The Placebo Effect: Is God a Coping Mechanism Designed By Evolution?

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Technology. Never has this word been more used, more advertised, or more descriptive than now. We stand in the midst of an age labeled by it. Technology, in many ways, defines one’s intelligence, productivity, and even social status. It has increased our computing capabilities, saved and destroyed lives, and solved mysteries that have plagued generations. Its exponential growth has brought hope to the sick and instilled fear in those deemed enemies, potential enemies, or future enemies of one nation or another. Most notably, technology, in partnership with science, reveals to us the interconnectedness of our world. The thick walls between disciplines are crumbling under the weight of discovery. Emerging from the rubble are boundless possibilities: biomedical engineering, sociobiology, cybernetics, biochemistry, music therapy, neurotheology, and numerous others.

It has brought the world everything from the atomic bomb to the zipper, but the question of the moment is, can technology and science show God to the world? Can technology reveal the “God” part of the brain in perhaps one of the most contrary interdisciplinary environments to have surfaced in recent years? Can science simplify a worldwide belief into neurological transmissions established by evolution as a coping mechanism? The answers to these questions are as complex as the systems they mention.

Before God can be discussed as a possible product of evolution, the idea of a god must be proven useful to human existence. As Alper asserts, “since the driving force behind all evolution is the preservation of a species, every trait must somehow serve to increase that species’ chances
of survival.”¹ If the idea of God is empirically useful to human existence, it will most likely be in the form of a coping mechanism. Additionally, the connection of evolution and the possible ‘God’ part of the brain will be explored.

Disclaimer

Before entering into this discussion of religion and science, I wish to bring to light a few points. First, I must admit to my lack of religious knowledge. Although I have attempted to be as inclusive as possible, my knowledge lies in the scope of western religion – and even then in a general sense. I have tried to acquaint myself with the broad concepts of other religious traditions, but I fear my examples and some principles are inherently western despite my efforts. For that I apologize.

Also, I wish to make clear that when I write of ‘God’ I do not mean to reference any specific religion but the idea of a god or gods (this discussion is not limited to monotheism). Call him/her/it Allah, Yahweh, God, Brahman, Bahá, Ahura Mazda, Shang Ti, Dainichi or any other name, the focus of this paper is to discuss the belief of human beings in an immortal power or being and the connection – or lack thereof – to evolution and to the human brain.

Further, most often when I refer to God, the institution of religion is implied as a secondary association. Frequently in the proceeding conversation the two notions are entwined. Where God is the solution, religion is the augmentation and development of God. An example of this could be found in the discussion on the belief in a god producing community. Faith in God is the commonality that initially forms the community, but it is religion that cultivates that connection and strengthens the bonds between community members. However, it is also

important to note that religion cannot exist without a god (by definition), and, therefore, religion must remain secondary evidence.

I. Is God a Coping Mechanism?

To answer if the concept of God is a coping mechanism, one must ask oneself, why believe in God? What does the notion of God provide humankind? Leaving behind as much religious tradition as possible, logic provides three possibilities: answers, comfort, and community. God’s (or perhaps more appropriately, a god’s) existence provides answers to the universal enigmas of life: Who created the world? Who created humankind? The existence of a god also allows for speculation: How was the world and humankind created? What is the purpose and/or meaning of life? Why was the world created with pain and suffering? What happens after death? With the assumption of a god or primordial force, cultures have been able to shape their own answers to these questions in the form of myths. Creation stories abound all around the world, each with a slightly different interpretation of the formation of the cosmos, god(s), earth, and human beings. An example that might be familiar is the Adam and Eve story from the book of Genesis. Is it out of the realm of possibilities for an ancient people to have constructed the concept of a god solely to answer these existential questions?

It is not difficult to imagine what comfort could be provided in finding answers for these daunting questions, especially concerning one’s future demise. The reassurance granted in an answer is no small matter. According to Matthew Alper, author of The ‘God’ Part of the Brain, one of the most likely reasons religion/God was conceived was “living with certain knowledge of imminent death leaves us in a perpetual state of anxiety.”

Matthew Alper, 117.
stepping-stone in proving his evolution hypothesis (which will be discussed further on in this paper), he provides a comprehensible insight into this fundamental of human nature and its basis in animal instincts.

