



NEW IDEAS

Human survival: evolution, religion and the irrational

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Is there a possible biological explanation for religion? That is, is there a genetic basis for believing in mystical, supernatural beings when there is no scientific evidence for their existence? Can we explain why some people prefer to accept myth over science? Why do so many people still accept creation and refuse to embrace evolution? Is there an evolutionary basis for religious beliefs? It is certainly true that religions have been part of human civilization throughout most of its recent history, at least for the last 5,000 years, and probably for much longer. Even great non-mystical philosophers such as Confucius, Buddha, and Lao Tzu have had their teachings evolve into mystical religions with spiritual ancestors, gods and reincarnation. On the other hand, religion is largely absent in modern Chinese culture, and of diminishing importance in Japanese and European cultures. In all cultures, the degrees of education gained by individuals correlate inversely with attachments to mystical deities. Atheists abound although they may be reluctant to come out of the closet and affirm their rational convictions. In this article, we seek explanations for human irrationality.

Keywords: evolution, religion, humanity, irrational thinking, science.

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EVOLUTIONARY SCIENCE AND RELIGION

Modern biologists and educators have pondered questions concerning a potential biological basis of religion. For example, Richard Dawkins is of the opinion that religion poses a major puzzle or challenge for anyone who thinks in a Darwinian way (Dawkins, 2004). One can propose that religious beliefs require that the faithful believers simply believe what is false to be the truth, and what is true to be false. So why have humans come to believe in things that can have no basis in knowledge and cannot be experimentally tested? And why do they continue to accept dogma that has been examined scientifically and shown to be misleading or incorrect, over and over again?

Charles Darwin noted that: “the vigorous, the healthy, and the happy survive and multiply” (Darwin, 1859), and Daniel Dennet elaborated: “evolutionary fitness reflects the capacity to replicate more successfully than the competition” (Dennet, 2009). If these precepts are correct,

then perhaps an explanation for irrationality can be found. In light of this presupposition, we can ask: Does religion contribute to or subtract from fitness? Does it contribute to or subtract from our health and happiness? As we shall try to argue, it does both.

The tremendous amount of time and energy spent pursuing and serving mystical beings clearly subtracts from survival and reproductive efforts. Sacrifices can undermine personal benefits, and these manifest themselves in numerous ways. The erection of massive “protecting” statues by Easter Islanders, construction of the great pyramids in Ancient Egypt, and the building of temples, churches, synagogues, mosques, and cathedrals by modern religious groups exemplify the tremendous waste of resources, time and effort that accompany religious pursuits. Sacrificial killing of the most beautiful maidens in Ancient Greece, killing of the fattest calves on the altar by the Hebrews, avoidance of certain

foods such as cows by Hindus and pigs by Jews and Muslims, and even self-imposed suicide for the gory “Glory of God” or to “guaranteed entrance into the Kingdom of the Lord” represent other examples. Religious wars, witch and heretic burnings, discrimination against people of similar but different religious beliefs, and rationalization of social discrimination have all been justified by religion. Many such practices continue to be justified today. Thus, adherence to a religious belief diminishes the reproductive success of a people and therefore should have been selected against. Still, they continue to exist.

One quite obvious reason for religion is to provide explanations for natural phenomena that people can easily believe in, regardless of their accuracy. For example, anyone can understand the notion that a god waved a magical wand and created the world, as we know it. The creation stories of the Norse, Greeks, Hebrews, Germanic tribes; American Indians and African people all differ, but in each case, the myths describing the beginning of the world are so simple that anyone can understand them without effort.

Compare this situation with the scientifically established process of evolution. Tremendous amounts of time, effort, and money went into elucidation of past events. Numerous fields such as archaeology, sociology and molecular biology converged to give an indisputable picture. The fossil record allowed dating of molecular phylogeny, and molecular phylogeny revealed the relationships of all of currently living and extinct organisms to each other. We can conclude with confidence that birds and reptiles share a relatively recent common ancestry, and that vertebrates arose just once from invertebrates. Even plants, animals, and fungi are more closely related to each other than these organisms are to bacteria, archaea or most unicellular eukaryotes. Yet these views are difficult to accept by people not trained in science. After all, the evidence obtained from and the methods used to pursue scientific knowledge cannot be understood without the expenditure of huge amounts of time and effort. And many people are either incapable of, or unwilling to follow such a path.

