

“Gods Inside”

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1 • THE GODS PROBLEM

Belief in gods is a human universal.

Gods are everywhere. In every culture and throughout every historical period, a central feature of human existence is the presence of a god or gods. Where humans exist, some people have religious experiences, feel the pangs of conscience, and suffer for their moral values. There are no cultures without any form of spiritual life. This fact must be taken seriously as a scientific phenomenon. Why do so many people genuinely experience contact with a spiritual realm inhabited by one or more identifiable entities, sometimes malign, more often benign? This is the target for our exploration, and thus in a sense the foundation of our disbelief in a Christian God.

There are people who claim to know nothing of spirituality. Likewise, some people have never been in love, even though some people of all cultures have such an experience. So, too, there are people who feel little or no interest in having children, having sex, or listening to music. Religious experiences are not known to all people of all ages. Still, spiritual experiences and ideas are common to all human societies, and for some—perhaps most—members of all human societies these experiences are prominent parts of their lives.

2 • THE EVOLUTION OF FREE WILL IS OUR STARTING POINT

Humans have evolved infinitely flexible behaviors.

Human universals cannot be explained by culture alone. Neither can behavioral traits seen among other animal species or newborn babies. Instead, like the human interests in food or sex, and like the human institutions of marriage or property, such ubiquitous human behaviors must have their roots in fundamental features of our evolutionary biology. For this reason, we have developed an evolutionary analysis of the experience of god(s) in human cultures. Unlike territoriality or marriage, however, there are no ubiquitous antecedents of human religious experience among animal species. We are not supposing that chimpanzees or gorillas are without

some intimations of the Divine. But there is no evidence that such experiences are common among animal species.

Therefore, we start off supposing that, *if* there is some evolutionary basis to human religious experience, it is not one shared commonly among animal species. This leads to the corollary that there is something special in hominids evolution that led to the development of religious experience. That something must be fairly unique to our evolution, if not completely so.

Humans patently have *not* been selected for innate knowledge of the particular skirt heights or automobiles appropriate to sexual conquest. Nor is our behavior entirely arbitrary or entirely controllable by simple fixed action patterns. Instead, the great expansion of our learning capacity has undermined such genetic rigidity. So how do we respond appropriately in each of the many, wildly varied, social and ecological situations in which we find ourselves? We seem to have evolved a general calculating capacity that improvises a wide repertoire of appropriate behavior.

Homo sapiens exhibits truly distinctive elaborations of tool-use, to such an extent that we are now virtually surrounded by its artifacts. Coupled with this rampant tool-use is a degree of behavioral plasticity that is unique, evolutionarily. No other organism on this planet comes close to our staggering potential for novel behavior. In a phrase, we have evolved free will.

3 • SO GODS EVOLVED

To protect our fitness from free will, unconscious Darwinian regulators evolved.

Darwinian evolution has given us remarkable flexibility. But extreme plasticity is dangerous from the perspective of evolutionary fitness. This evolutionary gift of free will--for we are the product of our evolution not its director--comes with a little-noticed liability. Wrong choices can take us far from fulfilling the Darwinian mission to reproduce. With our remarkable capacity to invent novel behaviors, what stops us from going awry?

One rejoinder might be that many do go awry. Some people choose to never reproduce. This fact might be taken as evidence that we are now free of that pesky Darwinian heritage. With lifelong celibacy arising from religious vows, perhaps there is no issue here at all.

This maneuver isn't promising. Many members of other species also do not reproduce, or do not survive into adulthood. Incidental failures of survival or reproduction, however, do not show that evolution by natural selection is not working. Indeed, the deeper evolutionary theory predicts that such failures *MUST* happen. If they never did, then an interventionist God would be a more likely theory for life than Darwin's.

If we are no more Darwinian screw-ups than other animal species, how is our behavior kept in check, given our amazing behavioral flexibility? Again, there are three basic solutions.

First, it may be that our perceived free will is only that, a perception, and that we are still genetically nudged to specific behavioral patterns ensuring that we will seek, and often achieve, outcomes that increase our Darwinian fitness. Leaving aside ideological distaste, human behavior simply does not show the stereotypical, or even predictable, features to the extent seen among other animal species.

Second, a few biologists have argued that we calculate the consequences of our behavior for our fitness, and choose accordingly. The problem with this idea is that we do not obviously--and here the word obviously takes on critical importance--consciously deliberate over Darwinian calculations. Sally does not consciously think over the fitness effects of choosing Jack rather than Robert when picking a date, or even a fiancée.

Third, perhaps humans *do* make strategic decisions about the consequences of our behavior for our Darwinian fitness, but we do so unconsciously. We propose that strategic Darwinian calculations are performed primarily in the frontal lobes of our brains, with the results guiding us subconsciously. We may be consciously unaware that these calculations are being made, believing instead that our decisions are guided by an innate understanding of “the right thing to do.” Neurobiological gods built by Darwinian evolution rein in our behavior.