Alper qualifies his statement by addressing the purpose of ‘anxiety.’ It is a protection mechanism, “an early warning device.”3 It is a product of evolution. Pain – “the chief stimulus by which all life is prompted to survive” – is a response to actual bodily harm.4 Anxiety is the mental representation of pain. It elicits the same response as pain to forewarn and prevent physical injury. In the example of a rabbit, anxiety occurs in the face of a potential threat, say a predator. Once the rabbit has removed itself from the predator, the anxiety dissipates. While effective when facing a removable fear, this marvel of evolution is a hindrance in the immovable face of death. Since humans could not remove themselves from the source of anxiety, Alper concludes our ancient ancestors chose to combat it with God. In other words, to cope with the knowledge of our future death and the resultant anxiety, we created God. With God, we can mold death to our liking whether it be eternity in heaven, reincarnation, judgment, or reward. With God, we can ‘know’ the nature of death.

Donald F. Smith and his evaluation of salutogenesis support Alper’s explanation for our knowledge of God. Salutogenesis is a theory first proposed by Antonovsky in 1979 to account for the number of people who manage to stay healthy despite repeated difficulties in their lives.5

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3      Ibid., 112.  
4      Ibid., 110.  
5      Donald F. Smith, “Functional Salutogenic Mechanisms of the Brain.” Perspectives in Biology and Medicine 45, no. 3 (2002): 320. Along with this theory, Antonovsky also proposed – after years of extended research – that a person’s “sense of coherence” or SOC was a primary factor for salutogenesis. Antonovsky defined SOC as “a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that one’s internal and external environments are predictable and there is a high probability that things will work out as well as can reasonably be accepted.”
According to Smith, “a person’s ability to withstand potentially stressful situations depends strongly on how the person views such situations, and decades of research on cognitive and behavioral therapy have left no doubt that one’s appraisal of a situation plays a key role in one’s well-being.” Further, “as far as we know, the outlook of a hardy person need not be realistic or correct in order for it to be effective in promoting well-being; what appears to matter most is the strength of the person’s salutogenic convictions.” With the inclusion of this last statement, Smith has allowed for the concept of God to be a “salutogenic conviction.”

The theory of salutogenesis and Alper’s explanation are remarkably similar. Where Alper argues people chose to craft the idea of a god in order to elude the anxiety of death, Smith affirms a person’s views before and during stressful situations determines his/her well-being. In his article Smith additionally includes factors with salutogenic properties, strengthening the resemblance to Alper’s hypothesis. First, Smith turns to social support which is defined as “information leading a person to belief he or she is cared for and loved, is esteemed and valued, and belongs to a network of communication and mutual obligation.”

With the inclusion of this last statement, Smith has allowed for the concept of God to be a “salutogenic conviction.”

In many western religions, and perhaps others, God is frequently characterized in a fashion that addresses these points. Some people in these traditions envision an immortal father and are granted the comfort of

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6 Donald F. Smith, 321-2. An example of one of the many studies done to research Antonovsky’s theory of salutogenesis is Susan Strang and Peter Strang’s analysis of how brain tumour patients cope. In their study, “Spiritual thoughts, coping, and ‘sense of coherence’ in brain tumour patients and their spouses,” the Strangs attempted to “explore to what extent brain tumour patients and their next of kin were able to cope, understand, and create meaning in their situation, to explore whether spirituality could be supportive, and to analyze whether these concepts are related to Antonovsky’s concept of sense of coherence.” They concluded that the patients’ comprehensibility was largely created by their own theories/thoughts even though they were in an unstable and insecure situation. Further more, the Strangs found “sense of coherence as a concept can explain how exposed persons handle their situation. In its construction SOC integrates essential parts of the stress/coping model (comprehensibility, manageability) and of spirituality (meaning).”

7 Ibid., 321.
8 Ibid., 322.
knowing they are being cared for and protected just as their mortal fathers watched over them as children. What people lack as adults in terms of emotional comfort or confidence can often be partially replenished by the thought of God’s love for them.

