

# Thomas Forster Tries to Understand Julian Jaynes

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In “The Origin of Consciousness in the Breakdown of the Bicameral Mind” Jaynes argues *inter alia* that the humans of the earlier urban civilisations lacked an important kind of consciousness that we now have. Peter Lipton said to me that everyone agrees that there are two good ideas in Jaynes’ book, but added that no two people can agree on what those two ideas are. My recent discovery of Graham Macdonald’s copy in the Honours room has spurred me to read it, and to offer a kind of book-club style presentation whose purpose is neither to attack nor defend but merely to try to understand what claims are being made.

I want to start off by emphasising that I am not proposing to take sides on the propositions expressed in this book. I’m an intellectual. Ideas are my trade. Show me an idea and I’ll taste it. Belgians are foodies; my much-loved NFiste colleague André Pétry lives out in the country. Once when I was staying with him the field opposite his house delivered overnight a vast harvest of a kind of particularly delicious toadstool called *coprina comatus*, a delicacy regrettably of incontestably phallic appearance known to English country people as *Old man’s tool*. Most people I have met express shock and horror at being asked to eat it. Not so André. No Belgian will allow anything to get in the way of a new taste experience. It is the same with me and ideas.

I want to thank various philosophical colleagues for help in working through this book, Ismay Barwell, Dennis Robinson, Philip Catton, Max Cresswell, Derek Browne, and Charles Pigden—so far! Some of you have been unkind enough to suggest that the ‘book-club-style’ waiver in the blurb is a cop-out “don’t expect me to defend anything”. This is of course true, but I hope to be able to thank all of you here, in later versions of this document, for this is definitely work-in-progress. As well as the inevitable unknown unknowns, there are plenty of things that I already know that I need to look up.

Jaynes is (was, he’s dead now) an academic psychologist, at Harvard. His principal thesis is a psychological one. It is that until about 3000 years ago humans were not conscious in the way that we are now, and that much of the information that we acquire by introspection was acquired by our predecessors by listening to hallucinated voices that reported to them the result of investi-

gations undertaken by their right hemispheres. They then did what the voices told them to do. People described the voices as being the voices of Gods. Each person probably had their own God (p 183), who looked out for them, but they also heard voices from other—more public—Gods. One such public God would be the local King or headman. (There is a feminist literature on why the Gods in this scenario are all male but i haven't been able to get hold of any of it so far.)

Speech, as we all know, is normally located in the left hemisphere; the corresponding areas of the right hemisphere have some language capacity, and it is known that electrical stimulation of those areas in awake adults will result in their reporting auditory hallucinations—typically of voices. Jaynes' thesis is that for a long time it was by this means (attending to hallucinations) that the speaking hemisphere acquired information from the “silent” hemisphere. The word he uses to describe this kind of mental organisation is the ‘bicameral’ of the title.

If this sounds too much like fashionable tosh about left-hemisphere versus right hemisphere (“Drawing with the right side of the brain” and so on) be patient and give it a chance. (It may be worth mentioning that lateralisation of brain function is clearly seen even in quite primitive vertebrates; see [6])

If, like me, you once worked in a psychic hospital you have lots of jokes about hallucinations (there are some in R.D.Laing: The Politics of Experience and The Bird of Paradise). Here is a rather good one . . .

*Dring-dring, dring-dring . . .* Welcome to the Psychotherapy hotline!

- If you do not have a touchtone telephone, or are in denial, replace the receiver now;
- If you are co-dependent get someone to press button 1 for you;
- If you are obsessive-compulsive press button 2 repeatedly;
- If you have multiple personality disorder, press buttons 3, 4 and 5;
- If you are manic press all buttons simultaneously;
- If you are paranoid there is no need to press any button: we know who you are and what you want, so just hold the line so we can trace the call.
- If you are schizophrenic listen carefully to the voices and they will tell you which button to press.
- If you are depressive there is no point in pressing any button: nobody will answer.

He accompanies this by quite a lot of interesting and suggestive historical chat: Jaynes may—in the final analysis—be a nutter, but if he is one he is a well-read, well-informed and thoughtful nutter... and he writes good prose: the book is a delight to read.

## 1 Language

His date for the origin of language (15-20K years ago) is much later than the modern view, which puts it 70,000 years earlier—possibly simultaneous with the emergence of *homo sapiens sapiens*. (See [3]). There does not seem to be general agreement about whether or not the Neanderthals had spoken language of the sort we have.

I'm not sure that his views about the emergence of language have any bearing on his theory of hallucinations one way or the other.

### 1.1 Writing

It's generally agreed that the first writing was *mnemonic*. (I seem to recall that my father once wrote an article on this subject: [2].) That is to say it was designed to remind people of information they already had, rather than to convey novel information. Jaynes' distinctive suggestion (in this context) is that we recovered the information from the writing by means of auditory hallucination.

Children initially learn to read aloud and there are people who never progress beyond that stage to silent reading. (It is unkindly said of Barbara Cartland that she writes for people who have to read aloud).