These considerations now allow us to return to our initial question with greater foresight: what *are* the evolutionary advantages that have caused the perpetration of religious beliefs? As stated by Darwin himself: “... the happy survive and multiply” (Darwin, 1859). Does religion contribute to happiness? One can consider several possibilities. First, it provides answers to questions that many people ask. Humans are plagued with curiosity, and if an authoritative person, a trusted priest, monk, or political leader provides answers to people’s satisfaction, a feeling of well being can temporarily result. Second, all religious groups claim their beliefs are correct, providing ego satisfaction to members of the group. The importance of ego to a feeling of well being is extremely important as any psychiatrist can verify since ego loss is a common cause of despair and suicide. Third, religion often creates social stability by laying down social laws and providing a sense of community. It causes members to accept unpleasant social roles and to focus on the hereafter, an enlightened state, potential reincarnation, or fear of hell and anticipation of heaven. No matter how illogical, religion forces people to focus on something other than the world we live in. Fourth, most religions lead people to believe that although we must die, a human “spirit” will survive after the body perishes. This provides a feeling of continuity and hope. No biologist questions the genetically programmed desire to live, which clearly has survival value. Perhaps an extension of this biological trait is a desire to live forever as most religions profess to be true.

Another perplexing observation concerns the fact that most people retain the religion they learned as children, even when numerous alternatives are available in their society. This was brought home when we (MHS and spouse) biked through Southern Germany from village to village in an area where families seldom move from their home sites, even after several generations. Passing through one village, we learned that almost everyone was Catholic; in fact a protestant church could not be found. Traveling another ten kilometers revealed that the next village was predominantly protestant with not even a token

Catholic church. Moving on to the next village, we were surprised to learn that this village like the first one, was almost exclusively Catholic. We asked the people what the explanation was. In the old days, over one hundred years ago, these areas were principalities owned by dukes and princes. The people who lived there were required to assume the religion professed by their monarch. Amazingly, over the past 100 years, since Germany became a unified country, the people living in these former principalities have not changed their beliefs and church affiliations.

A probable explanation for this startling observation has recently surfaced due to studies conducted at the University of California in Los Angeles. Harris and his coworkers in February 2008 published a neuroimaging study relevant to belief, disbelief and uncertainty. They found that processing disbelief occurs in an area of the brain with negative feelings related to pain, bad taste, and unpleasant smells (Harris et al., 2008). Some people tend to accept as true what is first heard and understood. This would imply that what children hear is often accepted uncritically, and that subsequent disbelief provides an unpleasant experience. The skeptical mind of the scientist has to adapt to discomfort, and questioning dogma is psychologically distressing. Thus, citing evidence and applying logic to try to change someone's opinion about anything is displeasing for them, and consequently, usually unsuccessful. This lack of success may also relate to the fact that the person's belief system wasn't based on data driven analysis, so there's no reason to expect such an approach to change it.

The question then arises: What is the survival value of an evolved innate system where denial of the beliefs acquired as a child evokes pain by activating the pain centers of the brain, while confirmation of these beliefs elicits pleasure. To answer this question, we must think back to the millions of years during which *Homo sapiens* evolved in the wild. Throughout most of our history, there was no science and no learned person to provide reliable information. Survival of our young ancestors depended on absorbing the instructions that were provided by their mothers.

If they DID NOT follow her strict advice, they were more likely to die, providing a meal for some carnivorous animal, or being killed by a poisonous plant, snake or spider. If they DID follow her experienced advice, survival was more probable. Thus, as also suggested by Richard Dawkins (2004), religion may have been a misguided consequence of evoked innate learning behaviors that once had more survival value than they do in today's social setting with scientific and educational opportunities that have become available only during the past few centuries.

To summarize, both religion and science are products of the human imagination (Trevors and Saier, 2010), but their origins are different. While several personal and communal benefits accrue from adherence to an unquestioning belief system, there is no good evidence that these provide the basis for continuance of religious faith. Childhood acceptance of religious concepts may BE the propagating force, and this can be used to rationalize the persistence of religion in spite of the many deleterious consequences of such institutions (Dawkins, 2004). A sense of happiness and security, social cohesion, ego satisfaction, and a desire to live (even eternally) certainly provide benefits, as may the provision of rules for everyday conduct with reduction of the need for burdensome decision-making. Perhaps these counteract the negative consequences of religion including unwarranted use of precious resources, sacrificial loss of human life, murder and persecution of witches, warlocks, non-believers and other "heretics", religious wars, etc). However, the built-in unpleasantness associated with rejection of childhood beliefs must be one of the strongest forces maintaining our unsubstantiated belief systems. This might have provided the biologically wired basis for irrationality, a misguided consequence of the survival value that gave rise to subconscious mechanisms incurred through our early evolutionary history. Nevertheless, whatever the reason, whatever the consequences, we must come to accept that irrationality is a part of the human existence. For better *and* for worse, religion is likely to be here for many more generations.

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