According to Smith, religious beliefs also hold salutogenic properties since the belief in God bestows comfort beyond a refuge from the anxiety caused by a fear of death. God, depending on different religious and cultural views, is often called upon to make decisions – relieving the mortal decision-maker of culpability and the unease of wondering whether the decision was correct. A trust in God has also been shown to reduce hopelessness and increase a sense of purpose and meaning.9 “Being a member of a religious organization can have salutogenic effects by providing a sense of belonging.”10 Smith also maintains,

“What ever salutogenic effects believing in God may have, they can probably be accounted for by a well-known psychological principle known as Thorndike’s Law of Effect, which states that organisms tend to repeat and learn responses that lead to tension reduction and the completion of motivated activity.”11

According to psychological theory, beliefs are learned because they are ‘rewarding.’ For example, beliefs can generate a feeling of increased control, which can bolster self-confidence and thereby reduce anxiety caused by the uncertainties of life.12

The concept of a god offers answers to existential questions and has been shown to provide comfort. Finally community shall be addressed. Communities are formed for numerous reasons, but the one of the most basic explanations is a common belief or strife. It is impossible to say which came first – a community which believed in a god or a group of people who formed a community based on their beliefs of the immortal – but religious communities have been in

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9 Donald F. Smith, 322.
10 Ibid.
11 Ibid., 323.
12 Ibid.
existence from the time of the earliest known cultures. The common idea and belief of a deity drew people together, and the development of religious traditions and customs provided the foundation of a prosperous relationship. For example, the Ten Commandments found in the Old Testament. The Ten Commandments not only supplied basic regulations, but with the threat (?) of God and his power, people were more likely to trust their neighbor was implementing the commandments. For many, the threat of God’s disappointment or wrath had the potential to far exceed the threat of mortal punishment.

While communities can be formed without any notion or thought to God or religion (and often are – especially in present times), acceptance into a community of faith continues and extends the benefits of religion as a coping mechanism. Other people in the community encourage an individual’s belief in God and, in turn, intensify the placebo effect. Dabbling into the discussion of evolution, it can be brought to attention that establishing communities of strong cohesiveness also enhanced abilities besides spirituality. As eloquently put by Dr.

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13 Alper even goes as far as to say “every world culture from the dawn of our species – no matter how isolated – has maintained a dualistic interpretation of reality. In other words, every human culture has perceived reality as consisting of two distinct substances or realms: the physical and the spiritual.” It is clear from Alper’s continued discussion that his use of the word ‘spiritual’ refers to not only an immaterial world but also the concept of a deity. Two problems exist with Alper’s generalization. First, it is my impression that we cannot make a clear cut distinction between the birth of the modern human and its predecessors; therefore, it is impossible to definitively say all cultures of homo sapiens believed in the idea of a deity without implying that some of their predecessors also held that belief. This begs the question, is the belief of a deity solely a human quality? Second, our knowledge of history, though extensive, is not complete. In such cases it is best to clarify the use of ‘every’ by saying, ‘to our knowledge.’

14 Although the use of ‘placebo’ may imply God does not exist, this is not my intention. I only wish to make the point that the comforting effects some believe to be the result of God may not be the result of God or may not always be the result of God.
Comings, “a band of religious hunter-gatherers might be just a little bit better at hunting and gathering than one that was less cohesive.”

As a concluding piece of evidence for the possibility of God as a coping mechanism, I would like to quote Matthew Alper:

“According to recent demographic studies and social statistics, there appears to exist an inverse relationship between a nation’s prosperity and the extent of its religiosity. In other words, whereas the most prosperous nations of the earth possess a statistically higher percentage of those who define themselves as being non-religious,…the least prosperous nations possess significantly higher numbers of those who define themselves as being religious.”

While it is possible that this information is a coincidence or a mere correlation, I believe it to be more likely that these statistics point to (along with the previous evidence presented) the conclusion that the concept of a deity can be used as a coping mechanism in stressful and/or worrisome situations.

II. Is God a Product of Evolution?

In his article “The Evolutionary Psychology of Religion,” Steven Pinker, recites some startling statistics: “25 percent of Americans believe in witches, 50 percent believe in ghosts, 50

