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THE ORIGIN OF CONSCIOUSNESS IN THE BREAKDOWN OF THE BICAMERAL MIND
AFTERWORD

IT IS NOW more than a decade since this essay first appeared in book form, and my publishers have encouraged me to add a postscript in which I might discuss the general reaction to this book as well as changes I might make if I were to rewrite it.

A favorite practice of some professional intellectuals when at first faced with a theory as large as the one I have presented is to search for that loose thread which, when pulled, will unravel all the rest. And rightly so. It is part of the discipline of scientific thinking. In any work covering so much of the terrain of human nature and history, hustling into territories jealously guarded by myriad aggressive specialists, there are bound to be such errancies, sometimes of fact but I fear more often of tone. But that the knitting of this book is such that a tug on such a bad stitch will unravel all the rest is more of a hope on the part of the orthodox than a fact in the scientific pursuit of truth. The book is not a single hypothesis.

There are four main hypotheses in Books I and II. I welcome this opportunity to add some comments to each of them.

1. Consciousness is based on language. Such a statement is of course contradictory to the usual and I think superficial views of consciousness that are embedded both in popular belief and in language. But there can be no progress in the science of consciousness until careful distinctions have been made between what is introspectable and all the hosts of other neural abilities we have come to call cognition. Consciousness is not the same as cognition and should be sharply distinguished from it.

The most common error which I did not emphasize sufficiently is to confuse consciousness with perception. Recently, at a meeting of the Society for Philosophy and Psychology, a well-known and
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prestigious philosopher stood up to object vociferously on this point. Looking at me directly, he exclaimed, “I am perceiving you at this moment. Are you trying to say that I am not conscious of you at this moment?” A collective cognitive imperative in him was proclaiming in the affirmative. But actually he was being conscious of the rhetorical argument he was making. He could have better been conscious of me if he had turned away from me or had closed his eyes.

This type of confusion was at least encouraged back in 1921 by Bertrand Russell: “We are conscious of anything that we perceive.”¹ And as his logical atomism became fashionable in philosophy, it became difficult to see it any other way. And in a later book Russell uses as an example of consciousness “I see a table.”² But Descartes, who gave us the modern idea of consciousness, would never have agreed. Nor would a radical behaviorist like Watson, who in denying consciousness existed certainly did not mean sense perception.

Just as in the case I mentioned above, I suggest Russell was not being conscious of the table, but of the argument he was writing about. In my own notation, I would diagram the situation as

Russell thought his consciousness was the second term, but in reality it was the entire expression. He should have found a more ethologically valid example that was really true of his consciousness, that had really happened, such as, “I think I will rewrite the Principa now that Whitehead’s dead” or “How can I afford the alimony for another Lady Russell?” He would then have come to other conclusions. Such examples are consciousness in action. “I see a table” is not.

Perception is sensing a stimulus and responding appropriately. And this can happen on a nonconscious level, as I have tried to describe in driving a car. Another way to look at the problem is to

¹ Bertrand Russell, Analysts of Mind (London: Allen and Unwin, 192-1).
remember the behavior of white blood cells, which certainly perceive bacteria and respond appropriately by devouring them. To equate consciousness with perception is thus tantamount to saying that we have six thousand conscious entities per cubic millimeter of blood whirling around in our circulatory system — which I think is a *reductio ad absurdum*.

Consciousness is not all language, but it is generated by it and accessed by it. And when we begin to untease the fine reticulation of how language generates consciousness we are on a very difficult level of theorizing. The primordial mechanisms by which this happens in history I have outlined briefly and then in II:5 tried to show how this worked out in the development of consciousness in Greece. Consciousness then becomes embedded in language and so is learned easily by children. The general rule is: there is no operation in consciousness that did not occur in behavior first.

To briefly review, if we refer to the circle triangle problem on page 40, in solving this struction we say, “I ‘see’ it’s a triangle,” though of course we are not actually seeing anything. In the struction of finding how to express this solving of the problem, the metaphor of actual seeing pops into our minds. Perhaps there could be other metaphiers leading to a different texture of consciousness, but in Western culture ‘seeing’ and the other words with which we try to anchor mental events are indeed visual. And by using this word ‘see’, we bring with it its paraphiers, or associates of actual seeing.

In this way the spatial quality of the world around us is being driven into the psychological fact of solving a problem (which as we remember needs no consciousness). And it is this associated spatial quality that, as a result of the language we use to describe such psychological events, becomes with constant repetitions this

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3 My friend W. V. Quine strenuously objects to my metaphrand-metaphier coinage because they are hybrids of Latin and Greek. I have opted to keep them however for their connotative association with multiplicand and multiplier. He has made the interesting suggestion that perhaps this distinction is related to the latent-manifest distinction of psychoanalysis. Are dreams metaphors? Is what Freud called the unconscious actually the latent metaphrand operated on by the manifest metaphier?
functional space of our consciousness, or mind-space. Mind-space I regard as the primary feature of consciousness. It is the space which you preoptively are ‘introspecting on’ or ‘seeing’ at this very moment.

But who does the ‘seeing’? Who does the introspecting? Here we introduce analogy, which differs from metaphor in that the similarity is between relationships rather than between things or actions. As the body with its sense organs (referred to as I) is to physical seeing, so there develops automatically an analog ‘I’ to relate to this mental kind of ‘seeing’ in mind-space. The analog ‘I’ is the second most important feature of consciousness. It is not to be confused with the self, which is an object of consciousness in later development. The analog ‘I’ is contentless, related I think to Kant’s transcendental ego. As the bodily I can move about in its environment looking at this or that, so the analog ‘I’ learns to ‘move about’ in mind-space, ‘attending to’ or concentrating on one thing or another.

All the procedures of consciousness are based on such metaphors and analogies with behavior, constructing a careful matrix of considerable stability. And so we narratize the analogic simulation of actual behavior, an obvious aspect of consciousness which seems to have escaped previous synchronic discussions of consciousness. Consciousness is constantly fitting things into a story, putting a before and an after around any event. This feature is an analog of our physical selves moving about through a physical world with its spatial successiveness which becomes the successiveness of time in mind-space. And this results in the conscious conception of time which is a spatialized time in which we locate events and indeed our lives. It is impossible to be conscious of time in any other way than as a space.

The basic connotative definition of consciousness is thus an analog ‘I’ narratizing in a functional mind-space. The denotative definition is, as it was for Descartes, Locke, and Hume, what is introspectable.
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My list of features is not meant to be exhaustive or exclusive. Nor are they meant to be universal aspects of consciousness everywhere. Given the great cultural differences in the world today, just as in the world's past, it seems to me unreasonable to think that the features and emphases of consciousness would be everywhere the same.

As it stands, the list I have given is I think incomplete. At least two other features should be added: concentration, which is the analog of sensory attention, and suppression, by which we stop being conscious of annoying thoughts, the behavioral analog of repugnance, disgust, or simply turning away from annoyances in the physical world.

I would also take this opportunity of commenting on what is called in this book conciliation or compatibilization, which have perplexed some readers. At the risk of even more confusion, I would change this word to consilience, which is Whewell's better term for my intended meaning of mental processes that make things compatible with each other. While this is not so obvious in waking life, it becomes extremely important in dreams. Originally, I had written two chapters on dreams to go in the present volume, but my publishers suggested that because of the length of the book, it seemed more reasonable to save them for the next volume, which I hope will appear in several years.

Psychologists are sometimes justly accused of the habit of reinventing the wheel and making it square and then calling it a first approximation. I would demur from agreement that that is true in the development that I have just outlined, but I would indeed like to call it a first approximation. Consciousness is not a simple

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4 It would be interesting to see experimentally if training in accurate and fast attention resulted in better concentration in tasks when tested with distraction.


6 For readers who would like an abstract of how this theory translates into dreams, I would suggest that they read my Bauer Symposium lecture in *Canadian Psychology*, 1986, 27:128-182, particularly pages 146 and 147.
matter and it should not be spoken of as if it were. Nor have I mentioned the different modes of conscious narratization such as verbal (having imaginary conversations — certainly the most common mode in myself), perceptual (imagining scenes), behavioral (imagining ourselves doing something), physiological (monitoring our fatigue or discomfort or appetite), or musical (imagining music), all of which seem quite distinct, with properties of their own. Such modes have obviously different neural substrates, indicating the complexity of any possible neurology of consciousness.

2. The bicameral mind. The second main hypothesis is that preceding consciousness there was a different mentality based on verbal hallucinations. For this I think the evidence is overwhelming. Wherever we look in antiquity, there is some kind of evidence that supports it, either in literary texts or in archeological artifacts. Apart from this theory, why are there gods? Why religions? Why does all ancient literature seem to be about gods and usually heard from gods?

And why do we have verbal hallucinations at all? Before the publication of this book, verbal hallucinations were not paid much attention to, except as the primary indicator of schizophrenia. But since that time, a flurry of studies have shown that the incidence of verbal hallucinations is far more widespread than was thought previously. Roughly one third of normal people hear hallucinated voices at some time. Children hear voices from their imaginary or we should say hallucinated playmates. It has recently been discovered that congenital quadriplegics who have never in their lives spoken or moved, and are often regarded as “vegetables,” not only understand language perfectly but also hear voices they regard as God.7 The importance I put on these studies taken together is that they clearly indicate to me that there is a genetic

basis for such hallucinations in us all, and that it was probably evolved into the human genome back in the late Pleistocene, and then became the basis for the bicameral mind.

3. *The dating*. The third general hypothesis is that consciousness was learned only after the breakdown of the bicameral mind. I believe this is true, that the anguish of not knowing what to do in the chaos resulting from the loss of the gods provided the social conditions that could result in the invention of a new mentality to replace the old one.

But actually there are two possibilities here. A weak form of the theory would state that, yes, consciousness is based on language, but instead of its being so recent, it began back at the beginning of language, perhaps even before civilization, say, about 12,000 B.C., at about the time of the beginning of the bicameral mentality of hearing voices. Both systems of mind then could have gone on together until the bicameral mind became unwieldy and was sloughed off, leaving consciousness on its own as the medium of human decisions. This is an extremely weak position because it could then explain almost anything and is almost undisprovable.

The strong form is of greater interest and is as I have stated it in introducing the concept of the bicameral mind. It sets an astonishingly recent date for the introduction into the world of this remarkable privacy of covert events which we call consciousness. The date is slightly different in different parts of the world, but in the Middle East, where bicameral civilization began, the date is roughly 1000 B.C.

This dating I think can be seen in the evidence from Mesopotamia, where the breakdown of the bicameral mind, beginning about 1200 B.C., is quite clear. It was due to chaotic social disorganizations, to overpopulation, and probably to the success of writing in replacing the auditory mode of command. This breakdown resulted in many practices we would now call religious which were efforts to return to the lost voices of the gods, e.g., prayer,
religious worship, and particularly the many types of divination I have described, which are new ways of making decisions by supposedly returning to the directions of gods by simple analogy.

I would not now make as much of the Thera explosion as I did in II.3. But that it did cause the disruption of theocracy in the Near East and hence the conditions for the learning of a non-hallucinatory mentality is I think valid. But in the general case, I would rather emphasize that the success of a theocratic agricultural civilization brings with it overpopulation and thus the seeds of its own breakdown. This is suggested at least among the civilizations of Mesoamerica, where the relative rapidity of the rise and fall of civilizations with the consequent desertion of temple complexes contrasts with the millennia-long civilizations in the older parts of the world.

But is this consciousness or the concept of consciousness? This is the well-known use-mention criticism which has been applied to Hobbes and others as well as to the present theory. Are we not confusing here the concept of consciousness with consciousness itself? My reply is that we are fusing them, that they are the same. As Dan Dennett has pointed out in a recent discussion of the theory, there are many instances of mention and use being identical. The concept of baseball and baseball are the same thing. Or of money, or law, or good and evil. Or the concept of this book.