4 • GODS ARE HIDDEN INSIDE US

Our unconscious Darwinian regulators give rise to religious and moral experience.

We propose that god(s) evolved as one of our brain functions in the same sense that vision evolved as a means of processing stimuli arising from photons stimulating neural tissue. That is, god(s) are located within the brain where, we propose, their evolved function nudges us toward Darwinian ends. This “god function” is neither trivial nor dysfunctional. Instead, it is integral to the effective functioning of the human brain as an organ shaped by natural selection. With this in mind, we dissect the evolutionary biology of religious experience from the standpoint of our theory.

The human brain operates bicamerally on our hypothesis, with a bicameral structure that has been sustained by evolution. So who, or what, is the “self” that we subjectively experience? We propose that the brain operations that constitute our subjective selves constitute only one of *two* major suites of integrating brain functions. Our experienced selves are thus the immediate tactical coordination centers for our behavior. To use a metaphor, our conscious minds are like the pilot on the bridge of a ship. But the pilot is not in command. The pilot takes orders from the captain. We are not in fact free to choose the meaning of our lives.

How does this happen? We suggest that our subjective self is directed, constrained, and shaped by means of sustained affect, directed perception, and long-term fixations. In other words, our selves are the immediate operators of our bodies, but not the source of coherence and direction in our lives. Does this mean that there is another “person” inside our brains? Not exactly. But there is another mind in our brains, one very different from the mind that we experience ourselves to be from moment to moment.

We have no fixed opinion about the degree of unity that this other mind possesses. That might vary from person to person. However, in psychiatrically normal individuals who are not in a temporarily “altered state,” our guess is that the other mind has a degree of coherence. In some respects, it may possess more coherence, persistence, and focus than our conscious selves possess. After all, our basic theoretical position is that this other mind is the guarantor, the

master controller, of our conscious self, keeping us entrained to Darwinian ends, despite our free will.

We do not claim to have a complete analysis of this Darwinian god function. Rather, our main goal is to argue that it exists. Next we turn to empirical evidence for the view that god(s) actually serve as beneficial parts of our evolutionary equipment, long favored by natural selection.

5 • THE GODLESS MUST WALK THE EARTH

Since any biological organ can malfunction, some people must, and do, lack gods as components of their brain function.

If god(s) is (are) strictly endogenous, with no existence outside our nervous systems, then there must be some individuals who lack god(s). Such individuals, on our analysis, should be devoid of strategic organization of their lives. They may have workable intelligence and all immediate biological drives and reactions may be intact. That is, their conscious selves can be functional even when the god function is absent or destroyed.

Such isolated dysfunction must sometimes occur because all biological functions can be abrogated. It is only in a truly supernatural world that every sentient person could share the same experience of a deity, or deities.

It is well-known in clinical psychology that there are individuals who congenitally lack social restraint or conscience. These individuals have been variously placed in such diagnostic categories as “morally insane,” “psychopath,” “sociopath”, and “anti-social personality disorder.” In American criminology, these people stand out as repeat offenders who are relatively easy to arrest and convict. They commit about 50% of major crimes, but are only 2% of the general population. Among females, they make up a large proportion of convicted prostitutes and controlled-substance felons. We examine one particularly distinctive subgroup: those utterly lacking the ability to organize their lives. We refer to this explicitly so-defined subgroup as “sociopaths,” for terminological convenience.

It is a hallmark of sociopathy that afflicted individuals experience neither genuine guilt nor remorse. Indeed, such individuals are the very model of existential heroes: rootless, unconstrained, and autonomous, at least in the medium to long-term. In the short run, they can feign any kind of behavior that they find convenient. That is, sociopaths do not have what is called a *conscience* in everyday English. They lack a profound connection to their god(s).

Lesions to the frontal part of the cerebral cortex, as well as underlying focal tissue, lead to large-scale disruptions in the organization of behavior. These large-scale disruptions take two main forms: “couch-potato” syndrome and pseudo-psychopathy. Couch-potato syndrome arises when brain-damaged patients retain general competence (there is no apparent dementia, aphasia, sensory or motor malfunction), yet these patients lose most or all ability to initiate action. Their characteristic behaviors involve eating and watching television. Interestingly, if deprived of a remote control for the television, they will watch the same channel endlessly. This syndrome was more common before the advent of seat-belts and air-bags in automobiles, when patients had the front part of their skulls crushed or severely struck by windshield impact in collisions.

Pseudo-psychopaths, by contrast, readily initiate activity, particularly if it involves the prospect of immediate gratification or self-aggrandizement. What they have strikingly lost is inhibition. The classic case of this syndrome was Phineas Gage, a responsible railroad construction worker whose personality was transformed by an iron rod blasting through his frontal lobe. After the trauma, he recovered all essential cognitive, motor, and sensory functions, but was left without responsibility, self-restraint, or reliability.