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16 Matthew Alper, 195-196. Alper also mentions that the USA and Ireland are statistically anomalies. Though he doesn’t go into detail as to why Ireland is so religious, Alper does make a case for America. He points to our religious heritage and edges in that religion is genetic. Whether or not religion is genetic will be discussed in section II, however, I would like to add a comment to Alper’s theory. The US is also much younger than many of the other economically prosperous nations. The strife and hardship present in creating and expanding our nation is much more recent. Fewer generations have passed and, if the coping mechanism is to be believed, it is not out of the question to say that religion has not dwindled to the point of other prosperous countries because the time for which it has no longer been necessary as a coping mechanism has been short.
17 The actual statistics that Alper presents can be found on pages 196-198 of his book “The ‘God’ Part of the Brain.”
percent believe in the devil, 50 percent believe that the Book of Genesis is literally true, 69 percent believe in angels, 87 percent believe Jesus was raised from the dead, and 96 percent believe in a god or a universal spirit. Matthew Alper repeats time and time again that every culture has believed in a spiritual realm. According to Tiger and McGuire, there are reportedly 4,200 distinct faith groups in the world, and when ‘religion’ is typed into the Google search engine, 370,000,000 (370 million) citations are returned. What has led to a world so dominated by religion? Why is this concept universal?

Some would say that the estimation that over 80 percent of the world believes in some higher being is proof of the existence of a deity. Scientifically, this is not a well-founded conclusion, especially since other arguments have surfaced that claim to explain the phenomenon. No one has yet proved the existence of a god, and the very nature of God – abstract and undefined – prevents anyone (at this point) from producing a logical argument for application. On the other hand, Darwin’s theory of evolution, though perhaps not complete, has explained many phenomena of the material world rationally and with some theoretical and

20 If it were, one could make the claim that if 80 percent of the world believed in extraterrestrial life, then extraterrestrial life existed.
21 No one has proved God does not exist either. In fact, I would hazard to say that it is impossible to prove that a god does not exist. Any evidence ‘proving’ God’s nonexistence could be dismissed by simply saying ‘God made it that way.’ On the other hand, the same dilemma does not exist in proving God’s existence – though, that too, might prove, and is most likely, impossible.

22 It is true that the theory of evolution deals solely with the material world in an argument that many would consider solely spiritual; however, we can only investigate material causes in justifying the quasi-universal concept of religion. Also, it is recognized that whatever conclusion(s) can be drawn from the viewpoint of the material world has no significance in
physical data. In fact, evolution is God’s main opponent in the race to justify the seemingly universal concept of religion.

The purpose of the previous section was to make certain evolution was a viable candidate for this discussion. As maintained in the introduction, “every trait must somehow serve to increase that species’ chances of survival.” By proving the possibility exists for the notion of God to act as an effective coping mechanism, it allows for the prospect that God is an evolutionary trait. Now one must only prove God is a product of evolution.

In reading it appears there are three viable possibilities in regards to evolution: the belief of a deity is an evolutionary trait, it is a by-product of evolution, and/or it is a learned behavior. Also highly involved in this debate is whether or not belief in God is genetic – that is, passed through generations of people by genes in DNA. Is it even possible for the concept of God to exist as an evolutionary trait or as a by-product of evolution without it being encoded in our DNA?

Matthew Alper is a strong proponent of evolution creating the idea of a god as a coping mechanism and continuing that creation through genetics. He cites many examples. First, let us return to the example of the anxiety-ridden human. Here, Alper makes a clear distinction between humans and other animals. He states, “no other creature on this planet can comprehend the concept of its own existence. Consequently, no other creature can conceive of its own

considering the spiritual (for the same reason one cannot prove God does not exist – another can simply say ‘God made it that way’).  

Matthew Alper, 103.  

This is excluding the possibility of God’s existence because the purpose of using evolution as a source for the belief in God is to prove the idea of God can exist independent of a god itself. If a person were to conclusively prove God’s existence through evolution or another material theory, it would not mean that an actual god does not exist, only that the possibility of no God exists. Also, there may be more than three possibilities, but these were the most common and at the forefront of the debate.
nonexistence, of its own mortality, of death. This coincides with the fact that no other creature can comprehend the concept of its own future.”25 With that statement Alper creates the basis for his pro-evolution argument. Once the human brain was able to comprehend death, the anxiety generated became too overwhelming, according to Alper. He asserts that at that point, evolution could have only solved this problem two ways: Regress (humans would lose their ability to conceive of their own existence), or add a spiritual component.

Granted, the having the foresight to see one’s imminent death is emotionally overpowering; however, I disagree with Alper’s argument. First, death is still a fear many are forced to recognize yet today. Even with the reassurance of a higher being, the concept of death is often terrifying. Perhaps religion has withstood the test of time because it greatly relieves the threat of death, but I do not believe it is a cure-all as Alper suggests. Also, one must ask, is the fear of death so enveloping that it became a severe hindrance to our early ancestors?