4. The double brain. When in any discussion or even in our thinking we can use spatial terms, as in “locating” a problem or “situating” a difficulty in an argument, as if everything in existence were spread out like land before us, we seem to get a feeling of clarity. This pseudo-clarity, as it should be called, is because of the spatial nature of consciousness. So in locating functions in different parts of the brain we seem to get an extra surge of clarity about them — justified or not.

At the time I was writing that part of the book in the 1960s,

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there was little interest in the right hemisphere. Even as late as 1964, some leading neuroscientists were saying that the right hemisphere did nothing, suggesting it was like a spare tire. But since then we have seen an explosion of findings about right hemisphere function, leading, I am afraid, to a popularization that verges on some of the shrill excesses of similar discussions of asymmetrical hemisphere function in the latter part of the nineteenth century\(^9\) and also in the twentieth century.\(^10\)

But the main results, even conservatively treated, are generally in agreement with what we might expect to find in the right hemisphere on the basis of the bicameral hypothesis. The most significant such finding is that the right hemisphere is the hemisphere which processes information in a synthetic manner. It is now well known from even more studies that the right hemisphere is far superior to the left in fitting together block designs (Kohs Block Design Test), parts of faces, or musical chords,\(^11\) and such synthetic functions were indeed those of the admonitory gods in fitting together civilizations.

The reader has by now guessed that a somewhat crucial experiment is possible. Since I have supposed that the verbal hallucinations heard by schizophrenics and others are similar to those once heard by bicameral people, could we not test out this cerebral location in the right temporal lobe of the voices by one of the new brain imaging techniques, using patients as they are hallucinating? This has recently been tried using cerebral glucography with positron tomography, a very difficult procedure. Indeed, the results demonstrated that there was more glucose uptake (showing more

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activity) in the right temporal lobe when the patient was hearing voices.\textsuperscript{12}

I wish to emphasize that these four hypotheses are separable. The last, for example, could be mistaken (at least in the simplified version I have presented) and the others true. The two hemispheres of the brain are not the bicameral mind but its present neurological model. The bicameral mind is an ancient mentality demonstrated in the literature and artifacts of antiquity.

The last line of Book III sounds indeed like a ponderous finality of judgment. It is. But it is also the beginning, the opening up of human nature as we know it and feel it profoundly because consciously in ourselves, with all its vicissitudes, clarities, and obscurities. Because of the documentation, we can see this most clearly in Greece in the first half of the first millennium B.C., where the change can truly be called

\textit{The Cognitive Explosion.}

With consciousness comes an increased importance of the spatialization of time and new words for that spatialization, like \textit{chronos}. But that is to put it too mildly. It is a cognitive explosion with the interaction of consciousness and the rest of cognition producing new abilities. Whereas bicameral beings knew what followed what and where they were, and had behavioral expectancies and sensory recognitions just as all mammals do, now conscious, humans can ‘look’ into an imagined future with all its potential of terror, joy, hope, or ambition, just as if it were already real, and into a past moody with what might have been, or savoring what did, the past emerging through the metaphor of a space through

whose long shadows we may move in a new and magical process
called remembrance or reminiscence.

Reminiscent memory (or episodic memory, as it is sometimes
called), in sharp contrast to habit retention (or semantic mem-
ory), is new to the world with consciousness. And because a
physical space in the world can always be returned to, so we feel
irrationally, somehow certain, impossibly certain, that we should
be able to return again to some often unfinished relationship, some
childhood scene or situation or regretted outburst of love or temper
or to undo some tragic chance action back in the imagined inexist-
tent space of the past.

We thus have conscious lives and lifetimes and can peer through
the murk of tomorrow toward our own dying. With the prod-
ding of Heraclitus in the sixth century B.C., we invent new
words or really modifications of old words to name processes or
symbolize actions over time by adding the suffix sis and so be con-
scious of them, words in Greek like gnosis, a knowing; genesis, a
beginning; emphasis, a showing in; analysis, a loosening up; or
particularly phronesis, which is variously translated as intellection,
thinking, understanding, or consciousness. These words and the
processes they refer to are new in the sixth and seventh cen-
turies B.C.

The Self

Along this new lifetime, putting together similar occurrences or
excerpts of them — inferences from what others tell us we are and
from what we can tell ourselves on the basis of our own conscious-

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am grateful to Professor Jones for discussion on this point.
15 This has been noted and emphasized by several classical scholars including Bruno
Snell, speaking of “a new ‘mental’ concord that apparently was not possible before the
seventh century when a new dimension of the intellect is opened.” Cited by Joseph
Russo in “The Inner Man in Archilochus and the Odyssey,” *Greek, Roman, and Byzan-
tine Studies*, 1974, 25:139, n. 1, who prefers an earlier date for this transformation, as
his title indicates.
ness of what we have done — we come to construct or invent, on a continuing basis, in ourselves and in others, a self. The advantage of an idea of your self is to help you know what you can or can’t do or should or should not do. Bicameral individuals had stable identities, names to which they or others could attach epithets, but such verbal identity is a far shallower form of behavior than the consciously constructed although variable, fragile, and defensive self that shakily pilots us through the alternatives of living consciously.

Particularly with regard to the self, but also in all of the treacherous terminology of mind, we must beware of the perils of polysemy or homonymic or multireferential confusion, as I have called it elsewhere. This results from the historical growth and inner alterations of most mental terms; the referrent of a term changes usually with the addition of new conscious referrents until the term is really multireferential. “Self“ is a good example. Originally, the word (or corresponding word in whatever language) probably was simply used as an identity marker as in all its many compounds: self-employed, self-discipline, etc. Or as when we say a fly washes itself. But with the fractal-like proliferation and intensification of consciousness through history, particularly since the twelfth century A.D., a very different referrent of “self” came into existence. It is the answer to the question “Who am I?“ Most social psychologists accept that denotation of self.

Thus, as John Locke somewhere says, if we cut off a finger, we have not diminished the self. The body is not the self. An early critic of my book pointed to the well-known fact that mirrors were used far back into antiquity and therefore such ancient

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16 But see Locke’s profoundly modern discussion in Essay on the Human Understanding, I:10–29.

17 Exactly the significance of such mirrors is a question. In the archeological museum in Riyadh, Saudi Arabia, I have seen an ancient tombstone with the outline of a lady holding such a mirror. Would this be vanity? Were mirrors hand idols which were common in bicameral Mesopotamia? The mystery of the use of mirrors in Mayan iconography should also be noted, as it usually represents a god or the brightness of a god. See Linda Schele and Mary Ellen Miller, The Blood of Kings (Fort Worth: Kimbell Art Museum, 1986).
peoples were conscious. But we don’t see our selves in mirrors, although we say so; we see our faces. The face is not the self.

Because of the importance of this confusion and its frequency in misunderstanding my book, I would like here to describe a few other studies briefly. When presented with mirrors, most fish, birds, or mammals react with complete disinterest or else engage in social or aggressive displays or attack their mirror images. But humans and chimpanzees are different: they like mirrors. Human children go through four stages of behavior with respect to their mirror images. At first there is little reaction, then smiling, touching, vocalizing as if it were another child, then a stage of testing or repetitive activity while observing the mirror image intently, and then, when the child is almost two years old, the adult reaction to the image as if it were its own. The test for this final stage has been to smear rouge on the child’s nose and then have the child look in a mirror and see if the child touches its nose— which it readily does by age two.

But the real interest in this phenomenon began when Gallup showed that the same effect could be obtained with chimpanzees. Chimpanzees after extensive experience with mirrors were put under deep anesthesia. Then a conspicuous spot of red dye was daubed on the brow or top half of an ear. Upon awakening, the chimpanzees paid no attention to the markings, showing that no local tactile stimulation was present. But when a mirror was provided, the chimpanzees, who by now were very familiar with their mirror images, immediately reached for the color spot to rub or pick it off, showing they knew the mirror images of themselves. Other chimpanzees that had had no experience with mirrors did not react in this way. Hence it was claimed that chimpanzees have selves and self-recognition. Or, in the words of one of the major

senior figures in animal behavior, “the results provide clear evidence of self-awareness in chimpanzees.”

This conclusion is incorrect. Self-awareness usually means the consciousness of our own persona over time, a sense of who we are, our hopes and fears, as we daydream about ourselves in relation to others. We do not see our conscious selves in mirrors, even though that image may become the emblem of the self in many cases. The chimpanzees in this experiment and the two-year-old child learned a point-to-point relation between a mirror image and the body, wonderful as that is. Rubbing a spot noticed in the mirror is not essentially different from rubbing a spot noticed on the body without a mirror. The animal is not shown to be imagining himself anywhere else, or thinking of his life over time, or introspecting in any sense — all signs of a conscious self.

This less interesting, more primitive interpretation was made even clearer by an ingenious experiment done in Skinner’s laboratory. Essentially the same paradigm was followed with pigeons, except that it required a series of specific trainings with the mirror, whereas the chimpanzee or child in the earlier experiments was, of course, self-trained. But after about fifteen hours of such training when the contingencies were carefully controlled, it was found that a pigeon also could use a mirror to locate a blue spot on its body which it could not see directly, though it had never been explicitly trained to do so. I do not think that a pigeon because it can be so trained has a self-concept.

From Affect to Emotion

The new spatialized time in which events and experiences could be located, remembered, and anticipated results not only in the


conscious construction of a self, but also in a dramatic alteration of our emotions. We share with other mammals a not very orderly repertoire of affects whose neural substrate was evolved long ago by natural selection into the limbic system deep in the brain. I wish here to mention three: fear, shame, and mating. And in doing so I wish to forewarn the reader that terminology is again a problem, particularly in this area—even the word affect, which I do not like to use because it is so often confused with effect and sounds strange to the nonprofessional. By affect, psychology means to designate a biologically organized behavior that has a specific anatomical expression and a specific biochemistry, one that dissipates with time. But with consciousness, all this is changed.

I shall call this consciousness of a past or future affect an emotion, as that is how we describe it. And what I am proposing here is a two-tiered theory of emotions for modern human beings as distinguished from bicameral man and other animals. There are the basic affects of mammalian life and then our emotions, which are the consciousness of such affects located inside an identity in a lifetime, past or future, and which, be it noted, have no biologically evolved mechanisms of stopping.

From Fear to Anxiety

In fear, there are a class of stimuli, usually abrupt and menacing, which stop the animal or person from ongoing behavior, provoke flight, and in most social mammals produce specific bodily expressions and internally a rise in the level of catecholamines in the blood, such as adrenalin and noradrenalin. This is the well-known emergency response, which dissipates after a few minutes if the frightening object or situation is removed.

But with consciousness in a modern human being, when we

reminisce about previous fears or imagine future ones, fear becomes mixed with the feeling of anxiety. If we wish to make echoes here of the James-Lange theory of the emotions, we would call anxiety the knowledge of our fear. We see a bear, run away in fear, and have anxiety. But anxiety as a rehearsal of actual fear partially occasions the emergency response at least weakly. It is man’s new capacity for conscious imagery that can keep an analog of the frightening situation in consciousness with a continuing response to it. And how to turn off this response with its biochemical basis was and I think still is a problem for conscious human beings, particularly with the resulting increase in catecholamine levels and all its long-term effects. I would ask you here to consider what it was like for an individual back in the first millennium B.C. to have these anxieties that did not have their own built-in mechanism of cessation and before human beings learned conscious mechanisms of thought for doing so.