## 2 Hallucinations

It was well-known way back before the flood when i was doing my EEG training that sensory deprivation can result in hallucinations, and there is a very attractive explanation for this: The CPU, deprived of input, winds up the sensitivity on its feature extractors until they are sensitive enough to be triggered by random peaks in background noise on whatever channel it is, and the output—*artefactual* output—of the feature-extractors is experienced by the subject as a hallucination in that modality. The old textbooks from my day mention hypnagogic auditory hallucinations as being entirely within normal limits. What seems to be new since 1976 is the realisation that non-hypnagogic auditory hallucinations seem to be normal too. (N.B. it is *auditory* hallucinations we are talking about, not visual hallucinations: I have often been struck by how often in the psychiatric literature and practice one hears of auditory hallucinations and how rarely one hears of visual hallucinations.) Also see [1], those hallucinations are often of music not voices.

(Denis Robinson's story). Catherine Blake hallucinated William's voice to the end of her days [citation?] and although she was probably fully as batty as he was there is no suggestion in her case or his that there was any *psychiatric* problem.

It sounds as if the ability to experience auditory hallucinations is a hangover that is still present in some people, a bit like defunct wiring in an old house; the cables are still there and some of the switches, but they no longer do anything. (Jaynes appears not to know of any function routinely discharged by the Wernicke's area of the silent hemisphere tho' my guess is that by now fMRI and PET scans have told us something. These technologies have arisen since this book was written; i am not up to speed with this.) Being no longer useful, the circuitry that supplies these phenomena is routinely inhibited, but can be rebooted if the physiology runs right. (*Hibernation*, and *Diving reflexes* may be other examples of physiological tricks that lie dormant for most of us most if not all of the time.) The odd brain chemistry of hypnagogic states (it's in transition, after all between two stable states and funny things can happen at phase boundaries) is in many people enough to trigger auditory hallucination. (The obvious parallel that occurs to me is the epileptic fit. It's part of the "normal" repertoire of human behaviour—except that it isn't normal, so that's not a good illustration). What can switch hallucinations on? The brain has various populations of neurons: some respond to dopamine, some to serotonin, some to  $\gamma$ -amino-butyric acid, and so on. In physiological crises where homeostasis goes wrong the system malfunctions globally in a manner reflecting the imperfect working of those parts of it that are most sensitive to whatever it is whose regulation has gone awry. So a *general* intoxication can produce *specific* symptoms. Perhaps to be schizophrenic is something banal like having a population of inhibitory neurons being undersupplied with their totemic brain amine. Theories of this kind have been floated: for example that it was underactivity of serotonergic neurons that was behind simple schizophrenia. I think that is no longer the theory *du jour* but—if Jaynes is right—then something like it could well be true.

(To try to understand how varying levels of chemicals might affect brain function think about what life would be like if the behaviour of the operating system on your laptop depended on temperature. The O/S processes information, but we don't think of the temperature of the laptop as information for it to process. Very hard to give a decent semantics for that kind of system).

Presumably (tho' he doesn't say this) we have had the capacity to hallucinate speech (as opposed to sounds in general) as long as we have had language. Jaynes' suggestion is that the ability of people to hallucinate the voice of the clan chief or  $\alpha$  male was useful in ensuring persistence of individual effort in the pursuit of major common tasks, particularly when the clan member is remote from immediate supervision. Without the hallucinated voice of the  $\alpha$  male ("team leader") individual workers would be as distractible as we all know lower animals to be. When we were just meandering omnivores like chimpanzees and gorillas (and bushmen, to this day) there was no need for integrated planning and concentration on prolonged tasks, and we could safely be as distractible

and laid back as they are. When we discovered agriculture there were jobs to be done that took more than a few minutes so we needed a mechanism to ensure persistence, and then the ability to hallucinate voices became useful. Birds spend a long time building nests, and beavers a long time building dams, but presumably the reason why they can engage in this protracted purposive activity without hallucinating commands from  $\alpha$  beaver or parrot-wife is that the behaviour is innate. (Long-distance bird migration is protracted but it is less of a problem.)

Jaynes makes the point that the voice-of-the- $\alpha$ -male that kept the worker up to the mark was not necessarily a verbatim recording of the  $\alpha$ -male's commands. The voice would interpret and elaborate on those commands. What worried me slightly is that if hallucinated voices from his/her right hemisphere are the manner in which the worker was kept on the job, we have to explain why this internalisation-and-elaboration of commands couldn't be done in the left hemisphere without any need for an intermediary. Presumably this is something to do with the innate capacities of the left hemisphere. Forward planning is generally done in the frontal lobe: perhaps it's only in the right frontal lobe. However, Jaynes' hypothesis is that the auditory hallucinations arise in the right temporal lobe (It's Wernicke's area that he thinks is responsible) not the right Broca's area (which is in the frontal lobe). I need to do some more reading.

Biologists have the concepts of an *exaptation* which is a feature that is evolved to serve one purpose (forgive the teleospeak) but which is then co-opted for another. Standard examples are the reptilian bones of the jaw that get adopted for the middle ear by mammals. Our ability to do mathematics is an exaptation of various syntax modules and modules that do trivial combinatorics ("Are any of my babies missing?") The ability to get embroiled in fictional worlds is an exaptation of our ability to conduct thought-experiments as apart of forward planning. I think the expression has come into being since Jaynes' book but i imagine Jaynes would have said that bicameral man's use of hallucinated voices for the purposes Jaynes proposes is an exaptation of our ability to experience hallucinations (itself probably a design flaw) that suddenly became useful once we had languages and could therefore hallucinate speech as well as birdsong and the sound of lions' footsteps in the dark.

### 3 Metaphor

Another thesis of Jaynes is that consciousness arose from metaphorical descriptions of mental life.

