

Critique 15 - Ancient Civilizations

“Anyone who studies deeply the earliest civilizations must come to realize that far more unites us with them than differentiates us. These ancestors of ours, only a few hundred generations past, who first figured out how to plant and harvest crops, who domesticated animals, built villages and then cities, created writing and literature and music and art, invented government and law, launched great projects of architecture, exploration, trade and conquest, and laid the foundations of science and mathematics, could not possibly have done all this with minds that functioned in the primitive – in fact, downright silly – manner Jaynes postulates. His theory offensively belittles those people and their stupendous achievements. All our subsequent accomplishments build upon theirs; they themselves did not have the benefit of following such trailblazers, they had to build from scratch.”

Response: There is nothing offensive about it. The underlying issue here is that Robinson either misunderstands or disagrees with Jaynes’s discussion of consciousness (*Origin*, Chapters 1-2) and, as many people do, ascribes too much importance to consciousness in the problem solving process. On this subject I also recommend Tor Norretranders, [*The User Illusion: Cutting Consciousness Down to Size*](#). The bicameral mind is not a “primitive mind,” as Robinson calls it (indicating he did not understand Jaynes’s explanation), but a non-conscious mind, or a mind that lacked introspection. Problem solving in the bicameral era is simply done without introspection. This is still largely the case today. The majority of human behavior is habitual, and most problems are solved unconsciously, as is often described by scientists. For one example (there are many others), see “[Richard Feynman – No Ordinary Genius](#)” on YouTube and watch from 52:32 – 53:20. Solutions to complex problems often come in a flash of insight. Again, unconscious problem solving would also have been present in the bicameral period. For example, there are accounts in Mesopotamia of the building plans for a temple coming as a vision in a dream. Many of the achievements of ancient civilizations Robinson celebrates are also accomplished (on a smaller scale) by insects such as ants and bees – things like complex social organization, residence building, farming, etc. (see [*Reflections on the Dawn of Consciousness*](#), pages 111-112).

Critics of Jaynes simply attribute too much importance to introspective consciousness, incorrectly believing it is involved in all cognition, learning, and problem solving. See also

Dorfman, Shames, and Kihlstrom, "Intuition, Incubation, and Insight: Implicit Cognition in Problem Solving." As far as the similarities with ancient civilizations, this is what Jaynes referred to as the presentist fallacy: overemphasizing the similarities of historical cultures while minimizing the differences (especially the psychological differences). Anthropologists and historians generally do not concern themselves with psychological differences, focusing instead on artifacts and practices. Descriptions of personal gods in Egypt and Mesopotamia, as well as many other aspects relevant to Jaynes's theory, are typically noted by mainstream historians without further comment or any insights into the larger psychological implications. We are predisposed to categorize things that appear the same as being the same, so since the inhabitants of ancient civilizations looked like us, there is a tendency to assume that they were also psychologically identical to us, yet this is not the case. It is very hard for us to imagine a city where the entire leadership consisted of gods, who made all of the important decisions, and who conveyed these orders in hallucinations and dreams to the priests. Yet this was the case in Mesopotamia (see the books referenced in the response to Critique 3, above).

People psychologically similar to us would have no need for these elaborate machinations, indeed no need for the huge pantheons of gods, or idols, oracles, divination, etc. If we take a step back, all of these practices are a mystery without Jaynes's theory. The transition from bicamerality to consciousness likely took place over many generations, with different features of consciousness emerging at different times and in different places, rather than simultaneously. Further evidence for bicameralism (as well as similarities with ancient civilizations) is seen in pre-literate societies (see my Introduction to [The Julian Jaynes Collection](#) and Lucien Levy-Bruhl, [Primitive Mentality](#)). Further evidence for the learned, linguistic nature of introspective consciousness is seen in child development studies (see my Introduction to [The Julian Jaynes Collection](#), David Foulkes, [Children's Dreaming and the Development of Consciousness](#), and Philip Zelazo, "The Development of Consciousness," in [The Cambridge Handbook of Consciousness](#)).

Final Thoughts

In writing this article, Frank Robinson clearly did not do his homework. He is apparently oblivious to the fact that Jaynes's neurological model for the bicameral mind has been shown to

be accurate by dozens of brain imaging studies over the past 14 years (for the relevant studies, see my chapter in [Reflections on the Dawn of Consciousness](#) and my Introduction to [The Julian Jaynes Collection](#)), as he makes no mention of it whatsoever in his article – or any other new evidence for Jaynes’s theory for that matter. He doesn’t seem to be familiar with the last three decades of research on [auditory hallucinations in various populations](#), [command hallucinations](#) that direct behavior, or the higher than previously known incidence of [imaginary companions](#) in children – despite the fact that I’ve conveniently organized all of this information in two books as well as the Supporting Research section of this website. In writing this article, wasn’t Robinson curious to learn how Jaynes’s theory has developed over the past 35 years since it was first published? – a literature review is one of the most basic principles in academic writing. Surprisingly, this doesn’t seem to be the case – we see no evidence that he’s read anything other than Jaynes’s original book (his single reference is to a quote by Richard Dawkins from [The God Delusion](#)).

Following in the footsteps of previous critics of Jaynes’s theory, Frank Robinson fails to offer alternate explanations for any of the otherwise mysterious phenomena Jaynes’s theory explains: the widespread occurrence of auditory hallucinations in normals today; command hallucinations; imaginary companions in children; monumental mortuary architecture; a right temporal lobe locus of auditory hallucinations, a feeling of a sensed presence, and religiosity; the ubiquity of gods and idols in the ancient world; the shift from visitation or bicameral dreams to conscious dreams that coincides with the development of consciousness; etc. For more on this subject, see: [Ten Questions Critics Fail to Answer](#).

The larger lesson we can learn from Frank Robinson’s article is that subjects that we are not entirely familiar with are generally more complex than we first realize. We must resist the common impulse to make snap judgments and feel the illusion of mastery for subjects we don’t fully understand. By prematurely making up our mind about a topic we are unfamiliar with, we risk the tendency to oversimplify and to only seek evidence that confirms are existing beliefs.