This is demonstrated in the famous incident described by Herodotus of the very first tragedy performed in Athens. It was performed only once. The play was The Fall of Miletus by Phrynicus, describing the sack of that Ionian city by the Persians in 494 B.C., a disaster that had happened the previous year. The reaction of the audience was so extreme that all Athens could not function for several days. Phrynicus was banished, never to be heard of again, and his tragedy burnt.

From Shame to Guilt

The second biological affect I wish to consider here is shame. Because it is a socially evoked affect, it has rarely been studied experimentally, in either animals or humans. It is a complicated affect whose occasioning stimuli often have to do with maintaining hierarchical relationships in highly social animals, and is the submissive response to rejection by the hierarchical group. While such biological shame is apparent as a controlling mechanism in
carnivore groups, it is much more obvious among the primates, and particularly in human beings. We seem to be ashamed to talk about shame, and, indeed, as adults, we have been so shaped by shame in the past, so confined to a narrow band of socially acceptable behavior, that it is rarely occasioned.

But when we think back to our childhoods, the piercing, throbbing trauma of being rejected by our peer groups, the fear of inappropriately crossing over from the private domain into the public countenance, the agony when we do, particularly in relation to sexual and excretory functions, toilet accidents of others or ourselves, but also in a milder form, in wanting to be dressed the same as other children, to receive as many valentines, and to be promoted with the rest, or have parents equal in wealth, health, or promise to the parents of others, or not to be beaten up or teased by others, sometimes even to be average in schoolwork when one is really superior — anything to be sure that one is snugly sunk deeply into one’s cohort — these are some of the most powerful and profound influences on our development. We should remember here that as we grow older, our cohort is less and less our immediate peer group and more and more our family tradition, race, religion, union, or profession, et cetera.

The physiological expression of shame or humiliation involves of course blushing, dropping of the eyes and of the head, and the behavioral one of simply hiding from the group. Unfortunately, nothing is known about its biochemical or neurological basis.

If you wish to feel shame in its pure form, this stepping outside what is expected of you, simply stand out in a busy street and shout out the time in minutes and seconds over the heads of everyone who passes by, and do it for five minutes — or until you are taken away. This is shame, but not guilt, because you have done nothing your society has taught you to call wrong.

And now consider what conscious reminiscence and imagery of the future bring to this affect. And particularly consider this in the milieu of ethical right and wrong that developed as markers
for behavior after the breakdown of the bicameral mind with its certainty of gods’ directives. Wrongs, or by another word, sins, or indeed anything that would eject us from society if it were known or seem to eject us from society can be reminisced about out of the past and worried about for the future. And this we call guilt. No one before 1000 B.C. ever felt guilt, even while shame was the way groups and societies were held together.

To indicate the evidence that guilt as opposed to shame is a new emotion at this time, I would cite a single bit of evidence, and one that is well known. This is the story of Oedipus. It is referred to in two lines of the Iliad and two lines in the Odyssey which I think we can take as indicating the true story, as it came down from bicameral times. The story seems to be about a man who killed his father and then unwittingly married his mother and so became King of Thebes, proceeding to have several children-siblings by his mother, then discovering what he had done, certainly feeling shame since incest had always been a taboo, but evidently recovering from that shame, living a happy life thereafter with his wife-mother, and dying with royal honors sometime later. This was written down around 800 B.C., but the story comes from several centuries before that.

And then, only four hundred years later, we have the great trilogy of Sophocles on the subject, a play about unknown guilt, guilt so extreme that a whole city is in famine because of it, so convulsive that the culprit when he discovers his guilt is not worthy to look upon the world again and stabs his eyes into darkness with the brooches clutched from his mother-wife’s breasts, and is led away by his sister-daughters into a mystical death at Colonus.

And again, there is no biological mechanism for getting rid of guilt. How to get rid of guilt is a problem which a host of learned social rituals of reacceptance are now developed: scapegoat ceremonies among the Hebrews (the word for sending away translates

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now as “forgiveness”), the similar *pharmakos* among the Greeks
(again the word *aphesis* for sending the pharmakos away becomes
the Greek for “forgiveness”), “purification” ceremonies of many
sorts, baptism, the taurobolium, the haj, confession, the tashlik, the
mass, and of course the Christian cross, which takes away the sins
of the world (note the metaphors and analogies in all this). Even
changing the nature of God to a forgiving father.

And I would also have you note here that while the affects are
usually discrete, and evoked in very specific kinds of situations for
specific kinds of responses, the emotions in consciousness are not
discrete, can meld and evoke each other. I've just said that in guilt
we can have worry about future shameful experiences, which in-
deed is anxiety, and we thus have two emotions, anxiety and guilt,
coming together as an even more powerful emotion.

*From Mating to “Sex”*

The third example I would consider here is the affect of mating.
It is similar in some respects to other affects but in other ways
quite distinct. Animal studies show that mating, contrary to what
the popular mind thinks, is not a necessary drive that builds up
like hunger or thirst (although it seems so because of conscious-
ness), but an elaborate behavior pattern waiting to be triggered
off by very specific stimuli. Mating in most animals is thus con-
fined to certain appropriate times of the year or day as well as to
certain appropriate sets of stimuli as in another’s behavior, or
pheromones, light conditions, privacy, security, and many other
variables. These include the enormous variety of extremely com-
plicated courtship procedures that for rather subtle evolutionary
advantages seem in many animals almost designed to prevent
mating rather than to encourage it, as one might expect from an
oversimplified idea of the workings of natural selection. Among
the anthropoid apes, in contrast to other primates, mating is so
rare in the natural habitat as to have baffled early ethologists as to
how these most human-like species reproduced at all. So too perhaps with bicameral man.

But when human beings can be conscious about their mating behavior, can reminisce about it in the past and imagine it in the future, we are in a very different world, indeed, one that seems more familiar to us. Try to imagine what your “sexual life” would be if you could not fantasize about sex.

What is the evidence for this change? Scholars of the ancient world, I think, would agree that the murals and sculptures of what I’m calling the bicameral world, that is, before 1000 B.C., are chaste; depictions with sexual references are scarcely existent, although there are exceptions. The modest, innocent murals from bicameral Thera now on the second floor of the National Museum in Athens are good examples.

But with the coming of consciousness, particularly in Greece, where the evidence is most clear, the remains of these early Greek societies are anything but chaste. Beginning with seventh century B.C. vase paintings, with the depictions of ithyphallic satyrs, new, semidivine beings, sex seems indeed a prominent concern. And I mean to use the word concern, for it does not at first seem to be simply pornographic excitement. For example, on one island in the Aegean, Delos, is a temple of huge phallic erections.

Boundary stones all over Attica were in the form of what are called herms: square stone posts about four feet high, topped with a sculptured head usually of Hermes and, at the appropriate height, the only other sculptured feature of the post, a penile erection. Not only were these herms not laughter-producing, as they certainly would be to children of today, they were regarded as serious and important, since in Plato’s Symposium “the mutilation of the herms” by the drunken general Alcibiades, in which he evidently knocked off these protuberances with his sword around the city of Athens, is regarded as a sacrilege.

25 Most of this information and references can be found in Hans Licht, Sexual Life in Ancient Greece (London: Routledge, 1931), or in G. Rattray Taylor, Sex in History (New York: Vanguard Press, 1954).
Erect phalli of stone or other material have been found in large numbers in the course of excavations. There were amulets of phalli. Vase paintings show naked female dancers swinging a phallus in a Dionysian cult. One inscription describes the measures to be taken even in times of war to make sure that the phallus procession should be led safely into the city. Colonies were obliged to send phalli to Athens for the great Dionysian festivals. Even Aristotle refers to phallic farces or satyr plays which generally followed the ritual performances of the great tragedies.

If this were all, we might be able to agree with older Victorian interpretations that this phallicism was merely an objective fertility rite. But the evidence from actual sexual behavior following the advent of conscious fantasy speaks otherwise. Brothels, supposedly instituted by Solon, were everywhere and of every kind by the fourth century B.C. Vase paintings depict every possible sexual behavior from masturbation to bestiality to human threesomes, as well as homosexuality in every possible form.

The latter indeed began only at this time, due, I suggest, in part to the new human ability to fantasize. Homosexuality is utterly absent from the Homeric poems. This is contrary to what some recent Freudian interpretations and even classical references of this period (particularly after its proscription by Plato in The Laws as being contrary to physis, or nature), seeking authorization for homosexuality in Homer, having projected into the strong bonding between Achilles and Patroclus.

And again I would have you consider the problem twenty-five hundred years ago, when human beings were first conscious and could first fantasize about sex, of how they learned to control sexual behavior to achieve a stable society. Particularly because erectile tissue in the male is more prominent than in the female, and that feedback from even partial erections would promote the continuance of sexual fantasy (a process called recruitment), we might expect that this was much more of a male problem than a female one. Perhaps the social customs that came into being for such control resulted in the greater social separation of the sexes (which
Afterword

was certainly obvious by the time of Plato) as well as an enhanced male dominance. We can think of modern orthodox Muslim societies in this respect, in which an exposed female ankle or lock of hair is punishable by law.

I certainly will admit that there are large vacant places in the evidence for what I am saying. And of course there are other affects, like anger becoming our hatred, or more positive ones like excitement with the magical touch of consciousness becoming joy, or affiliation consciousized into love. I have chosen anxiety, guilt, and sex as the most socially important. Readers of a Freudian persuasion will note that their theorizing could begin here. I hope that these hypotheses can provide historians more competent than myself with a new way of looking at this extremely important period of human history, when so much of what we regard as modern psychology and personality was being formed for the first time.

There is so much more to do, so many more bays and inlets of history and theory to explore. The tracking of ancient mentalities is an ongoing process that is leading to new insights and discoveries. Since I do not know Chinese, I could not address that part of the data in the book. But I am pleased that my associate Michael Carr, an expert in ancient Chinese texts, is making up for that lack in a series of definitive papers. The dating here is approximately the same as in Greece, which has led some historians to call this period the “axial age.”

Several scholars have explored the ramifications of the theory in literature, particularly Judith Weissman, whose book with the working title of Vision, Madness, and Morality, Poetry and the Theory of the Bicameral Mind is being completed as I am writing. Thomas Posey is continuing his studies of verbal halluci-


27 The title also of one of her papers: “Vision, Madness, and Morality: Poetry and
nations, Ross Maxwell is doing further historical studies, and many others, such as D. C. Stove, I also thank for their support and encouragement,

PRINCETON UNIVERSITY, 1990
CHAPTER 6

The Origin of Civilization

But wherefore should there be such a thing as the bicameral mind? And why are there gods? What can be the origin of things divine? And if the organization of the brain in bicameral times was as I have suggested in the previous chapter, what could the selective pressures in human evolution have been to bring about so mighty a result?

The speculative thesis which I shall try to explain in this chapter — and it is very speculative — is simply an obvious corollary from what has gone before. The bicameral mind is a form of social control and it is that form of social control which allowed mankind to move from small hunter-gatherer groups to large agricultural communities. The bicameral mind with its controlling gods was evolved as a final stage of the evolution of language. And in this development lies the origin of civilization.

Let us begin by looking at what we mean by social control.

The Evolution of Groups

Mammals in general show a wide variety of social groupings, all the way from the solitariness of certain predatory animals to the very close social cohesiveness of others. The latter animals are the more preyed upon, and a social group is itself a genetic adaptation for protection against predators. The structure of
herds in ungulates is relatively simple, utilizing precise genetically given anatomical and behavioral signals that are all evolved for group protection. Primates have a similar vulnerability, and for the same reason are evolved to live in close association with others. In dense protective forests, the social group may be as small as six, as in gibbons, while on the more exposed terrains, the group may be up to eighty, as in the Cape baboons.¹ In exceptional ecosystems, the group size may be even larger.