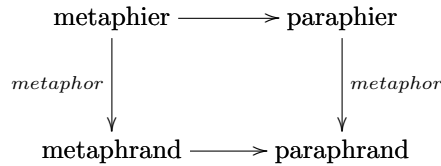
Jaynes' coinages: A metaphor has two components, a **metaphrand** and a **metaphier**. His example is:

Snow blankets the ground.

The metaphrand here is the completeness and thickness of the snow cover; the metaphier is the blanket. Now the appeal of this metaphor lies in the

associations of the word ‘blanket’. such as: warmth, security, sleeping until it’s time to be awakened etc.

He calls these associations **paraphiers**. To what aspect of the metaphrand do these paraphiers correspond? To the **paraphrands** (of the metaphrand).



In this case one of the paraphrands would be—for example—the thought that the land is asleep until spring, that sort of thing. Some metaphors give rise to more paraphrands than others. Jaynes gives the example of a bow of a ship being said to *plough the sea*. The paraphrands here would be thoughts about how the sea is like a field of crops or something of that nature. As Jaynes says, this particular example doesn’t seem to lead anywhere.

A metaphor might appeal to us precisely because it captures/evokes paraphrands very easily and smoothly. However a metaphor might instead suggest lots of novel paraphrands that weren’t there before and thereby prod us to see the metaphrand in a new way. J is suggesting that this is what happened with visual metaphors (“I see the solution”) applied to mental processes.

**The thesis then is that consciousness is the bundle of paraphrands that we obtain by using visual metaphors to describe mental processes.**

But if consciousness arises from metaphorical use of language to describe mental states, what kind of non-metaphorical language was available for describing mental states? What sort of mental state could Bicameral Man describe? There were some, or at least there were *physiological* states. Any mental or physiological state that could be detected by exteroceptors (and which could be detected in others) could be detected in oneself. Pulse racing, cold sweats, the four F’s . . . Jaynes seems aware of this, tho’ he does nothing to flesh it out . . . see tho’ the discussion of metaphor concerning *phrenes* around p 265

## 4 Consciousness

Jaynes has a very restricted concept of consciousness, so that when he says that four thousand years ago humans were not conscious his claim isn’t as implausible as it might sound.

Judging which of two weights is heavier: Marbe’s experiment and Watts’ experiment. (p 39)

“If we are out walking, and two roads diverge in a wood, and we know that one of them comes back to our destination after a much more circuitous route, we can “traverse” that longer route with our analogue ‘I’ to see if its vistas and ponds are worth the longer time

it will take. Without consciousness with its vicarial ‘I’ we could not do this.”

If they aren’t conscious how can they use first-person singular verbs? Washoe certainly learnt to use correctly—to denote herself—the ASL symbol<sup>1</sup> her minders used for denoting her. Was Washoe conscious? Perhaps people can successfully use languages with first-person pronouns even if they are bicameral in Jaynes’ sense. There are first person narratives in *The Tale of Wenamun* (see [4]) which comes from the period of Ancient Egypt said by Jaynes to be bicameral.

Conversation with Denis Robinson: we never introspect content, we only introspect representation. “The final step cannot be overseen”. Dennett has the expression “original intentionality”.

dfn p 75.

... he had no awareness of his awareness of the world: he had no internal mind-space to introspect on. [...] Volition, planning, initiative is organised with no consciousness whatever and is then “told” to the individual in his familiar language, sometimes with the visual aura of a familiar friend or authority figure or “god” or sometimes as a voice alone. The individual obeyed these hallucinated voices because he could not “see” what to do by himself.

p.85

He uses the illustration of driving a car or (for me!) riding a bike. I think we all know/accept that much of this activity is in a clear and uncontroversial sense unconscious; people often appropriate the word ‘autopilot’ to describe their experience/control in these contexts. All the while your consciousness is directed elsewhere. J says that in the old days *all* your actions were like that. You were permanently on autopilot. Every now and then something not routinely forseen would be encountered: as it might be a flat tyre, a police road block, a stalled engine. That is when we apply our conscious minds to the situation. Bicameral man would wait for a voice from the right hemisphere.

I don’t drive a car; for me the obvious illustration is playing a piano piece that i know well. I am only too well aware (‘aware’? joke—joke!!) how this action is not conscious, and how conscious attention can only bugger it up. (tho’ i used to do a lot of acting and i never took a prompt—what is the difference?).

What leaves me slightly uneasy about these examples is that altho’ they are—we are agreed—unconscious in some suitable sense of ‘unconscious’, each of them was not always so. There was a time when playing my piano piece was definitely the work of a higher cortical centre and required conscious attention—when i was learning it. So my question is: did Bicameral Man have the kind of consciousness that i needed in order to sight-read my piece off the page when i started learning it? Presumably ... so how does that kind of consciousness differ from the kind of consciousness Bicameral man is supposed by Jaynes *not* to have?

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<sup>1</sup>Three erect middle fingers like Churchill’s Victory sign but with three fingers.

## 4.1 Deceit

At several points (e.g., p 72-3) Jaynes says that bicameral man was incapable of deceit. (No thieves in Inca cities p 160) but we need to clarify what sort of deceit is envisaged here. *Pan Troglodytes* are capable of deceit. Jaynes uses the example of female chimps wiggling their bums at males in order to distract them in order to steal their food, or filling their mouths with water and then beckoning a disliked zookeeper whom they will then squirt. He says this is not the kind of deceit he is interested in.