Furthermore, Alper only allows for two solutions in reference to knowing our death. Yet, let us consider emotions. If the development of our emotions had been slowed or stopped, would humans have been able to retain their self-awareness with limited distress? One might say that our emotions are one of humankind’s greatest assets, however, would not evolution’s choice of our emotions be as arbitrary as creating a spiritual realm? Emotions allow humans to coexist and to be empathetic to those around them. On the other hand, emotions also lead to rash decisions, strife, and war. Similar outcomes can occur with religion. The purpose of this example was to demonstrate that evolution had more than two, simple choices – if it was evolution at all.

Alper also makes the claim that because religion and the concept of a deity are quasi-universal, they must be a product of evolution. How else, he asks, could the idea of a god exist

25 Ibid., 116. This quote is the basis for Alper’s argument. However, to my knowledge, there is very little evidence to support this claim.
worldwide? In fact, Alper seems to claim all universal or quasi-universal concepts or actions are genetic. For an example, Alper uses mathematics. While I do not contest mathematics, and other similar skills, may be genetic, I do wonder where the influence of our genes ends and our ‘self’ begins. Consider for a moment that math is not genetic. How is it universal? Consider also the example of sewing. This action too can be, at the very least, quasi-universal. Yet, do people question the existence of a ‘sewing gene?’ Or does it seem more likely that it was an inevitable improvement? Generations of human beings have proven that, given enough time, progress occurs. Is it an evolutionary step to go from a campfire to a torch? Or from corn to cornmeal? Or from raw meat to cooked? Approach mathematics with the same thought process. Is it not progress to know how many sheep one had in the morning so that a person could go searching if a sheep was missing at the end of the day? Or know how many people were in one’s family so that a person could collect that many apples? Progress simply becomes engrained in the daily life skills that each generation learns from the last. Skills like math and sewing are necessary to everyday life.

According to Comings, learned skills that are passed from one generation to the next were deemed memes in Richard Dawkins’ book The Selfish Gene. The existence of these “cultural transmissions” or “cultural mutations” raises the question, could spirituality be a meme? Comings, who is also an advocate of evolutionary spirituality, says no. He puts forth the following evidence:

“If spirituality was culturally transmitted, twin studies would not have shown a significant genetic component and the concordance rate would have been the same for identical versus fraternal twins. This was not the case. Twin studies of spirituality showed that genes accounted for 50 percent of the variance, the unique

26 David E. Comings, 521.
environment for 50 percent, and the common environment, including cultural influences, zero percent.”  

Comings does concede that “the common environment and cultural transmission accounted for a significant percent of the variance of church attendance suggesting that religion is transmitted, at least in part, as meme.”

Despite the fact that the twin evidence appear to be quite conclusive, one must also consider that identical twins share more genes in common than just ‘religious genes.’ Perhaps other genes could influence their religiousness. Only two genes, DRD4 and VMAT2 (two dopamine genes), have been identified thus far as being related to spirituality and self-transcendence. Much research must be done before any conclusions are made. I do not pretend to be a geneticist, but I believe there is much to learn about the interaction of an individual’s genes and size of the role they play in predetermination. Until every ‘god gene’ has been detected and verified, one must remain open to all possibilities.

The third of the popular explanations of God is that God is a by-product of evolution. It is this explanation for which Steven Pinker argues. Pinker states that evolutionists have created three cases for the necessity of religion: religion gives a sense of comfort, religion brings a community together, and religion is the source of our higher ethical learnings. He attempts to discredit the first by claiming that believing in God to gain comfort is like telling a freezing man he is warm in order to comfort him. Pinker fails to make his case. In the latter half of the example, the man in question can immediately tell what is the truth of the matter. However, in the case of God, one can never know the truth. A person can convince themselves one way or

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27 Ibid.
28 Ibid.
29 David E. Comings, 505-506.
30 Steven Pinker, 2-3.
the other when contemplating the idea of God, because there is no way to empirically or logically prove God’s actions or lack thereof.