It is the group then that evolves. When dominant individuals give a warning cry or run, others of the group flee without looking for the source of danger. It is thus the experience of one individual and his dominance that is an advantage to the whole group. Individuals do not generally respond even to basic physiological needs except within the whole pattern of the group’s activity. A thirsty baboon, for example, does not leave the group and go seeking water; it is the whole group that moves or none. Thirst is satisfied only within the patterned activity of the group. And so it is with other needs and situations.

The important thing for us here is that this social structure depends upon the communication between the individuals. Primates have therefore evolved a tremendous variety of complex signals: tactile communication ranging from mounting and grooming to various kinds of embracing, nuzzling, and fingerling; sounds ranging from assorted grunts, barks, screeching, and yakking, all grading into each other; nonvocal signals such as grinding teeth or beating branches;² visual signals in a variety of facial expressions, the threatening, direct eye-to-eye gaze, eyelid fluttering in baboons in which the brows are raised and the lids are lowered to expose their pale color against the darker background

of the face, together with a yawn that bares the teeth aggressively; various postural signals such as lunging, head jerking, feinting with the hands, and all these in various constellations.³

This huge redundant complexity of signaling is essentially devoted to the requisites of the group, its organization into patterns of dominance and subordination, the maintenance of peace, reproduction, and care for the young. Except for signifying potential group danger, primate signals rarely apply to events outside the group, such as the presence of food or water.⁴ They are totally within group affairs and are not evolved to give environmental information in the way human languages are.

Now this is what we start with. Within a specific ecology, for most species, it is this communication system that limits the size of the group. Baboons are able to achieve groups as high as eighty or more because they have a strict geographical structure as they move about on the open plains, with dominant hierarchies being maintained within each circle of the group. But in general the usual primate group does not exceed thirty or forty, a limit determined by the communication necessary for the dominance hierarchy to work.

In gorillas, for example, the dominant male, usually the largest silver-backed male, together with all the females and young, occupies the central core of each group of about twenty, the other males tending to be peripheral. The diameter of a group at any given moment rarely exceeds 200 feet, as every animal remains attentive to the movements of others in the dense forest environment.⁵ The group moves when the dominant male stands motion-

³ Peter Marler, "Communication in monkeys and apes," Ch. 16, in Primate Behavior.
less with his legs spread and faces a certain direction. The other members of the group then crowd around him, and the troop moves off on its leisurely day’s journey of about a third of a mile. The important thing here is that the complex channels of communication are open between the top of the dominance hierarchy and all the rest.

There is no reason to think that early man from the beginning of the genus *Homo* two million years ago lived any differently. Such archaeological evidence as has been obtained indicates the size of a group to be about thirty. ⁶ This number, I suggest, was limited by the problem of social control and the degree of openness of the communication channels between individuals. ⁷ And it is the problem of this limitation of group size which the gods may have come into evolutionary history to solve.

But first we must consider the evolution of language as the necessary condition for there to be gods at all.

**THE EVOLUTION OF LANGUAGE**

*When Did Language Evolve?*

It is commonly thought that language is such an inherent part of the human constitution that it must go back somehow through the tribal ancestry of man to the very origin of the genus *Homo*, that is, for almost two million years. Most contemporary linguists of my acquaintance would like to persuade me that this is true. But with this view, I wish to totally and emphatically


*⁷* This group size is approximately the same for modern tribal hunters when they are nomadic. But the case is not the same. See Joseph B. Birdsell, “On population structure in generalized hunting and collecting populations,” *Evolution, 1958*, 12: 189-205.
disagree. If early man, through these two million years, had even a primordial speech, why is there so little evidence of even simple culture or technology? For there is precious little archaeologically up to 40,000 B.C., other than the crudest of stone tools.

Sometimes the reaction to a denial that early man had speech is, how then did man function or communicate? The answer is very simple: just like all other primates, with an abundance of visual and vocal signals which were very far removed from the syntactical language that we practice today. And when I even carry this speechlessness down through the Pleistocene Age, when man developed various kinds of primitive pebble choppers and hand axes, again my linguist friends lament my arrogant ignorance and swear oaths that in order to transmit even such rudimentary skills from one generation to another, there had to be language. But consider that it is almost impossible to describe chipping flints into choppers in language. This art was transmitted solely by imitation, exactly the same way in which chimpanzees transmit the trick of inserting straws into ant hills to get ants. It is the same problem as the transmission of bicycle riding; does language assist at all?

Because language must make dramatic changes in man's attention to things and persons, because it allows a transfer of information of enormous scope, it must have developed over a period that shows archaeologically that such changes occurred. Such a one is the late Pleistocene, roughly from 70,000 B.C. to 8000 B.C. This period was characterized climatically by wide variations in temperature, corresponding to the advance and retreat of glacial conditions, and biologically by huge migrations of animals and man caused by these changes in weather. The hominid population exploded out of the African heartland into the Eurasian subarctic and then into the Americas and Australia. The population around the Mediterranean reached a new high and took the lead in cultural innovation, transferring man's cultural and biological focus from the tropics to the middle lati-
tudes. His fires, caves, and furs created for man a kind of transportable microclimate that allowed these migrations to take place.

We are used to referring to these people as late Neanderthals. At one time they were thought to be a separate species of man supplanted by Cro-Magnon man around 35,000 B.C. But the more recent view is that they were part of the general human line, which had great variation, a variation that allowed for an increasing pace of evolution, as man, taking his artificial climate with him, spread into these new ecological niches. More work needs to be done to establish the true patterns of settlement, but the most recent emphasis seems to be on its variation, some groups continually moving, others making seasonal migrations, and others staying at a site all the year round.

I am emphasizing the climate changes during this last glacial age because I believe these changes were the basis of the selective pressures behind the development of language through several stages.

**Calls, Modifiers, and Commands**

The first stage and the *sine qua non* of language is the development out of incidental calls of *intentional calls*, or those which tend to be repeated unless turned off by a change in behavior of the recipient. Previously in the evolution of primates, it was only postural or visual signals such as threat postures which were intentional. Their evolution into auditory signals was made necessary by the migration of man into northern climates, where there was less light both in the environment and in the dark caves where man made his abode, and where visual signals could

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not be seen as readily as on the bright African savannas. This evolution may have begun as early as the Third Glaciation Period or possibly even before. But it is only as we are approaching the increasing cold and darkness of the Fourth Glaciation in northern climates that the presence of such vocal intentional signals gave a pronounced selective advantage to those who possessed them.

I am here summarizing a theory of language evolution which I have developed more fully and with more caution elsewhere. It is not intended as a definitive statement of what occurred in evolution so much as a rough working hypothesis to approach it. Moreover, the stages of language development that I shall describe are not meant to be necessarily discrete. Nor are they always in the same order in different localities. The central assertion of this view, I repeat, is that each new stage of words literally created new perceptions and attentions, and such new perceptions and attentions resulted in important cultural changes which are reflected in the archaeological record.

The first real elements of speech were the final sounds of intentional calls differentiating on the basis of intensity. For example, a danger call for immediately present danger would be exclaimed with more intensity, changing the ending phoneme. An imminent tiger might result in 'wahee!' while a distant tiger might result in a cry of less intensity and so develop a different ending such as 'wahoo'. It is these endings, then, that become the first modifiers meaning 'near' and 'far'. And the next step was when these endings, 'hee' and 'hoo', could be separated from the particular call that generated them and attached to some other call with the same indication.

The crucial thing here is that the differentiation of vocal modifiers had to precede the invention of the nouns which they modified, rather than the reverse. And what is more, this stage of speech had to remain for a long period until such modifiers

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became stable. This slow development was also necessary so that the basic repertoire of the call system was kept intact to perform its intentional functions. This age of modifiers perhaps lasted up to 40,000 B.C., where we find archaeologically retouched hand axes and points.

The next stage might have been an age of commands, when modifiers, separated from the calls they modify, now can modify men's actions themselves. Particularly as men relied more and more on hunting in the chilled climate, the selective pressure for such a group of hunters controlled by vocal commands must have been immense. And we may imagine that the invention of a modifier meaning 'sharper' as an instructed command could markedly advance the making of tools from flint and bone, resulting in an explosion of new types of tools from 40,000 B.C. up to 25,000 B.C.

Nouns

Once a tribe has a repertoire of modifiers and commands, the necessity of keeping the integrity of the old primitive call system can be relaxed for the first time, so as to indicate the referents of the modifiers or commands. If 'wahee!' once meant an imminent danger, with more intensity differentiation, we might have 'wak ee!' for an approaching tiger, or 'wab ee!' for an approaching bear. These would be the first sentences with a noun subject and a predicative modifier, and they may have occurred somewhere between 25,000 and 15,000 B.C.

These are not arbitrary speculations. The succession from modifiers to commands and, only when these become stable, to nouns is no arbitrary succession. Nor is the dating entirely arbitrary. Just as the age of modifiers coincides with the making of much superior tools, so the age of nouns for animals coincides with the beginning of drawing animals on the walls of caves or on horn implements.
The next stage is the development of thing nouns, really a carry-over from the preceding. And just as life nouns began animal drawings, so nouns for things beget new things. This period corresponds, I suggest, to the invention of pottery, pendants, ornaments, and barbed harpoons and spearheads, the last two tremendously important in spreading the human species into more difficult climates. From fossil evidence we know factually that the brain, particularly the frontal lobe in front of the central sulcus, was increasing with a rapidity that still astonishes the modern evolutionist. And by this time, perhaps what corresponds to the Magdalenian culture, the language areas of the brain as we know them had developed.

The Origin of Auditory Hallucinations

At this point, let us consider another problem in the origin of gods, the origin of auditory hallucinations. That there is a problem here comes from the very fact of their undoubted existence in the contemporary world, and their inferred existence in the bicameral period. The most plausible hypothesis is that verbal hallucinations were a side effect of language comprehension which evolved by natural selection as a method of behavioral control.

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

To someone who has not fully understood the previous chapters, this type of suggestion will sound extremely strange and far-
fetched. But if one is facing directly and conscientiously the
problem of tracing out the development of human mentality,
such suggestions are necessary and important, even though we
cannot at the present time think how we can substantiate them.
Behavior more closely based on aptic structures (or, in an older
terminology, more 'instinctive') needs no temporal priming. But
learned activities with no consummatory closure do need to be
maintained by something outside of themselves. This is what
verbal hallucinations would supply.

Similarly, in fashioning a tool, the hallucinated verbal com-
mand of "sharper" enables nonconscious early man to keep at his
task alone. Or an hallucinated term meaning "finer" for an indi-
vidual grinding seeds on a stone quern into flour. It was indeed
at this point in human history that I believe articulate speech,
under the selective pressures of enduring tasks, began to become
unilateral in the brain, to leave the other side free for these
hallucinated voices that could maintain such behavior.

The Age of Names

This has been an all too brief sketch of what must have been
involved in the evolution of language. But before there could be
gods, one further step had to be taken, the invention of that most
important social phenomenon — names.

It is somehow startling to realize that names were a particular
invention that must have come into human development at a
particular time. When? What changes might this make in hu-
man culture? It is, I suggest, as late as the Mesolithic era, about
10,000 B.C. to 8000 B.C. when names first occurred. This is the
period of man's adaptation to the warmer postglacial environ-
ment. The vast sheet of ice has retreated to the latitude of
Copenhagen, and man keys in to specific environmental situa-
tions, to grassland hunting, to life in the forest, to shellfish col-
lecting, or to the exploitation of marine resources combined with
terrestrial hunting. Such living is characterized by a much
greater stability of population, rather than the necessary mobility of the hunting groups which preceded them with their large mortality. With these more fixed populations, with more fixed relationships, longer life-spans, and probably larger numbers in the group which had to be distinguished, it is not difficult to see both the need and the likelihood of a carry-over of nouns into names for individual persons.