Chimps can suppress their reactions to discoveries of food caches in order to keep the spoils for themselves. Perhaps a better word for this is *dissembling*<sup>2</sup>. Dogs famously cannot dissemble in this way. Derek Browne tells me that the characteristic pose of dogs used to invite play-fights (forepaws out, thorax touching the ground, bum in the air) is never used by dogs to lull a victim into a false sense of security the better to launch on them a genuinely vicious attack.

Surely Jaynes is not suggesting that Bicameral man was like dogs in this respect rather than chimps?

There are also records of young chimps mimicking a limp of a senior male of their troop—but only when he is not looking. Presumably Bicameral Man was capable of that kind of thing too?

I think the kind of deceit he is interested in must be the kind of deceit that one needs if one is to be a spy, to *live a cover*—the mindset and skills required to build a systematically deceitful picture. Not a *single* act of deceit, but a systematic and integrated false narrative. (But then what about the Trojan Horse??—which comes from a time when, according to J, the Greeks were bicameral.) It's the kind of deceit that requires you to have a theory of your own mind, rather than a theory of the *Other's* mind.<sup>2</sup> There are certainly senses in which chimps have a theory of other minds, and presumably Bicameral Man had that kind of theory-of-other-minds, but no theory-of-other-minds that included—as part of the package—attributing systematically deceitful behaviour (“*living a cover*”). And they had no theory-of-their-own-mind.

At one point (p 160) he says of the putatively bicameral Inca that they were unable to narratize (his word) the deceit of others.

As Max Cresswell says: why could the bicameral voices not command Bicameral Man to act in a way that is in fact deceitful?

He is inconsistent on what he thinks bicameral man does when confronted

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<sup>2</sup>“...Sarah is shown [a videotape of] Gussie watching Keith jump up and down below a bunch of fruit. The (embedded) videotape that Gussie is watching is stopped or put on hold, and she is shown being offered several photographs of Keith stepping up onto a chair, reaching with a stick and so on. Sarah's own videotape is stopped, placed on hold, showing the scene of Gussie confronting the several photographs, and Sarah is presented with several photographs—one showing Gussie selecting a picture in which Keith steps up onto a chair, or selecting a picture of Keith reaching out with a stick, and so on. Sarah's task is to choose the photograph depicting the choice that *she* believes that Gussie will make. To perform correctly, Sarah must attribute to Gussie the capacity of attributing intention to Keith, that is, she must attribute an attribution. Human adults can pass this test, but apes cannot. Apes have intentions and probably attribute intentions but the attribution of attribution is restricted to humans.” [5] p. 67

with novel situations of conflict. At one point he says that Bicameral man confronted with a hostile intruder would obey the instruction of the voice and kill the intruder. He says this in the context of explaining how consciousness and introspection might result in a more adaptive (because more *diplomatic*) approach to conflict resolution. But when describing the interaction between the conquistadores and the (putatively) bicameral Incas he says that the Incas were unable to resist because their voices were silent on what to do in this unforeseen situation.

I suspect that the points he makes about deceit might be red herrings, in the sense that he may be under the impression that the kind of consciousness he is denying to bicameral man is the kind of consciousness needed for deceit, so in order to bolster his case he needs to deny that bicameral man was capable of deceit. However it may be that deceit requires—rather than consciousness—a kind of theory of other minds—which could be cognitively quite sophisticated but not actually require consciousness. Consciousness might be a theory of one’s own mind, and thus perhaps something that one acquires only *after* one has a theory of other minds. If things happen in that order: (i) theories of other minds (so we can do deceit) and then (ii) theory of one’s own mind (so one has consciousness) then Jaynes doesn’t need to argue this point. The reason why he thinks he has to argue the point is that he needs to explain how consciousness could be adaptive, and one of its advantages is the potential it lends its owners to practice deceit.

Bicameral Man certainly did have a theory of other minds at least to the extent of being able to say “The gods are angry”—but that’s pretty basic.

## 5 History

One rather nice—and very accessible—illustration he uses is the sequence of prophetic books of the Torah, what Christians call the Old Testament. (p 296) Accessible because of the ready availability of copies of the Bible. Chronologically the sequence seems to run from Amos to Ecclesiastes. Amos is a tiresome monomaniac who listens only to his voices and bangs on about them all the time. The book of Amos contains no introspection, no novelists’ psychologising; it’s just a load of finger-wagging God-bothering prophecy. Jaynes says Amos is a bicameral. Ecclesiastes on the other hand contains lots of psychologically astute observation. With which of the two would you rather spend an afternoon in a pub garden? It’s a no-brainer.

In the later bicameral period fewer people could hallucinate and there emerged a priestcraft who would engage in all sorts of bizarre rituals, which would help them into a state in which they could hallucinate Gods. One feature common to all these rituals is that they induced physiological stress. It is normal (albeit rare) to experience auditory hallucination in states of drowsiness. Now drowsiness is a state of physiological stress: epileptic seizures are more likely to happen under physiological stress—such as drowsiness (and also—interestingly—hyperventilation). Auditory hallucinations (of epileptic origin, at least) will be

commoner under these conditions of stress. (Are all auditory hallucinations epileptic phenomena? Probably not). Intoxication with hydrocarbons (glue sniffing) is another source of physiological stress. I have heard it said that the volcanic gases at Delphi contain volatile hydrocarbons ( $C_2H_4$  *inter alia*) and that that is the reason for the presence of a temple+oracle there but I doubt very much if there is enough  $C_2H_4$  to stress the priestesses enough to get them to fit or hallucinate.

