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## Evolutionary Perspectives on Religion



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### Synonyms

[Evolution of religion](#)

### Definition

*How* and *why* are the two different questions to examine the evolution of religions. The first question requires taking a sociohistorical (and perhaps also a phylogenetic) perspective on religion and giving an exposition of the historical development of the phenomena collectively known as religion. The second requires taking a functional/adaptive perspective on religion and answering the thorny question of whether religion evolved as an adaptation or a by-product.

## How Did Religion Evolve?

There is no consensus among scholars on the definition of religion. Some even argue that the concept of religion does not apply to all cultures and historical periods. For the present purposes, however, we will adopt Durkheim's (1912) classic definition of religion as a set of beliefs and practices that unite groups into a moral community around a sense of the sacred. The "sacred" often, but not always, involves a supernatural realm with supernatural agents. Beliefs are mostly about the supernatural, whereas practices include rituals that aim to appease supernatural agents or to invoke their intervention in worldly affairs.

No nonhuman animal species display behavior that conforms to this definition of religion. We can thus assume that full-blown religion is uniquely human. On the other hand, ritual-like behavior of elephants around the dead and mourning for the dead in several species have been observed. There is also suggestive evidence regarding Neanderthal burials, which might indicate belief in an afterlife. However, there is no conclusive evidence that religion existed before the advent of behavioral modernity.

The evolutionary history of religion in *Homo sapiens* has been most thoroughly described by the sociologist of religion Robert Bellah in his magisterial work *Religion in Human Evolution: From the Paleolithic to the Axial Age*. This section will follow his exposition.

Bellah (2011) describes three stages in the historical evolution of religion based on the evolution of representational abilities. The first is tribal religion which existed throughout the Paleolithic age. Following the psychologist Donald Merlin's (1991) classification, Bellah states that mimetic culture and enactive representations characterize this stage. The main form of religious practice is ritual, for which child play is the evolutionary precursor. Rituals enact social relationships, relationships to ancestors and to spirits and thus maintain the social order. Ritual burials with grave goods are first evidence of religious behavior which suggest belief in an afterlife. We still see tribal religion in modern hunter-gatherer societies.

In the next stage, we encounter archaic religion. This is the religious form of large agricultural societies. Mythic culture and symbolic representations (images and icons) characterize this stage. Religious concepts are communicated through visual art and oral narratives. Simple emotions are transformed into more specialized emotions and attitudes through symbolic representation: awe, equanimity, self-transcendence, etc. We first see the examples of this type of religion in ancient Mesopotamia, ancient Egypt, and Zhou China. The society is hierarchically organized and the god-king is the mediator between the national gods and the people.

In the final stage, we encounter Axial religion. Axial age is the name first given by Karl Jaspers (1949) to the period between 800 and 200 BC (sometimes extended to cover the whole first millennium BC). This is the time when great religious traditions that still exist came into being almost simultaneously and with little contact among each other: Confucianism and Taoism in China; the Upanishads and Buddhism in India; teachings of the reformist prophets Isaiah and Jeremiah in ancient Israel; and those of Socrates and Plato in ancient Greece. What characterized this period was a quest for human meaning in the universe and the rise of an elite class of religious leaders and thinkers.

Theoretical culture and conceptual (standpoint free) representations characterize the Axial age. Religions develop a theology for the first time and they make a claim to be universal rather than just

nationalist. Religion does not just serve to maintain status quo but criticizes and transforms it. Culture depends on writing and external storage of memory. The deity becomes transcendent and an ontological divide is introduced between God and humans.

Bellah maintains that, through this process of cultural evolution, new stages do not merely replace old ones but build upon them. Thus, theoretic culture is added to the already existing mimetic and mythic cultures. Interestingly, Bellah does not touch upon the two largest world religions today: Christianity and Islam. He thinks they are extensions of the classic Axial age religions and do not represent a new stage in the evolutionary history of religions.

## Why Did Religion Evolve?

According to modern evolutionary theory, a trait that comes about as a result of the process of evolution has to be one of three things: an adaptation (the direct product of natural selection), a by-product (the nonadaptive vestige of another adaptation), or a random effect (not produced directly or indirectly by natural selection but the product of historical accidents; see Buss et al. 1998). Since religion is a highly complex and functional (in the nontechnical sense) phenomenon, we can rule out the possibility that it is an accidental or random product of evolution. Thus, it either evolved because it somehow provided survival or reproductive advantage to ancient humans, or else it evolved as a side effect of other traits that did provide such an advantage. Accordingly, we can distinguish between religion as adaptation theories and religion as by-product theories.

### Religion as an Adaptation

Adaptationist theories of religion generally emphasize the cooperative nature of religion: Religion promotes cooperation within a society. Large-scale cooperation between genetically unrelated individuals is usually seen as what makes humans unique among animals and what enables human civilization and is clearly adaptive.