Now, once a tribe member has a proper name, he can in a sense be recreated in his absence. 'He' can be thought about, using 'thought' here in a special nonconscious sense of fitting into language structures. While there had been earlier graves of a sort, occasionally somewhat elaborate, this is the first age in which we find ceremonial graves as a common practice. If you think of someone close to you who has died, and then suppose that he or she had no name, in what would your grief consist? How long could it last? Previously, man, like other primates, had probably left his dead where they fell, or else hidden them from view with stones, or in some instances roasted and eaten them. But just as a noun for an animal makes that relationship a much more intense one, so a name for a person. And when the person dies, the name still goes on, and hence the relationship, almost as in life, and hence burial practices and mourning. The Mesolithic midden-dwellers of Morbihan, for example, buried their dead in skin cloaks fastened by bone pins and sometimes crowned them with stag antlers and protected them with stone slabs. Other graves from the period show burials with little crowns, or various ornaments, or possibly flowers in carefully excavated places, all, I suggest, the result of the invention of names.

But a further change occurs with names. Up to this time auditory hallucinations had probably been casually anonymous and

11 As at Choukoutien during the Middle Pleistocene and later in the Croatian cave of Krapina. See Grahame Clark and Stewart Piggott, Prehistoric Societies (London: Hutchinson, 1965), p. 61.

not in any sense a significant social interaction. But once a specific hallucination is recognized with a name, as a voice originating from a particular person, a significantly different thing is occurring. The hallucination is now a social interaction with a much greater role in individual behavior. And a further problem here is just how hallucinated voices were recognized, as whom, and if there were many, how sorted out. Some light on these questions comes from the autobiographical writings of schizophrenic patients. But not enough to pursue the matter here. We are greatly in need of specific research in this area of schizophrenic experience to help us in understanding Mesolithic man.

The Advent of Agriculture

We are now at the threshold of the bicameral period, for the mechanism of social control which can organize large populations of men into a city is at hand. Everyone agrees that the change from a hunting and gathering economy to a food-producing economy by the domestication of plants and animals is the gigantic step that made civilization possible. But there is wide disagreement as to its causes and the means by which it came about.

The traditional theory emphasizes the fact that when the glaciers covered most of Europe during the Late Pleistocene, the whole area from the Atlantic coast across North Africa and the Near East to the Zagros Mountains in Iran enjoyed such an abundant rainfall that it was indeed a vast procreant Eden, luxuriant with plant life ample to support a wide range of fauna, including Paleolithic man. But the recession of the polar ice cap moved these Atlantic rain-winds northward, and the entire Near East became increasingly arid. The wild food-plants and the game on which man had preyed were no longer sufficient to allow him to live by simple food-gathering, and the result was that many tribes emigrated out of the area into Europe, while those who remained — in the words of Pumpelly, who originated this
hypothesis from his own excavations—"concentrating on the oases and forced to conquer new means of support, began to utilize the native plants; and from among these he learned to use seeds of different grasses growing on the dry land and in marshes at the mouths of larger streams on the desert." And this view has been followed by a series of more recent authors, including Childe, as well as Toynbee, who called this supposed desiccation of the Near East environment the "physical challenge" to which agricultural civilization was the response.

Recent evidence shows that there was no such extensive desiccation, and that agriculture was not economically 'forced' on anyone. I have been placing an overwhelming importance on language in the development of human culture in Mesolithic times and I would do so here as well. As we saw in Chapter 3, language allows the metaphors of things to increase perception and attention, and so to give new names to things of new importance. It is, I think, this added linguistic mentality, surrounded as it was in the Near East by a fortuitous grouping of suitable domesticates, wild wheats and wild barley, whose native distribution overlaps with the much broader habitats of the herd animals of southwestern Asia, goats, sheep, cattle, and wild pigs, that resulted in agriculture.

THE FIRST GOD

Let us look more directly for a moment at the best defined and most fully studied Mesolithic culture, the Natufian, named after the Wadi en-Natuf in Israel, where the first of the sites was

16 Butzer, p. 416.
found. In 10,000 B.C., like their Paleolithic predecessors, the Natufians were hunters, about five feet tall, often living in the mouths of caves, were skillful in working bone and antler and in chipping retouched blades and burins out of flint, drew animals almost as well as the artists of the cave drawings of Lascaux, and wore perforated shells or animal teeth as ornaments.

By 9000 B.C., they are burying their dead in ceremonial graves and adopting a more settled life. The latter is indicated by the first signs of structural building, such as the paving and walling of platforms with much plaster, and cemeteries sometimes large enough for eighty-seven burials, a size unknown in any previous age. It is, as I have suggested, the age of names, with all that it implies.

It is the open-air Natufian settlement at Eynan which shows this change most dramatically.17 Discovered in 1959, this heavily investigated site is about a dozen miles north of the Sea of Galilee on a natural terrace overlooking the swamps and pools of Lake Huleh. Three successive permanent towns dating from about 9000 B.C. have been carefully excavated. Each town comprised about fifty round stone houses with reed roofs, with diameters up to 23 feet. The houses were arranged around an open central area where many bell-shaped pits had been dug and plastered for the storage of food. Sometimes these pits were reused for burials.

Now here is a very significant change in human affairs. Instead of a nomadic tribe of about twenty hunters living in the mouths of caves, we have a town with a population of at least 200 persons. It was the advent of agriculture, as attested by the abundance of sickle blades, pounders and pestles, querns and mortars, recessed in the floor of each house, for the reaping and preparation of cereals and legumes, that made such permanence and population possible. Agriculture at this time was exceedingly

primitive and only a supplement to the wide variety of animal fauna — wild goats, gazelles, boars, fox, hare, rodents, birds, fish, tortoises, crustaceans, mussels, and snails — which, as carbon-dated remains show, were the significant part of the diet.

The Hallucinogenic King

A town! Of course it is not impossible that one chief could dominate a few hundred people. But it would be a consuming task if such domination had to be through face-to-face encounters repeated every so often with each individual, as occurs in those primate groups that maintain strict hierarchies.

I beg you to recall, as we try to picture the social life of Eynan, that these Natufians were not conscious. They could not narratize and had no analog selves to 'see' themselves in relation to others. They were what we could call signal-bound, that is, responding each minute to cues in a stimulus-response manner, and controlled by those cues.

And what were the cues for a social organization this large? What signals were the social control over its two or three hundred inhabitants?

I have suggested that auditory hallucinations may have evolved as a side effect of language and operated to keep individuals persisting at the longer tasks of tribal life. Such hallucinations began in the individual's hearing a command from himself or from his chief. There is thus a very simple continuity between such a condition and the more complex auditory hallucinations which I suggest were the cues of social control in Eynan and which originated in the commands and speech of the king.

Now we must not make the error here of supposing that these auditory hallucinations were like tape recordings of what the king had commanded. Perhaps they began as such. But after a time there is no reason not to suppose that such voices could 'think' and solve problems, albeit, of course, unconsciously. The 'voices'
heard by contemporary schizophrenics 'think' as much and often more than they do. And thus the 'voices' which I am supposing were heard by the Natufians could with time improvise and 'say' things that the king himself had never said. Always, however, we may suppose that all such novel hallucinations were strictly tied in consistency to the person of the king himself. This is not different from ourselves when we inherently know what a friend is likely to say. Thus each worker, gathering shellfish or trapping small game or in a quarrel with a rival or planting seed where the wild grain had previously been harvested, had within him the voice of his king to assist the continuity and utility to the group of his labors.

*The God-King*

We have decided that the occasion of an hallucination was stress, as it is in our contemporaries. And if our reasonings have been correct, we may be sure that the stress caused by a person's death was far more than sufficient to trigger his hallucinated voice. Perhaps this is why, in so many early cultures, the heads of the dead were often severed from the body, or why the legs of the dead were broken or tied up, why food is so often in the graves, or why there is evidence so often of a double burial of the same corpse, the second being in a common grave after the voices have stopped.

If this were so for an ordinary individual, how much more so for a king whose voice even while living ruled by hallucination. We might therefore expect a very special accordance given to the house of this unmoving man whose voice is still the cohesion of the entire group.

At Eynan, still dating about 9000 B.C., the king's tomb — the first such ever found (so far) — is a quite remarkable affair. The tomb itself, like all the houses, was circular, about 16 feet in diameter. Inside, two complete skeletons lay in the center ex-
tended on their backs, with legs detached after death and bent out of position. One wore a headdress of dentalia shells and was presumed to have been the king's wife. The other, an adult male, presumably the king, was partly covered with stones and partly propped up on stones, his upright head cradled in more stones, facing the snowy peaks of Mount Hermon, thirty miles away.

At some later time, soon after or years later, we do not know, the entire tomb was surrounded by a red-ochered wall or parapet. Then, without disturbing its two motionless inhabitants, large flat stones were paved over the top, roofing them in. Then, on the roof a hearth was built. Another low circular wall of stones was built still later around the roof-hearth, with more paving stones on top of that, and three large stones surrounded by smaller ones set in the center.

I am suggesting that the dead king, thus propped up on his pillow of stones, was in the hallucinations of his people still giving forth his commands, and that the red-painted parapet and

The first god: the dead king of Eynan propped up on a pillow of stones in about 9000 B.C., as discovered by excavations in 1959.
its top tier of a hearth were a response to the decomposition of the body, and that, for a time at least, the very place, even the smoke from its holy fire, rising into visibility from furlongs around, was, like the gray mists of the Aegean for Achilles, a source of hallucinations and of the commands that controlled the Mesolithic world of Eynan.

This was a paradigm of what was to happen in the next eight millennia. The king dead is a living god. The king's tomb is the god's house, the beginning of the elaborate god-house or temples which we shall look at in the next chapter. Even the two-tiered formation of its structure is prescient of the multitiered ziggurats, of the temples built on temples, as at Eridu, or the gigantic pyramids by the Nile that time in its majesty will in several thousand years unfold.

We should not leave Eynan without at least mentioning the difficult problem of succession. Of course, we have next to nothing to go on in Eynan. But the fact that the royal tomb contained previous burials that had been pushed aside for the dead king and his wife suggests that its former occupants may have been earlier kings. And the further fact that beside the hearth on the second tier above the propped-up king was still another skull suggests that it may have belonged to the first king's successor, and that gradually the hallucinated voice of the old king became fused with that of the new. The Osiris myth that was the power behind the majestic dynasties of Egypt had perhaps begun.

The king's tomb as the god's house continues through the millennia as a feature of many civilizations, particularly in Egypt. But, more often, the king's-tomb part of the designation withers away. This occurs as soon as a successor to a king continues to hear the hallucinated voice of his predecessor during his reign, and designates himself as the dead king's priest or servant, a pattern that is followed throughout Mesopotamia. In place of the tomb is simply a temple. And in place of the corpse is a statue, enjoying even more service and reverence, since it does not decompose.
We shall be discussing these idols, or replacements for the corpses of kings, more fully in the next two chapters. They are important. Like the queen in a termite nest or a beehive, the idols of a bicameral world are the carefully tended centers of social control, with auditory hallucinations instead of pheromones.