Anyway, the idea is that in the bicameral era people had lower stress thresholds for the induction of hallucinations. The inference is also that the palaver that one associates with induction of trances, voices etc isn't just power-of-suggestion or hypnosis but is physiological stress.

## 5.1 Comments to fit in

At some point i had the idea that this was connected with Nietzsche's point about early god-talk being good philosophy-of-science.

The ordeal of Gilbert Pinfold

Abos talk about the Dreamtime

p.140 para 2. Is it not possible that this is done by transitivity?

I think that in any case Jaynes' book comes from a time when the analysis of non-human-primate societies was much less sophisticated than it is now.

Is it known that people with callosal agenesis also lack the anterior commissure and do not hallucinate?

How do they coordinate the nomenclature of their gods?

The bicameral mind in Jaynes' conception is a novel development that could happen only after the invention of language (but before the invention of writing). It's not an earlier stage to be found also in *Pan Troglodytes* or *Homo Sapiens Neanderthalensis*. Auditory hallucinations of voices speaking languages are an essential part of the kit.

Jaynes says the gods whose voices the Greeks heard had no power to work miracles. They had to obey the usual laws of nature. Not 100% true, because Apollo visits plagues on the Greeks at the start of the Iliad, and also whisks Paris off home when things are becoming too hot for him in his fight with Menelaus. Circe turns Odysseus' men into pigs. But perhaps there can be a systematic account of how they come to have supernatural powers.

p 207 "Admonitory voices echoing kings, viziers, parents etc are unlikely to command individuals into acts of compromise" Why?

Could bicameral man worry about the Liar paradox?

He also says (p 73) bicameral man had no ego.

at the beginning of ch 3 (p 205) he seems to suggest that people had a choice of whether or not to obey their voices. But perhaps the presumption of obedience was very strong. Paranoid schizophrenics commit murders beco's their voices tell them to. It's worth asking why the voices are so compelling.

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Auditory hallucinations provide a way in which the left hemisphere has access to *high level* material from the right hemisphere. Nowadays the talking

hemisphere gets input from the silent hemisphere all right, but it is of a low level kind (of the nature of the ballistic computations you make when running to catch a ball)

hemispheric inattention

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John Spanos writes:

I skip-read that thing of yours on Jaynes (will return to it). One thought: what's all this about hallucination as an aide-memoir to what the chief honcho has said? Hallucination is either intentional or not, isn't it? From memory, Wittgenstein, 'If the past brought us images with hallucinatory clarity, it would still take memory to know that it was past'. Either we know or understand it to be that the hallucination is of the honcho speaking, or we don't (imagery is dumb; like pictures, it needs titles or superscripts); why do we need the imagery at all (thoughts don't—as a matter of fact, and couldn't comprise—imagery, at all or only). And I have always had a soft spot for that view of Jerry Fodor's, to the effect that it's just a fashion to think that speech and language evolved for communication; maybe they evolved from the need or interest to give public expression to thoughts. What you need, cognitive-archaeologically, basically, is a theory not of how language developed, but how thinking (adverting to/the holding of propositional attitudes/etc) did. Or, if you don't like the priority of the question of how thinking happened, how the making of sounds became meaningful. It's all about intensionality; and how much and of what kind of speech you need for it to comprise communication. And naming can't be the basis of it. Oh, and so on and so on.

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So what are the two good ideas? My picks are:

(i) Consciousness a kind of back-formation from metaphorical descriptions of mental activity

(ii) The idea that auditory hallucinations might have been very important in the social life of early urban civilisations

Dorothy Grover suggests we should consider what the talk of unconscious people would be like. If they have no reflection they will just say the first thing that comes into their heads. So Bicameral people bumbled on like three-year olds...?

## References

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- [2] Sacks, O. *Musicophilia—Tales of Music and the Brain*. Picador 2007
- [3] Forster, Leonard. *Thoughts on the Mnemonic Function of Early Systems of Writing*, in *Idee: Gestalt: Geschichte*. Festschrift Klaus von See ed. Gerd Wolfgang Weber (Odense: Odense University Press, 1988) pp 59–62.

- [4] Philip Lieberman “Eve Spoke” Picador 1998
- [5] Miriam Lichtheim Ancient Egyptian Literature Vol I: the Old and Middle Kingdom; vol II The New Kingdom U California Press 1973, 1975.
- [6] David Premack and Ann James Premack. The Mind of an Ape. W.W. Norton New York 1983
- [7] Lesley J. Rogers and Richard J Andrew “Comparative Vertebrate Lateralization”. Cambridge University Press 2002 ix + 66pp

There now follow some undigested notes.