We believe that conscience is instilled in us by the successful functioning of our frontal lobes. Sociopaths are godless, in our terms. They exhibit the disturbing behavior of people who lack all contact with their endogenous gods.

Interestingly, an individual who exhibited congenital sociopathy was found to lack fully-developed frontal lobes, presumably also a congenital defect. However, it is not necessary to entirely lose a brain area to lack the function associated with that area. Most sociopaths are not known to lack frontal lobes. They *do*, however, show lower metabolic activity in their frontal lobes, suggesting some impairment of frontal lobe function.

Thus the Godless exist, and their dysfunction probably involves failures of frontal lobe function. Conversely, in the vast majority of individuals the god function is apparently a part of how our brains normally work.

6 • GODS MUST BE MADE MANIFEST

Because gods are fundamental to human brain function, we must, and do, have direct experiences of them under some conditions.

It is common for people to experience “the hand of God.” It is common, that is, for individuals undergoing such severe physical stresses as shock, starvation, or fever to experience such things. In fact, some of the best evidence for the authenticity of religious experience comes from humans in altered states of consciousness.

In the state referred to as psychosis by modern psychiatry, people lose the ability to distinguish between hallucinations and everyday reality. Older theories of psychiatry used to describe individuals as psychotic in general, but with the recognition that schizophrenics often experience periods of lucidity, the adjective psychotic now usually refers to a state of consciousness, rather than the psychiatric patient *in toto*.

In psychotic states, patients show a kind of “scrambled” experience of the world. Paranoia is a commonplace feature of psychosis, though not invariable. Grandiosity also occurs, although it is less common, in both schizophrenics and manics. Inappropriate and sometimes extreme interest in sex, violence, and excreta are also common. Psychotic states are not usually completely irrelevant to the everyday concerns of people in normal states, though. Rather, they tend to reflect radical distortions of such concerns.

Among the prominent features of psychosis are religious hallucinations and delusions. Delusions of being specially chosen and religious hallucinations are common features of cinematic and fictional renderings of psychosis and they are quite common among the case reports of psychiatric patients.

Similarly, in drug-induced altered states of consciousness, reports of “seeing God” or hearing “the voice of God” are common.

Why are such experiences so commonplace when the normal limits of cognition are transgressed? Our interpretation is that such experiences reflect a breakdown in the blockade that normally forestalls the direct experience of the gods inside our brain. In other words, we propose that hypertrophied religious experience during delirium, intoxication, and psychosis is a more overt, though less functional, manifestation of our endogenous controller. That controller is the actual source of all genuine religious experience.

7 • RELIGION MEDIATES BETWEEN FREE WILL AND GODS

Religions reconcile our experience of gods with our rational suspicion that they are absurd.

If you knew nothing whatsoever about the subjective nature or meaning of religious experience, you would still notice that humans spend a great deal of time imploring invisible entities. Buildings are erected because of this concern. People kneel and bow toward invisible beings, or toward statues of people or creatures that do not seem to exist in their everyday lives. Something of importance for the organization of human lives is going on. And since such behaviors are common across autonomous cultures, this “thing,” this “religious experience,” must be of profound evolutionary importance.

It is not required by our theory that everyone have religious experiences as they are conventionally defined. Some people do not wish to have children, but that does not invalidate the notion that reproduction is a fundamental part of human life.

Our interpretation is that conventional religious experience revolves around the culture-dependent interaction between the god-function located in our frontal lobes and the conscious portions of the cerebral cortex. That is, religion is an intercession between our consciousness and our godly unconscious controller. If our hypothesis is correct, and we do have a god function embodied primarily in our frontal lobes, then practices that modulate, ameliorate, or otherwise enhance this function—that is, religious practices—should exist.

We do not wish to argue that religion is necessarily good, nor that it is always beneficial to our Darwinian fitness. Rather, we would say that religion arises from an “itch” that we

“scratch” during religious practices, just as sex drives generate a wide range of behaviors and cultural practices that are related to sex, many of which have little to do with actual reproduction.

8• LIVING IN HARMONY WITH OUR ACTUAL GODS

Gods are neither fictional nor materially powerful; we must live with the fact that they dwell within us and help define our lives.

It might be supposed that the argument sketched here leads us to the view that organized and *ad hoc* religious practices should be exposed as some type of fraud. But we have no such view. Instead, we see religious experience as about as valid or useful as erotica. It too concerns and stimulates an important function, one that is part of the behavioral substratum underlying evolutionarily appropriate human conduct. Like erotica, religion may become extreme or dysfunctional in some cases. Also like erotica, there is some variation in religious practice, not all of it worthy of either condemnation or praise.

Religious experience is not Divine in origin. Instead, it is an evolved part of the human way of life, one that is abrogated or dismissed only at some peril. Gods are real, and important. But they are neither transcendental nor all-powerful, and their origins are decidedly material. These gods no more deserve our worship or awe than our livers do, though the liver really is a pretty impressive organ.