*The Success of Civilization*

Here then is the beginning of civilization. Rather abruptly, archaeological evidence for agriculture such as the sickle blades and pounding and milling stones of Eynan appear more or less simultaneously in several other sites in the Levant and Iraq around 9000 B.C., suggesting a very early diffusion of agriculture in the Near Eastern highlands. At first, this is as it was at Eynan, a stage in which incipient agriculture and, later, animal domestication were going on within a dominant food-collecting economy.\(^\text{18}\)

But by 7000 B.C., agriculture has become the primary subsistence of farming settlements found in assorted sites in the Levant, the Zagros area, and southwestern Anatolia. The crops consisted of einkorn, emmer, and barley, and the domesticated animals were sheep, goats, and sometimes pigs. By 6000 B.C., farming communities spread over much of the Near East. And by 5000 B.C., the agricultural colonization of the alluvial valleys of the Tigris-Euphrates and Nile was rapidly spreading, swelling populations into an intensive cultural landscape.\(^\text{19}\) Cities of 10,000 inhabitants, as at Merinde on the western edge of the Nile delta, were not uncommon.\(^\text{20}\) The great dynasties of Ur and of Egypt begin their mighty impact on history. The date 5000 B.C.,


\(^{19}\) Butzer, p. 464.

or perhaps five hundred years earlier, is also the beginning of what is known to geologists as the Holocene Thermal Maximum, lasting to approximately 3000 B.C., in which the world's climate, particularly as revealed by pollen studies, was considerably warmer and moister than today, allowing even further agricultural dispersal into Europe and northern Africa, as well as more productive agriculture in the Near East. And in this immensely complex civilizing of mankind, the evidence, I think, suggests that the *modus operandi* of it all was the bicameral mind.

It is to that evidence that we now turn.
BOOK THREE

Vestiges of the Bicameral Mind
in the Modern World
CHAPTER 1

The Quest for Authorization

WE ARE NOW at last in a position where we can look back and see the history of mankind on this planet in its proper values for the first time and understand some of the chief features of the last three millennia as vestiges of a previous mentality. Our view of human history here must be that of a furthest grandeur. We must try to see man against his entire evolutionary background, where his civilizations, including our own, are but as mountain peaks in a particular range against the sky, and from which we must force ourselves into an intellectual distance so that we see its contours aright. And from this prospect, a millennium is an exceedingly short period of time for so fundamental a change as from bicamerality to consciousness.

We, at the end of the second millennium A.D., are still in a sense deep in this transition to a new mentality. And all about us lie the remnants of our recent bicameral past. We have our houses of gods which record our births, define us, marry us, and bury us, receive our confessions and intercede with the gods to forgive us our trespasses. Our laws are based upon values which without their divine pendency would be empty and unenforceable. Our national mottoes and hymns of state are usually divine invocations. Our kings, presidents, judges, and officers begin their tenures with oaths to the now silent deities taken upon the writings of those who have last heard them.

The most obvious and important carry-over from the previous
mentality is thus our religious heritage in all its labyrinthine beauty and variety of forms. The overwhelming importance of religion both in general world history and in the history of the average world individual is of course very clear from any objective standpoint, even though a scientific view of man often seems embarrassed at acknowledging this most obvious fact. For in spite of all that rationalist materialist science has implied since the Scientific Revolution, mankind as a whole has not, does not, and perhaps cannot relinquish his fascination with some human type of relationship to a greater and wholly other, some *mysterium tremendum* with powers and intelligences beyond all left hemispheric categories, something necessarily indefinite and unclear, to be approached and felt in awe and wonder and almost speechless worship, rather than in clear conception, something that for modern religious people communicates in truths of feeling, rather than in what can be verbalized by the left hemisphere, and so what in our time can be more truly felt when least named, a patterning of self and numinous other from which, in times of our darkest distress, *none* of us can escape — even as the infinitely milder distress of decision-making brought out that relationship three millennia ago.

There are many things that could be said at this point — many. A full discussion here would specify how the attempted reformation of Judaism by Jesus can be construed as a necessarily new religion for conscious men rather than bicameral men. Behavior now must be changed from within the new consciousness rather than from Mosaic laws carving behavior from without. Sin and penance are now within conscious desire and conscious contrition, rather than in the external behaviors of the decalogue and the penances of temple sacrifice and community punishment. The divine kingdom to be regained is psychological not physical. It is metaphorical not literal. It is 'within' not *in extenso*.

But even the history of Christianity does not and cannot remain true to its originator. The development of the Christian Church returns again and again to this same longing for bicam-
eral absolutes, away from the difficult inner kingdoms of *agape* to
an external hierarchy reaching through a cloud of miracle and
infallibility to an archaic authorization in an extended heaven. In
previous chapters I have often paused to point out various parallels between ancient bicameral practices and modern religious
ones, and I shall not labor such comparisons here.

Also beyond the purview of the present book is a full explora-
tion of the way that the more secular developments of the last
three millennia are related to their emergence from a different
mentality. I am thinking here of the history of logic and con-
scious reasoning from the Greek development of Logos to modern
computers, and of the spectacular historical pageant of philos-
ophy, with its efforts to find a metaphor of all existence in which
we may find some conscious familiarity and so feel at home in
the universe. I am thinking too of our struggles toward systems of
ethics, of attempting with rational consciousness to find sub-
stitutes for our previous divine volition which could carry with them
that obligation which at least could simulate our earlier obedience
to hallucinated voices. And too of the cyclic history of politics,
the gyres of our wavering attempts to make governments out of
men instead of gods, secular systems of laws to perform that
formerly divine function of binding us together into an order, a
stability, and a commonweal.

These larger questions are the important ones. But here, in
this chapter, I wish to introduce the issues of Book III by con-
sidering a handful of more ancient topics of lesser importance
that are precise and clear carry-overs from the earlier mentality.
My reason for doing so here is that these historical phenomena
shed a needed and clarifying light back into some of the darker
problems of Books I and II.

One distinguishing characteristic of such vestiges is that they
are more obvious against the complexity of history the closer we
are to the breakdown of the bicameral mind. The reason for this
is quite clear. While the universal characteristics of the new consciousness, such as self-reference, mind-space, and narratization, can develop swiftly on the heels of new language construction, the larger contours of civilization, the huge landscape of culture against which this happens, can only change with geological slowness. The matter and technic of earlier ages of civilizations survive into the new eras uneroded, dragging with them the older outworn forms in which the new mentality must live.

But living also in these forms is a fervent search for what I shall call archaic authorization. After the collapse of the bicameral mind, the world is still in a sense governed by gods, by statements and laws and prescriptions carved on stelae or written on papyrus or remembered by old men, and dating back to bicameral times. But the dissonance is there. Why are the gods no longer heard and seen? The Psalms cry out for answers. And more assurances are needed than the relics of history or the paid insistences of priests. Something palpable, something direct, something immediate! Some sensible assurance that we are not alone, that the gods are just silent, not dead, that behind all this hesitant subjective groping about for signs of certainty, there is a certainty to be had.

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, statue 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. In this chapter and the next we shall examine some of these more archaic vestiges of the bicameral mind.
The most immediate carry-over of bicamerality is simply its perpetuation in certain persons, particularly itinerant prophets, which I have discussed in 11.6, or those institutionalized as oracles, which I shall describe here. While there is a series of cuneiform tablets describing Assyrian oracles dating from the seventh century B.C., and the even earlier oracle of Amon of Thebes in Egypt, it is really in Greece that we know this institution best. Greek oracles were the central method of making important decisions for over a thousand years after the breakdown of the bicameral mind. This fact is usually obscured by the strident rationalism of modern historians. Oracles were subjectivity's umbilical cord reaching back into the sustaining unsubjective past.

_The Oracle at Delphi_

Coincidental with my metaphor is the fact that at the most famous oracle, that of Apollo at Delphi, there was a queer cone-like stone structure called the _omphalos_ or navel. It stood at the reputed center of the earth. Here presided on certain days, or in some centuries every day throughout the year, a supreme priestess, or sometimes two or three in rotation, selected so far as we know on no particular basis (in Plutarch's day, in the first century B.C., she was the daughter of a poor farmer). She first bathed and drank from a sacred brook, and then established contact with the god through his sacred tree, the laurel, much as conscious Assyrian kings are depicted being smeared by tree-cones in the hands of genii. She did this either by holding a

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2 Plutarch, _Pyth. rac._ 22, 405C.
laurel branch, or by inhaling and fumigating herself with burnt laurel leaves (as Plutarch said), or perhaps by chewing the leaves (as Lucian insisted).

The replies to questions were given at once, without any reflection, and uninterruptedly. The exact manner of her announcements is still debated,\(^3\) whether she was seated on a tripod, regarded as Apollo's ritual seat, or simply stood at an entrance to a cave. But the archaic references to her, from the fifth century on, all agree with the statement of Heraclitus that she spoke "from her frenzied mouth and with various contortions of her body." She was *entheos, plena deo*. Speaking through his priestess, but always in the first person, answering king or freeman, 'Apollo' commanded sites for new colonies (as he did for present-day Istanbul), decreed which nations were friends, which rulers best, which laws to enact, the causes of plagues or famines, the best trade routes, which of the proliferation of new cults, or music, or art should be recognized as agreeable to Apollo — all decided by these girls with their frenzied mouths.

Truly, this is astonishing! We have known of the Delphic Oracle so long from school texts that we coat it over with a shrugging usualness when we should not. How is it conceivable that simple rural girls could be trained to put themselves into a psychological state such that they could make decisions at once that ruled the world?

The obdurate rationalist simply scoffs *plena deo* indeed! Just as the mediums of our own times have always been exposed as frauds, so these so-called oracles were really performances manipulated by others in front of an illiterate peasantry for political or monetary ends.

But such a realpolitik attitude is doctrinaire at best. Possibly there was some chicanery in the oracle's last days, perhaps some bribery of the *prophetes*, those subsidiary priests or priestesses

\(^3\) See E. R. Dodds, *The Greeks and, the Irrational* (Berkeley: University of California Press, 1968), which I have used as a handbook in these matters.
who interpreted what the oracle meant. But earlier, to sustain so massive a fraud for an entire millennium through the most brilliant intellectual civilization the world had yet known is impossible, just impossible. Nor can it gibe with the complete absence of criticism of the oracle until the Roman period. Nor with the politically wise and often cynical Plato reverently calling Delphi "the interpreter of religion to all mankind."\footnote{Plato, \textit{Republic}, 4, 427B. We should also remember that Socrates derived some of what I am about to call his 'archaic authorization' from the oracle. See \textit{Apology}, 20E.}

Another kind of explanation, really a quasi-explanation, still busied about with in the popular and sometimes professional literature, is biochemical. The trances were real, it says, but caused by vapors of some sort rising from a \textit{casium} beneath the floor of the cave. But the French excavations of 1903 and more recent ones have shown distinctly that no such casium existed.\footnote{A. P. Oppe, "The Chasm at Delphi," \textit{Journal of Historical Studies}, 1904, 24: 214f.}

Or else there might be a drug in the laurel that could have produced such an Apollonian effect. To test this, I have crushed laurel leaves and smoked quantities of them in a pipe and felt somewhat sick but no more inspired than usual. And chewed them as well for over an hour, and very distinctly felt more and more Jaynesian, alas, than Apollonian.\footnote{I am grateful to EveLynn McGuinness for much in my life and here for acting as an observer, although her role was somewhat compromised both by her participation and a certain minimal reverence. Our negative result agrees with T. K. Oesterreich. See his \textit{Possession, Demonical and Other}, English translation, 1930, p. 319, note 3.} The glee with which external explanations are sought out for such phenomena simply indicates the resistance in some quarters to admitting that psychological phenomena of this type exist at all.