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Gareth Southwell writes

I used an aspect of Jaynes’ argument in my PhD thesis, so I’d be happy to share my thoughts on it, if they’re of any help. It seems to me that some of Jaynes’ points lend themselves to the more modern materialist approach that seeks to define phenomenal consciousness out of existence (e.g. Daniel Dennett). As Jaynes points out (quite convincingly, I think), conscious awareness (narrowly defined) does not seem vital to the performance of any number of tasks that we would think of as strictly ‘mental’ (e.g. calculation, perception, even judgement), and so (Jaynes argues) it would seem possible to conceive of a time (such as in Homeric Greece) where people were not conscious in the way that moderns are. The jarring aspect of Jaynes’ position is that it does not place this lack of apperception at a time where there was no corresponding psychological sophistication (i.e. prehistory) but at a time of cultural and literary development (which seems to us counterintuitive, to put it mildly). Therefore, if we accept this position, the effect is to reduce apperceptive consciousness (being aware of being aware) to a very small point, and to severely reduce its role.

I don’t think Jaynes (unlike Dennett) wants to argue phenomenal consciousness out of existence, but his arguments could certainly be used in that way. He does, I believe, hold that we do have phenomenal consciousness, but that it is less central to our mental states than we think it is. One possible position (if we accept his main arguments) is therefore that phenomenal consciousness is necessary in the development of certain mental capacities, but once they are established, it becomes less central. So, like learning to drive a car, attention is everything when learning the skills, but can drop into the background once the skills are mastered (and we can continue on ‘autopilot’). (This is actually a position proposed by Eric Lormand —see ‘Nonphenomenal Consciousness’, *Nous*, 1996, 30:242-61.)

An interesting question is therefore, if humans existed at one time without phenomenal consciousness, how it came into being? Since (arguably) non-phenomenal consciousness is open to a materialist/functionalist explanation, it may be tempting to follow Dennett and argue that we are (in effect) still ‘Zombies’, possessing merely the illusion of consciousness. I don’t personally buy this, but it is an interesting problem if one were to accept Jaynes’ account.

Incidentally, I am fairly agnostic on Jaynes' historical thesis - his account of a non-phenomenal consciousness in Homeric times. I think that his arguments regarding our current mental processes are quite convincing, and backed up by modern research and our own experience. So, these two aspects of his argument may be treated independently, I think (and, besides, I do not feel qualified to judge his historical/literary research).

Berel Lerner adds:

Bernard Williams's *\*Shame and Necessity\** can be read for anti-Jaynes arguments. Note 9 on p. 176 of that book gives some bibliographical citations for critiques of Jaynes's reading of the Illiad.

Ian Dengler writes:

here are whatever notes I have conserved comparing Jaynes to various arguments on a scale from natural philosophy, or modern physics to the jumble of trance, insanity and whatever one wishes to add to the grand beyond, including nothingness. That could be an ahimsa, or Buddhist integrity argument in the case of Jaynes.

See Frank R. Wallace and Neo-Tech

Shame and Necessity

by Bernard Williams

University of California Press, 2008

Review by Berel Dov Lerner, Ph.D.

Oct 7th 2008 (Volume 12, Issue 41)

The Mythology of the Constellations

Ancient Greek and Roman myths about the stars and constellations. ... behind the constellations date back to ancient Greece, but we use their Latin names. ... [comfychair.org/~cmbell/myth/myth.html](http://comfychair.org/~cmbell/myth/myth.html)

The Luminary, or brightest star by both proper and Greek- letter name (or number ). Many luminaries, especially those of southern constellations, ... [www.astro.uiuc.edu/~kaler/sow/const.html](http://www.astro.uiuc.edu/~kaler/sow/const.html)

Star Names

To the Greek letter name is appended the Latin possessive form of the constellation name. Thus the brightest star in Lyra, Vega (an Arabic proper name ), ... [www.astro.uiuc.edu/~kaler/sow/starname.html](http://www.astro.uiuc.edu/~kaler/sow/starname.html)

Greek Mythology: THE CONSTELLATIONS, STAR MYTHS 1

The Greek name for constellations, was katasterismoi. Of these the twelve signs whose risings intersected the sun's at dawn were known as the zodiakos ... [www.theoi.com/Cat\\_Astraioi.html](http://www.theoi.com/Cat_Astraioi.html)

Rationalism: Jaynes' definition of consciousness differs greatly from popular misconceptions of consciousness. Even most current psychology textbooks skirt the complex issue of consciousness or erroneously equate it with cognition. Jaynes clearly describes how, "consciousness is not the same as cognition and should be sharply distinguished from it" (Jaynes, 1976). It is necessary to understand Jaynes' more accurate and precise definition of consciousness before one can understand how he arrives at his further conclusions. After providing a more concrete understanding of the mental activity for which consciousness is not necessary, Jaynes offers his view of what consciousness is. According to

Jaynes, conscious thinking requires metaphors (referring to one thing in order to better understand another). It also requires analog models (thinking of a map of California, for example, in order to visualize the entire, physical state of California.) Metaphors of "me" and analogs of "I" allow consciousness to function through introspection and self-visualization. Other features of consciousness described by Jaynes are narratization, which is "the analogic simulation of actual behavior" and spatialized time, in which "we locate events and indeed our lives" (Jaynes, 1986a).

Religation: Zubiri coined the term from the Latin *religare*, *to tie*, and related it to cosmothetic reason, or diety. We are not simply thrown into existence but impelled into it by something that we feel all the time as an obligation, a force imposing on us the task of choosing and realizing ourselves. Religation, the relation to that sense of interior logic is the *fundamental root of existence* and the ontological structure of personality. *Ency Phil.* v. 8

Unconsciousness mnestic processing . Carol White. *Ontology, The Ontological Difference, and the Unthought.* Tulane Stud Phil 32, 95-102. Heidegger emphasizes the ontological difference between Being and what is or between the unthought context of our involved activity with things and things as they appear in our reflective thought about them.