In the case of the second argument, Pinker simply asks, why? Why does religion make a community stronger and not another trait or action? This is a very pertinent question. Though it was mentioned in the previous section that religion or spirituality could enhance the cohesiveness of a community, no one has presented an argument as to why the cohesiveness of a spiritual community is stronger than that of a community with a different belief system.31

Pinker continues to poke holes in the case of the evolutionists when he addresses their third argument. Again he asks, why? Why do human beings need to use religion as a moral compass? To drive home his point, Pinker cites a few passages in the Bible that are less than the ideal of faultlessness a majority of people assume and even goes so far as to label it a “manual for rape and genocide and destruction.”32 To answer Pinker, human beings should not need religion as a moral compass, at least in theory. Do all atheists lie, cheat, steal, and murder because they don’t believe in a god? Do they not understand the concept of morality? Further, from the standpoint of evolution, what is the purpose of morals? – Survival. Morals keep humankind in check. However, there exist other systems that, in essence, achieve the same goal. Alper mentions the hierarchy system that exists in the majority of the animal kingdom. In this system, “each member of the group engages one another in a series of physical contests… until each individual’s rank in the hierarchy system is determined.”33 As long as survival of the

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31 Though not an argument, Bulbulia does reiterate the statement: “recent adaptationist inquiry into religiousity’s social functions suggests that enhanced cooperation and coordination provided powerful inducements to the evolution of religious inclinations in our species.” (114)

32 Steven Pinker, 3.

33 Matthew Alper, 213.
species is the only intended outcome, morality need not exist; however, some system must take its place.

Finally, Pinker presents his argument for a by-product of evolution. He contends that two criterion exist that differentiate between an adaptation and a by-product. First, one must establish that the trait in question is in some sense innate. Pinker defines an innate trait as one that developed reliably across a range of environments and is universal across the species. Second, in order for the trait to be considered an adaptation, the causal effects of the trait would, on average, have improved the survival or reproduction of the bearer of that trait in an ancestral environment. Pinker, of course, stipulates that the causal effects of spirituality have not improved survival or reproduction based on his discrediting of the three earlier arguments. However, it is my opinion that Pinker does not adequately defend his position on the argument of spirituality providing comfort; therefore, he fails to provide ample evidence to support his claim that spirituality is a by-product of evolution as opposed to an adaptation.

At the present, the evidence appears to be favoring the concept of God as a product of evolution. Although (I would hazard to say) not quite conclusive, with the discovery of DRD4 and VMAT2 and the results of more than a handful of twin tests, God seems to be genetic. Perhaps the next question to ask is, to what extent? There looks as though there is some evidence in support of religion as a learned behavior also. With the perspective of the issue a bit hazy, it may be beneficial to investigate the integration of the two theories.

III. Is There a “God” Part of the Brain?

Where God and the human brain meet, complexity exists. Nothing is so baffling as to worm one’s mind around the infinite. Ironically, one of the newest brain hypes has set its sights
on untangling the threads of 100 billion neurons and the connection to God. Specifically, researchers are looking for the ‘God spot,’ the ‘God module,’ the ‘God’ part of the brain, or whatever they have chosen to call it. They are looking for the part of the brain that controls religious experience. Just as there are sections of the brain that control the heart, vision and speech, scientists believe that there exists a specific section of the brain devoted to managing spiritual events.

The proof that exists for this God section of the brain lies mainly in the reactions of people with some brain damage or people who experience certain types of seizures. To make his argument for the ‘God’ part of the brain, Alper turns to “spiritual/religious aphasia.” He suggests that, “similar to the manner in which a person can develop a linguistic or musical aphasia” a spiritual aphasia can develop. For evidence, Alper looks to two studies. The first, by Canadian psychologist Michael Persinger, found “one of the main differences between the 19 percent of high school students who had religious experiences before their teens, and the rest, was the presence of a head injury or blackout at least once during childhood.” The second study was conducted by Dr. Arnold Sadwin. In his research, Sadwin discovered what appeared to be a reoccurring theme: “people who had incurred religiously oriented personality disorders after incurring a blow to the head.” Alper also broaches the question, “when a priest suffers from Alzheimer’s, does he not lose, along with his other sensibilities, his sense of spiritual consciousness?”