Rather, I suggest a quite different explanation. And for that purpose, I shall introduce here the notion of

\textit{The General Bicameral Paradigm}

By this phrase, I mean an hypothesized structure behind a
large class of phenomena of diminished consciousness which I am interpreting as partial holdovers from our earlier mentality. The paradigm has four aspects:

the collective cognitive imperative, or belief system, a culturally agreed-on expectancy or prescription which defines the particular form of a phenomenon and the roles to be acted out within that form;

an induction or formally ritualized procedure whose function is the narrowing of consciousness by focusing attention on a small range of preoccupations;

the trance itself, a response to both the preceding, characterized by a lessening of consciousness or its loss, the diminishing of the analog or its loss, resulting in a role that is accepted, tolerated, or encouraged by the group; and

the archaic authorization to which the trance is directed or related to, usually a god, but sometimes a person who is accepted by the individual and his culture as an authority over the individual, and who by the collective cognitive imperative is prescribed to be responsible for controlling the trance state.

Now, I do not mean these four aspects of the general bicameral paradigm to be considered as a temporal succession necessarily, although the induction and trance usually do follow each other. But the cognitive imperative and the archaic authorization pervade the whole thing. Moreover, there is a kind of balance or summation among these elements, such that when one of them is weak the others must be strong for the phenomena to occur. Thus, as through time, particularly in the millennium following the beginning of consciousness, the collective cognitive imperative becomes weaker (that is, the general population tends toward skepticism about the archaic authorization), we find a rising emphasis on and complication of the induction procedures, as well as the trance state itself becoming more profound.

By calling the general bicameral paradigm a structure, I not
only mean a logical structure into which these phenomena can be analyzed, but also some presently unspecified neurological structure or relationships between areas of the brain, perhaps something like the model for the bicameral mind presented in 1.5. We might thus expect that all of the phenomena mentioned in Book III in some way involve right hemispheric function in a way that is different from ordinary conscious life. It is even possible that in some of these phenomena we have a partial periodic right hemisphere dominance that can be considered as the neurological residue of nine millennia of selection for the bicameral mind.

The application of this general bicameral paradigm to the oracle at Delphi is obvious: the elaborate induction procedures, the trance in which consciousness is lost, the ardently pursued authorization of Apollo. But it is the collective cognitive" imperative or group belief or cultural prescription or expectancy (all of these terms indicating my meaning) which I wish to emphasize. The immensity of the cultural demand upon the entranced priestess cannot be overemphasized. The whole Greek world believed, and had for almost a millennium. As many as thirty-five thousand people a day from every part of the Mediterranean world might struggle by sea through the tiny port of Itea that snuggles the receptive coast just below Delphi. And they, too, went through induction procedures, purifying themselves in the Castalian spring, making offerings to Apollo and other gods as they persisted up the Sacred Way. In the latter centuries of the oracle, more than four thousand votive statues crowded this 220-yard-long climb up the side of Mount Parnassus to the temple of the oracle. It was, I suggest, this confluence of huge social prescription and expectancy, closer to definition than mere belief, which can account for the psychology of the oracle, for the at-once-ness of her answers. It was something before which any skepticism would be as impossible as for us to doubt that the speech of a radio originates in a studio that we cannot see. And it is something before which modern psychology must stand in awe.
To this causative expectancy should be added something about the natural scene itself. Oracles begin in localities with a specific awesomeness, natural formations of mountain or gorge, of hallucinogenic wind or waves, of symbolic gleamings and vistas, which I suggest are more conducive to occasioning right hemisphere activity than the analytic planes of everyday life. Perhaps we can say that the geography of the bicameral mind in the first part of the first millennium B.C. was shrinking down into sites of awe and beauty where the voices of gods could still be heard.

Certainly the vast cliffs of Delphi move into such a suggestion and fill it fully: a towering caldron of blasted rock over which the sea winds howl and the salt mists cling, as if dreaming nature were twisting herself awake at awkward angles, falling away into a blue surf of shimmering olive leaves and the gray immortal sea.

(It is, however, difficult for us to appreciate such scenic awe today, so clouded is the purity of our response to landscape with our conscious ‘inner’ worlds and our experience with swift geographical change. Moreover, Delphi today is not quite as it was. Its five acres of broken columns, cheerful graffiti, camera-clicking tourists, and stumps of white marble over which heedless ants crawl indecisively, are not exactly the stuff of divine inspiration.)

Other Oracles

Particularly recommending such a cultural explanation of Delphi is the fact that there were similar if less important oracles throughout the civilized world at the time. Apollo had others: at Ptoe in Boeotia and at Branchidae and Patara in Asia Minor. At the latter, the Prophetess, as part of the induction, was locked into the temple at night for connubial union with her hallucinated god that she might better be his medium.7 The great

7 Herodotus, 1:182.
oracle at Claros had priests as mediums whose frenzies were visited by Tacitus in the first century A.D.\textsuperscript{8} Pan had an oracle at Acacesium, but it became defunct early\textsuperscript{9} The golden oracle at Ephesus, famous for its enormous wealth, had tranced eunuchs as the mouthpieces of the goddess Artemis.\textsuperscript{10} (The style of their vestments, incidentally, is still used today by the Greek Orthodox Church.) And the abnormal dancing on the tips of the toes of modern ballerinas is thought to derive from the dances before the altar of the goddess.\textsuperscript{11} Anything opposite to the everyday can serve as a cue for the engagement of the general bicameral paradigm.

The voice of Zeus at Dodona must have been one of the oldest oracles, since Odysseus visited it to hear whether to return to Ithaca openly or by stealth.\textsuperscript{12} It was at that time probably just a huge sacred oak tree and the Olympian voice was hallucinated from the wind trembling in its leaves, making one wonder if something similar took place among the Druids who held the oak holy. It is only in the fifth century B.C. that Zeus is no longer heard directly, and Dodona has a temple and a priestess who speaks for him in unconscious trances,\textsuperscript{13} again conforming to the temporal sequence the bicameral theory would predict.

Not only the voices of gods, but also of dead kings, could still be heard bicamerally, as we have earlier suggested was the origin of gods themselves. Amphiaraus had been the heroic prince of Argos who had plunged to his death in a chasm in Boeotia, supposedly at the nudge of an angry Zeus. His voice was 'heard' from the chasm for centuries after, answering the problems of

\textsuperscript{8} Tacitus, \textit{Annales}, 2,154.


\textsuperscript{10} Charles Picard, \textit{Ephese et Claros} (Paris: de Bocard, 1922).

\textsuperscript{11} Louis Sechan, \textit{La Dance Greque Antique} (Paris: de Bocard, 1930)) and also Lincoln Kirstein, \textit{The Book of the Dance} (Garden City: Garden City Publishing Co., 1942).

\textsuperscript{12} \textit{Odyssey}, 14:327:19:296.

\textsuperscript{13} Aelius Aristides, \textit{Orations}, 45:n.
his petitioners. But again as centuries passed, the Voice' came to
be hallucinated only by certain entranced priestesses who lived
there. At that later time they did not so much answer questions
as interpret the dreams of those who consulted the voice.\textsuperscript{14}

In some ways the most interesting, however, from the hypoth-
esis of the bicameral mind is the hallucinated voice of Tropho-
nius at Lebadea, twenty miles east of Delphi. For it is the longest
lasting of the direct Voices' without intermediary priests or priest-
esses. The locale of the oracle even today bears some remnants
of its ancient awesomeness, a meeting of three soaring preci-
pices, of murmuring springs easing strongly out of the solemn
ground and crawling submissively away into stony ravines. And
up a little, where one ravine begins to wind into the heart of the
mountain, there was once a carved-out cell-like pit in the rock
that squeezed down into an ovenlike shrine over an underground
flume.

When the collective imperative of the general bicameral para-
digm is less, when belief and trust in such phenomena are
waning with rationalism, and particularly when it is being ap-
plied not to a trained priestess but to any suppliant, the induction
is longer and more intricate to compensate. And this is what
occurred at Lebadea. Pausanias, the Roman traveler, described
the elaborate induction procedure that he found there in A.D.
150.\textsuperscript{15} After days of waiting and purification and omens and
expectancy, he tells us how he was abruptly taken one night and
bathed and anointed by two holy boys, then drank from Lethe's
spring to forget who he was (the loss of the analog 'I'), then
made to sip at the spring of Mnemosyne so as to remember later
what was to be revealed (like a post-hypnotic suggestion). Then
he was made to worship a secret image, then was dressed in holy
linen, girded with sacred ribbons, and shod with special boots,
and then only after more omens, if favorable, was finally inserted

\textsuperscript{14} Pausanias, \textit{Description of Greece}, 1, 34:5.

\textsuperscript{15} Ibid., 9, 39:11.
down an impassive ladder into the devout pit with its dark torrent where the divine message grew swiftly articulate.

**The Six Oracular Terms**

As the Greek mind moves from the universally bicameral to the universally conscious, these oracular vestiges of the bicameral world and their authority change until they become more and more precarious and difficult to obtain. There is, I suggest, a loose pattern in all this, and that over the thousand years of their existence, oracles were in a continuing decadence which can be understood as six terms. These can be regarded as six steps down from the bicameral mind as its collective cognitive imperative grew weaker and weaker.

1. The *locality* oracle. Oracles began simply as specific locations where, because of some awesomeness of the surroundings, or some important incident or some hallucinogenic sound, waves, waters, or wind, suppliants, any suppliants, could still 'hear' a bicameral voice directly. Lebadea remained at this term, probably because of its remarkable induction.

2. The *prophet* oracle. Usually there then occurred a term where only certain persons, priests, or priestesses, could 'hear' the voice of the god at the locality.

3. The *trained prophet* oracle, when such persons, priests, or priestesses, could 'hear' only after long training and elaborate inductions. Up to this term, the person was still himself and relayed the god's voice to others.

4. The *possessed* oracle. Then, from at least the fifth century B.C., came the term of possession, of the frenzied mouth and contorted body after even more training and more elaborate inductions.
5. The interpreted possessed oracle. As the cognitive imperative weakened, the words became garbled and had to be interpreted by auxiliary priests or priestesses who themselves had gone through induction procedures.

6. The erratic oracle. And then even this became difficult. The voices became fitful, the possessed prophet erratic, the interpretations impossible, and the oracle ended.

The oracle of Delphi endured longest. It is striking evidence for its supreme importance to the god-nostalgic subjectivity of Greece in its golden age that it lasted so long, particularly when it is recalled that in almost every invasion it sided with the invader: with Xerxes I in the early fifth century B.C., with Philip II in the fourth century B.C., and even in the Peloponnesian Wars, it spoke on the side of Sparta. Such the strength of bicameral phenomena in the forces of history. It even lived out its sad, hilarious, patriotic mocking by Euripides in the amphitheaters.

But by the first century A.D., Delphi had come to its sixth term. Bicamerality having receded further and further into the unremembered past, skepticism had overgrown belief. The mighty cultural cognitive imperative of the oracular was played out and shattered, and the thing with increasing frequency would not work. One such instance at Delphi is told by Plutarch in A.D. 60. The prophetess reluctantly attempted a trance, the omens being dreadful. She began to speak in a hoarse voice as if distressed, then appeared filled with a "dumb and evil spirit," and then ran screaming toward the entrance and fell down. Everyone else, including her prophetes, fled in terror. The report goes on that they found her partly recovered when they returned, but that she died within a few days. As this was probably observed by a prophetes who was a personal friend of Plutarch's, we have no reason to doubt its authenticity.

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16 Plutarch, *Def. Orac.*, 51, 438C.
17 Dodds, *Greeks and the Irrational*, p. 72.
Yet even with these neurotic failures, Delphi was still consulted by the tradition-hungry Greece-haunted Romans. The last to do so was my namesake, the Emperor Julian who, following his namesake Julianus (who had written down from hallucinated gods his Chaldaean Oracles), was attempting to revive the ancient gods. As part of this personal quest for authorization, he tried to rehabilitate Delphi in A.D. 363, three years after it had been ransacked by Constantine. Through his remaining priestess, Apollo prophesied that he would never prophesy again. And the prophecy came true. The bicameral mind had come to one of its many ends.