For Heinrich Lambert, phenomenology is consciousness (without) intentional intension (1777). the language of thought hypothesis is often associated with Fodor: mental processing occurs in a language different from ones ordinary native language, but underlying and explaining our competence with it. the idea is a development of the Chomskyan notion of an innate universal grammar.

. Gilbert Harman. *Immanent and Transcendent Approaches to the Theory of Meaning.* *Perspectives on Quine*, Barrett, r. (ed) 144–157. Cambridge, 1990. Quine's immanent approach to the theory of meaning takes translation to be the paradigm way to explain meaning. Davidson takes a transcendent approach to meaning apart from translation. See religation.

Jaynes first demonstrates in great detail that even today, consciousness is only a small part of mental activity and is not necessary for concept formation, learning, thinking, or even reasoning. He illustrates how all of these mental functions can be performed automatically and unconsciously. One of the many examples cited is signal learning as a simple demonstration that learning does not require consciousness: If a light signal immediately followed by a puff of air through a rubber tube is directed at a person's eye about ten times, the eyelid, which previously blinked only at the puff of air, will begin to blink to the light signal alone, and this becomes more and more frequent as trials proceed. Subjects who have undergone this well-known procedure of signal learning report that it has no conscious component whatever.

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.599999945319 The Origin of Consciousness in the Breakdown of the Bicameral Mind, is another example of how patriarchy and heterosexuality were imposed thru linear thinking. Prior to about 1000 B.C., consciousness did not exist, but rather everyone went around in an egalitarian "bicameral"/bisexual

condition, free of stress, war and preferential bias for one sex or the other. During the stresses of the late Bronze Age, bicamerality broke down, and much of Jaynes' book is devoted to analyzing the appearance of phallogocratic model in the heroes of Homer.

.70 Thaumaturgics SORITES, ISSN 1135-1349 Issue 09. April 1998. Pp. 32-46. "Seeing Aspects, Seeing Value" Copyright (C) by SORITES and Joe Fearn  
Joe Fearn

Davidson's anti-scepticism is, indeed, more usefully viewed as depending simply on the holistic interdependence that obtains between the different forms of knowledge and which make such knowledge possible (this interdependence does, in fact, underlie the 'omniscient interpreter' argument, even if other features of that argument tend to detract attention from it). To doubt that most of our beliefs are true (at least so far as our most basic beliefs are concerned) is thus to doubt the very possibility that we have beliefs. We become perverted when we deny ourselves through drugs. Nature cannot be denied without a terrible price.

.7978000000000000982179499+ Semi-trance, Mental Illness, and Altered States of Consciousness M. Pitkanen1, February 1, 2006

Department of Physical Sciences, High Energy Physics Division, PL 64,

The book *The origin of consciousness in the breakdown of them bicameral mind* of Julian Jaynes provides, not only a fascinating scenario about the evolution of modern consciousness from the consciousness of bicameral stone age man, but also a holistic view about schizophrenic consciousness. In fact, Jaynes regards schizophrenic as a bicameral man receiving commands of God as auditory and visual hallucinations. Jaynes sees Gods as the right brain of the bicameral man. In TGD framework Gods represent higher levels of the self-hierarchy.

To put it in nutshell, TGD view about the relationship of human consciousness to higher levels of self-hierarchy relies on the notion of semi-trance. During semi-trance parts of brain entangle with some higher level, say the self associated with the social group, and are in trance and therefore unconscious. The remaining parts of brain are however conscious and receive communications from the collective consciousness via the entangled region of brain as sensory hallucinations, emotions and thoughts. Semi-trance is absolutely essential for the self-narrative: without it our consciousness would consist of memory fragments lasting only few seconds: higher level selves tell us where we come from and where we are going. Bicameral man received the commands and advices of the collective consciousness as auditory and visual hallucinations via regions of the right brain hemisphere wherefrom they were communicated to the left hemisphere whereas modern man receives these communications as thoughts (internal speech) in left brain semi-trance and emotions in right brain semi-trance. According to this view, schizophrenic spends in the bicameral state larger fraction of time than normal person and receives communications of the higher levels selves more often as sensory hallucinations than as thoughts and emotions. Thus schizophrenia can be seen as cognitive and emotional abnormality and becomes illness in modern society relying crucially on cognitive and emo-

tional self-narrative which is much more refined than the self-narrative based on sensory hallucinations. In normal consciousness left brain hemisphere inhibits the messages from right hemisphere, left and right hemispheres are totally entangled a considerable fraction of time and the entanglement with higher level selves can also involve the entanglement of entire brain leading to short periods of total trance. In this view negative periods of schizophrenia correspond to the phases when right brain hemisphere is not entangled with higher level selves and positive, psychotic periods to the phase when this entanglement occurs often. This vision generalizes also to manic-depressive and anxiety disorders and one can see mental illness as disorder of communication between human brain and higher levels of self hierarchy.