34 Matthew Alper, 97.
35 Aphasia is defined by the Merriam-Webster dictionary as “the loss or impairment of the power to use or comprehend words usually resulting from brain damage.” Although aphasia is inherently linguistic by definition, I believe Alper means to use in the general sense of the word – the loss or impairment of a power resulting from brain damage.
36 Ibid., 96.
37 Ibid.
The argument Alper presents may be valid, however, there is fault in his support. Addressing Alper’s question concerning Alzheimer’s, the fact that spirituality deteriorates along with the rest of the man’s sensibilities is no proof that there exists a specific God section of the brain. According to the Alzheimer’s Association, Alzheimer’s disease progresses by forcing brain cells to deteriorate and die. It does not mention Alzheimer’s disease focusing its attack on specific areas of the brain. Spirituality, like anything else human beings experience, must be processed by the brain. If the whole of the brain is deteriorating, wouldn’t spirituality also deteriorate, even if it was processed by multiple brain sections?

Also, Apler’s inclusion of ‘musical aphasia’ was a poor choice for support. Music and its interactions with the brain, though perhaps more concrete than the God/brain discussion, are far from being well recognized. A recent article by Peretz and Zatorre comments,

“a vast network of regions in both the left and right hemispheres of the brain… is recruited by musical activities. [However,] comparisons across domains have generally been more consistent with the idea that musical abilities are subserved, at least in part, by neural networks that are dedicated to their respective processing. The strongest support for the existence of processing components whose operation is specific to the processing of music comes from the study of auditory disorders. Selective impairments and sparing of music recognition abilities can occur after brain damage.”

In summary, music, at first, appears to utilize a number of brain sections; however, this is not consistent with persons who suffer severe brain damage and retain their musical abilities. Hence, the main issue that baffles scientists and researchers who question the God/brain connection also baffles those who are interested in the music/brain interaction. In comparing spiritual aphasia to

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musical aphasia, Alper only prompts the question, what makes spirituality different from music? Why can’t spirituality use multiply sections of the brain? Is there a commonality that exists between topics such as music and spirituality that, if accounted for, renders the discussion of evolution and/or genetic moot?

Other evidence for a specified spiritual center in the brain is often from research concerning temporal lobe epilepsy. According to Albrigh, this type of research lead to the detection of the ‘God module.’ The ‘God module’ discovered by neuroscientist V.S. Ramachandran while studying patients with temporal lobe epilepsy and is supposedly located just above the left ear in the temporal lobe. During his research, Ramachandran found that patients frequently experienced religious or spiritual feelings just prior or during their seizures. A statistically significant amount of patients also became hyperreligious.

This argument is similar to the aspect of Alper’s line of reasoning concerning brain damage. In both cases, possible proof for a localization of spiritual thought seems to be valid. Yet, Newberg stipulates, findings

“showed marked increases in the bilateral frontal cortices, cingulate gyrus, and thalamus. A decrease in blood flow was noted in the superior parietal lobes bilaterally with the left more affected than the right. Interestingly, the decreases in the superior parietal lobes correlated with the increases in the thalamus, suggesting a complex network that affects multiple brain areas.”

In this case of brain and God, evidence abounds. Apparently, the current problem is in deciphering that evidence. Until researchers can interpret the data and explain this dual

41 Ibid.
phenomenon, the ‘God module’ cannot be argued conclusively. Connections to genetics and evolution must also wait. The existence or nonexistence of a ‘God’ part of the brain may greatly affect the claim of spirituality’s evolution. Finding a correlation between spirituality and music in the brain may also be beneficial to the evolution debate, especially if it can be determined that music is genetic.

IV. Conclusion: Why Do People Believe in God?

The belief in a deity could have possibly been utilized as a coping mechanism; however, it is difficult, with the current evidence, to conclusively say that the origin (the basis for the existence) of the belief in a god was as a coping mechanism. The notion of God may have been a product of evolution, a learned behavior, or a combination of the two. Whether spirituality is processed by a single section or multiple sections of the brain is debatable. These are the conclusions this paper has yielded. Perhaps the only valuable thing that can be drawn from this paper, yet is critical to recognize, is that no well-founded conclusions can be made with the evidence at hand. Researchers must continue to search for proof.

What answer, then, can be given? Why do people believe in God? The simple response is, by choice. Whether by ‘God module’ or genetics, evolution or learned behavior, or a combination of theories, a foundation is laid for existence of religion. However, it is the choice of the individual to build upon – or destroy – that foundation. No amount of cultural or hereditary influence can alter that truth.

With religion, we seek to understand God and our relationship with God. With science and technology, we continually attempt to quantify God. Our efforts are great – our successes are limited. Yet, the journey to knowledge continues.
Bibliography