Sibyls

The Age of Oracles occupies the entire millennium after the breakdown of the bicameral mind. And as it slowly dies away, there appear here and there what might be called amateur oracles, untrained and uninstitutionalized persons who spontaneously felt themselves possessed by gods. Of course some simply spoke schizophrenic nonsense. Probably most. But others had an authenticity that could command belief. Among such were those few but unknown number of weird and wonderful women known as the Sibyls (from the Aeolic sios = god + boule = advice). In the first century B.C., Varro could count at least ten at one time around the Mediterranean world. But there were certainly others in more remote regions. They lived in solitude, sometimes in reverenced mountain shrines that were built for them, or in tufaceous subterranean caverns near the groan of the ocean, as did the great Cumaean Sibyl. Virgil had probably personally visited the latter around 40 B.C., when he described her frenzied laboring with a possessing Apollo in Book VI of the Aeneid.

Like oracles, the Sibyls were asked to make decisions on matters high and low up to the third century A.D. So gristled with
moral fervor were their replies that even the early Christian Fathers and Hellenistic Jews bowed to them as prophets on a level with those of the Old Testament. The early Christian Church, in particular, used their prophecies (often forged) to buttress its own divine authenticity. Even a thousand years later, at the Vatican, four of the Sibyls were painted into prominent niches on the ceiling of the Sistine Chapel by Michelangelo. And even centuries later, copies of these muscular ladies with their oracular books open used to look down on the wondering present writer in a Unitarian Sunday school in New England. Such is the thirst of our institutions after authorization.

And when they too had ceased, when the gods no longer would inhabit living human forms in prophecy and oracle, mankind searches for other ways of taking up the slack, as it were, between heaven and earth. There are new religions, Christianity, Gnosticism, and Neo-Platonism. There are new orders of conduct to relate god-shorn men to the enormous conscious landscape of a now spatialized time, as in Stoicism and Epicureanism. There is an institutionalization and elaboration of divination beyond anything in Assyria, divination built into the political state officially to generate decisions on important matters. As the Greek civilizations had been anchored into the divine by oracles, so the Roman now is by auspices and augurers.

A Revival of Idols

But even these cannot fill the need of the common man for transcendence. Following the failure of oracles and prophets as if to replace them is an attempted revival of idols similar to those of bicameral times.

The great bicameral civilizations had, as we have seen, used a wide variety of effigies to help hallucinate bicameral voices. But when those voices ceased in the adjustment to subjective consciousness, all this was darkened. Most idols were destroyed.
Late bicameral kingdoms at the behest of their jealous gods had always smashed and burned the idols of opposing gods or kings. And the practice accelerated when the idols were no longer heard and worshiped. King Josiah, in the seventh century B.C., ordered all idols in his domain destroyed. The Old Testament is full of the destruction of idols, as well as imprecations on the heads of those who make new ones. By the middle of the first millennium B.C., idolatry is only here and there, fitful and unimportant.

Curiously, there is at this time a very minor cult of hallucinating from severed heads. Herodotus (4:26) speaks of the practice in the obscure Issedones of gilding a head and sacrificing to it. Cleomenes of Sparta is said to have preserved the head of Archonides in honey and consulted it before undertaking any important task. Several vases of the fourth century B.C. in Etruria depict scenes of persons interrogating oracular heads. And the severed head of the rustic Carians which continues to 'speak' is mentioned derisively by Aristotle. And this is about all. Thus, after subjective consciousness is firmly established, the practice of hallucinating from idols is only sporadically present.

But as we approach the beginning of the Christian era, with the oracles mocked into silence, we have a very true revival of idolatry. The temples that whitened the hills and cities of decadent Greece and ascendant Rome were now crammed with more and more statues of gods. By the first century A.D., the Apostle Paul despairingly found Athens full of idols (Acts 17), and Pausanias, whom we met a few pages ago at Lebadea, described them as being simply everywhere on his travels and of every conceivable sort: marble and ivory, gilded and painted, life-sized and some two or three stories high.

Did such idols 'speak' to their worshipers? There is no doubt

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19 De Partibus Animalium, III, 10:9-12.
that this sometimes occurred, just as in bicameral times. But in
general in the subjective era, it seems very doubtful that this
happened spontaneously very often. For otherwise there would
not have been the rising attention to artificial means, magical and
chemical, for obtaining hallucinated messages from stone and
ivory gods. And here again we see the entrance into history of
the general bicameral paradigm: collective cognitive imperative,
induction, trance, and archaic authorization.

In Egypt, where the breaking point between bicamerality and
subjectivity is far less sharp than in more volatile nations, there
was the development of the so-called Hermetic literature. This is
a series of papyri describing various induction procedures that
came into being at the edge of bicameral certainty and spread
over the conscious world. In one of them, there is a dialogue
called the *Asclepus* (after the Greek god of healing) that de-
scribes the art of imprisoning the souls of demons or of angels in
statues with the help of herbs, gems, and odors, such that the
statue could speak and prophesy.\(^{20}\) In other papyri, there are
still other recipes for constructing such images and animating
them, such as when images are to be hollow so as to enclose a
magic name inscribed on gold leaf.

By the first century A.D., this practice had spread over most of
the civilized world. In Greece, rumors broke into legends over the
miraculous behavior of public cult statues. In Rome, Nero prized
a statue which warned him of conspiracies.\(^{21}\) Apuleius was
accused of possessing one.\(^{22}\) So common were hallucinogenic
idols by the second century A.D. that Lucian in his *Philopseudes*
satirized the belief in them. And Iamblichus, the Neo-Platonist
apostle of *theurgy*, as it was called in his *Peri agalmaton*, tried to

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\(^{20}\) The records of the various temples to the medical god Asclepius are full of re-
ported diagnoses and therapeutic directives told to the sick as they slept there. These
have been collected and translated by E. J. and L. Edelstein, *Asclepus: A Collection
and Interpretation of the Testimonies*, 2 vols., 1945.

\(^{21}\) Suetonius, *Nero*, 56.

\(^{22}\) Apuleius, *Apol.*, 63.
prove “that idols are divine and filled with the divine presence,” establishing a vogue for such idols against the fuming execration of Christian critics. His disciples obtained omens of every sort and distinction from idols. One hallucinator boasted he could make a statue of Hecate laugh and cause the torches in her hand to light up. And another feels he can tell whether a statue is animate or inanimate by the sensation it gives him. Even Cyprian, the good gray Bishop of Carthage, complained in the third century of the “spirits that lurk under statues and consecrated images.”

23 The whole civilized world, in this effort to recall the bicameral mind after the failure of oracles and prophecy, was filled with epiphanies of statues of every sort and description in this remarkable revival of idolatry.

How was all this believable? Since this is well into the subjective era, when men prided themselves on reason and common sense, and at last knew there were such experiences as false hallucinations, how was it possible that they could actually believe that statues embodied real gods? And really spoke?

Let us recall the almost universal belief of these centuries in an absolute dualism of mind and matter. Mind or soul or spirit or consciousness (all these were confused together) was a thing imposed from heaven on the bodily matter to give it life. All the newer religions of this era were allied about this point. And if a soul can be imposed on so fragile a thing as flesh to make it live, on a hurtable carcass that has to have vegetable and animal matter stuffed in one end and stenchfully excreted at another, a sense-pocked sinful vessel that the years wrinkle and the winds chafe and diseases cruelly hound, and that can be sliced off in a trice from the soul it holds by the same act that stabs an onion, how much more possible for life, divine life, to be imposed by heaven upon a statue of unbleeding beauty with a faultless and immaculate body of unwrinkling marble or diseaseless gold!

23 Other instances are mentioned by E. R. Dodds, *Greeks and the Irrational*. 
Here is Callistatus, for example, in the fourth century A.D., writing about an ivory and gold statue of the god Asclepius:

Shall we admit that the divine spirit descends into human bodies, there to be even defiled by passions, and nevertheless not believe it in a case where there is no attendant engendering of evil? . . . for see how an image, after Art has portrayed in it a god, even passes over into the god himself! Matter though it is, it gives forth divine intelligence.\textsuperscript{24}

And he and most of the world believed it.

The evidence for all this would be much more obvious today, had not Constantine in the fourth century, even like King Josiah in Israel one millennium earlier, sent his armies of Christian converts out with sledge hammers through the once bicameral world to smash all its physical vestiges in sight. Every god is a jealous god after the breakdown of the bicameral mind.

But even this destruction could not abolish idolatrous practice, so vital is it to have some kind of authorization for our behavior. Medieval Italy and Byzantium believed in enchanted idols who had power to avert disaster. The notorious Knights Templars were at least accused of taking orders from a gold head called Baphomet. So common had hallucinogenic idols become in the late Middle Ages that a bull of Pope John XXII in 1326 denounced those who by magic imprison demons in images or other objects, interrogate them, and obtain answers. Even up to the Reformation, monasteries and churches vied with each other to attract pilgrims (and their offerings) by miracle-producing statuary.

In some epochs, perhaps when the cognitive imperatives for such neo-bicameral experiences began to wither under the sunlight of rationalism, the belief in statue animation was occasion-

ally sustained by the use of fraudulent contrivances.\textsuperscript{25} In one instance of many, a life-sized medieval rood of the crucified Jesus at Boxley, which rolled its eyes at penitents, shed tears, and foamed at the mouth, was found in the sixteenth century to have “certain engines and old wires with old rotten sticks in the back of the same.”\textsuperscript{26} But we shouldn’t cynicize too deeply here. While such artificial animation often functioned as chicanery to fool the miracle-hungry pilgrim, it may also have been meant as an enticement to the god to body itself in a more lifelike statue. As a fourteenth-century tract on the matter explained, “God’s power in working of his miracles loweth down in one image more than in another.”\textsuperscript{27} Animated idols in some contemporary tribes are explained by their worshipers in the same way.

Idolatry is still a socially cohesive force — its original function. Our parks and public gardens are still the beflowered homes of heroic effigies of past leaders. While few of us can hallucinate their speech, we still on appropriate occasions might give them gifts of wreaths, even as greater gifts were given in the gigumus of Ur. In churches, temples, and shrines the world over, religious statues are still being carved, painted, and prayed to. Figurines of a Queen of Heaven dangle protectively from the mirrors of American windshields. Teen-age girls I have interviewed, living in deeply religious convents, often sneak down to the chapel in the dead of night and have mentioned to me their excitement at being able to ‘hear’ the statue of the Virgin Mary speak, and ‘see’ her lips move or her head bow or — sometimes — her eyes weep. Gentle idols of Jesus, Mary, and the saints throughout much of the Catholic world are still being bathed, dressed, incensed,

\textsuperscript{26} See Jonathan Sumption’s \textit{Pilgrimage: An Image of Medieval Religion} (Totawa, N.J.: Rowman and Littlefield, 1975), p. 56; also Julia Holloway’s forthcoming \textit{The Pilgrim}. I am grateful to her for bringing this to my attention.
\textsuperscript{27} Quoted from the Lollard manuscript \textit{Lanterne of Lights} by Sumption, p. 270.
flowered, jeweled, and launched shoulder-high and glorious out of bell-bellowing churches on outings through towns and countrysides on feast days. Placing special foods in front of them or dancing and bowing before them still generates its numinous excitement.28 Such devotions differ from similar divine outings in bicameral Mesopotamia 4000 years ago mostly in the idol's relative silence.

28 As in Flaubert's beautiful story *Un Coeur Simple.*