The evolution of modern consciousness meant a gradual development of the simplest God+ few men two-leveled hierarchy to a refined many-leveled hierarchy of selves having social hierarchy as its social image and various higher level selves talking with the voices of the persons in the hierarchy. At the same time subjective consciousness evolved: left and right brain became more and more entangled and semitrance periods became briefer, left brain began to inhibit the communication of sensory hallucinations from right to left brain, and sensory hallucinations transformed to thoughts and emotions. Thus the loss of God's voice did not mean the loss of semitrance communications and they are absolutely essential for the survival of the social structures and for modern self-consciousness. It is however quite possible that modern man spends much shorter fraction of time in semitrance than his bicameral cousin.

Since our genome does not differ much from that of stone age man, this process is much more a self-organization process than evolution of genome. By *ontogeny recapitulates phylogeny* principle this development is expected to repeat itself during the development of individual during the first years of childhood about which we not remember anything. This explains the Father- God and Mother-Goddess associations and the strongly reactive attitudes to religion resembling often strongly rebel against father. The average effective cognitive and emotional ages of the individuals of a civilization characterize the developmental level of the civilization.

According to Jaynes, until 3000 years ago, man along with all other primates functioned by learned reactions or conditioned response. But, because of his much larger, more complex brain, man was able to develop a coherent language beginning about 8000 B.C. Auditory hallucinations, or "voices", then guided him. These hallucinations evolved in the right hemisphere of the brain and were transmitted as "heard" in the left hemisphere of the brain (the bicameral two-chamber mind). Human beings essentially were highly intelligent but automatically reacting animals that could communicate with spoken language. That communication enabled human beings to cooperate closely to build societies, even thriving civilizations. Yet, like other animals, man functioned almost entirely by an automatic guidance system that was void of subjective consciousness until about 1000 B.C., when he was forced to evolve into consciousness to survive in the collapsing bicameral civilizations.

deconstruction, Derrida argues that meanings that are fully present to con-

sciousness are in principle impossible. Cambridge Dict. Phil. 1996: 182

### 5.1.1 Richard Allison writes

E R Dodds [?], *The Greeks and the Irrational*, epoch-making in its time – basic thesis is what it says on the tin – why should we view the Greeks as somehow superior sweetness-and-light purely rational beings when they were as open to “primitive/irrational” modes of thought and behaviour as any other society? Direct quote – “The Greeks were never “mere” rationalists – they were deeply and imaginatively aware of the power, the wonder and the peril of the Irrational.” (And the book is not especially concerned with the *Odyssey*.) Bound to be many copies in the UL.

Jeffrey S. Stamps *Holonomy: A Human Systems Theory*. 1980 Doctoral dissertation Saybrook Institute. Systems Inquiry Series, Intersystems Publications. There is a group of writers who might be described as forerunners or ‘fellow thinkers’ of the general systems group - Bateson, Dobzhansky, Prigogine, Schrodinger, L.L. Whyte, and Norber Wiener. Then there is a group of writers who might be called ‘creative eccentrics’ Frazer (*The Levels of Temporality*), Koestler (*Holon: the human condition*), Maslow, Jaynes (*Bicameral (Un)Consciousness*), and others. The author develops a taxonomy. <http://www.netage.com/Learning/Publications/Holonomy/holonomy.html> Consider a MATID-Universe  $(S, \pi, M, I, G, A)$  with spacetime metrics  $g$  and  $\sim g$  on  $M$  and  $S$ , with  $\pi^*g = \rightarrow S$  its corresponding psy-line; suppose parameter  $t \in [a, b]$  as proper time of both  $\gamma$  and  $\sim$ . Thus, when the individual moves from  $M$ , (along  $\gamma$ ) he thinks (along  $\sim \gamma$  in  $S$ ) from the idea  $\sim p_1$  to  $\sim p_2$ . Let  $t_4 \in [a, b]$  greater than  $t_2$  and let  $p_4 = \gamma(t_4)$ . Consider  $q_4$  in the fiber through  $p_4$ . May we have  $\sim \gamma(t_4) = q_4$ ? What conditions have to be imposed on  $\sim \gamma$  near  $t_2$  so that  $q_4$  be reached at time  $t_4$ ? Does an intermediate moment  $t_3$  between  $t_2$  and  $t_4$  exist, when we could make a choice between different possibilities to reach  $q_4$  at moment  $t_4$ ? In this context we conjecture that intelligence distribution (connection) and its curvature will strongly influence behaviour: the speed and focus of thought is function of intelligence and, knowing the psy-pattern of an individual (or a community) we may predict the time necessary to attain some knowledge goal. Gabriel Teodor PRIPOAE, Sorin COMOROSAN. *A Mathematical Model for a Unified Material and Ideatic Universe. Application to the Human Mind.*

Dear Tom

I enjoyed your Jaynes talk. I am also full of admiration for all your activities and interests, as revealed on your webpage.

I think I mentioned Derek Bickerton. You might enjoy his latest book, *\*Adam’s Tongue\**. Also, Dan Everett’s *\*Don’t Sleep, There Are Snakes\** is an interesting read, on the (alleged) cognitive peculiarities of the Pirah. There’s also a somewhat sceptical interview with Everett by Geoff Sampson in a new OUP linguistics book whose exact title I forget but whose editors are Gil, Trudgill and Sampson.

Best regards Andrew

Andrew Carstairs-McCarthy  
Emeritus Professor  
School of Languages, Cultures and Linguistics  
University of Canterbury, Private Bag 4800, Christchurch 8140;  
4 Fendalton Road, Fendalton, Christchurch 8014,  
New Zealand  
home phone (+64 3) 741 1161