Since it is assumed that large-scale cooperation is unlikely to be brought about by standard evolutionary mechanisms (e.g., kin selection, direct or indirect reciprocity), religion is offered as the mechanism to do the job. If religion indeed promotes large-scale cooperation, it can be seen as an adaptation. Religion might play this role in several different but complementary ways.

One prominent aspect of many religions is the extravagant displays they employ: circumcision, fasting, snake handling, etc. One has to engage in these displays to be accepted and to remain in the religious group. One reason religion has defied an adaptationist analysis is that these displays are so costly, time consuming, and downright dangerous that they clearly decrease one's chances of survival. However,

The performance of these costly behaviors signals commitment and loyalty to the group and the beliefs of its members. Thus, trust is enhanced among group members, which enables them to minimize costly monitoring mechanisms that are otherwise necessary to overcome the free-rider problems that typically plague collective pursuits. (Sosis and Alcorta 2003, p. 267)

Thus, costly rituals engender trust among group members precisely because they are hard to fake by others who do not share the moral outlook of the group and only want to join the group to reap the benefits of group living without contributing anything. Trust, on the other hand, is what enables cooperation among individuals who do not know each other personally (see also Bulbulia 2004; Henrich 2009).

Another way religion can promote cooperation and harmony in large groups is by invoking supernatural agents (traditionally referred to as gods) who are watchful, morally concerned and powerful. Noncooperators and other norm violators need to be monitored and deterred if intragroup cooperation is to be maintained. This becomes increasingly difficult to do on a personal basis as group size increases. If, on the other hand, everyone in the group believes in the existence of supernatural agents who watch and know about everyone, who are concerned with morally relevant behavior of group members, and who are powerful enough to punish norm violations

wherever and whenever they occur, then norm violations can be effectively prevented. The so-called supernatural punishment hypothesis has been used to explain how religions with big moralizing gods can foster cooperation and vice versa: As religions expand at the expense of less successful forms of religion, their networks of cooperation also expand, and an ever-expanding large-scale cooperation is enabled (see Norenzayan 2013). The fact that participants who are reminded of a punishing God behave more altruistically to anonymous partners in an economic game (or hypothetically) is one type experimental support for the theory (Shariff and Norenzayan 2007; Yilmaz and Bahcekapili 2016). In addition, it has been observed that there is a negative correlation between belief in hell and national crime rates, whereas a positive correlation between belief in heaven and crime rate, again supporting the supernatural punishment hypothesis (Shariff and Rhemtulla 2012).

### Religion as a By-product

Cognitive scientists of religion generally argue that religious thought is nothing special; general cognitive mechanisms that subserve belief formation produce religious beliefs under certain circumstances as well. Thus, religious thought is a by-product of ordinary thought, which has itself evolved as an adaptation. Some of those general cognitive mechanisms include agency detection, theory of mind, and precautionary reasoning. Agency detection is the ability and tendency to detect the presence of agents that might cause harm to the individual. Theory of mind is the ability and tendency to attribute beliefs and desires to an agent and thus to predict the likely behavior of the agent. If these tendencies are extended to natural events without obvious explanations, one can deduce the existence of supernatural beings behind thunder, earthquakes, and the normal cycles of life, and thus take precautions to prevent or appease such beings. Religious belief and ritual can therefore be explained as a by-product without reference to a separate religious mental module or an adaptive function subserved by religion (see Boyer 2001).

If religious belief is a natural extension of ordinary cognitive processes, why do some individuals altogether lack such beliefs? An evolutionary psychology of religion should also be able to explain the evolution of irreligion. A recent attempt to do so argues that the same cognitive and cultural processes that lead to religiosity can also create a tendency toward atheism (Norenzayan and Gervais 2013). If theory-of-mind (or mentalizing) abilities create a disposition toward religious belief, individuals with weak mentalizing skills should be disposed toward religious disbelief. In fact, the autistic spectrum is associated with lower levels of belief in a personal God. Second, if religious belief is intuitive, individuals who routinely suppress intuitive thinking tendencies in order to think analytically should be disposed toward religious disbelief. In fact, scientists generally show much lower levels of religious belief compared to the general population. Third, if religious belief needs cultural support to be maintained, lack of public displays of religiosity should lead to irreligion. In fact, religious belief is especially low in secular societies where religious education and symbols have left the public sphere. Finally, if religious belief is a solution to existential needs such as security and control, individuals might be indifferent to religion if such needs are met by other means. In fact, religious belief is especially low in Scandinavian societies where social security systems are especially powerful.

## Cross-References

- ▶ [Evolution of Cooperation](#)
- ▶ [Religion](#)
- ▶ [Religious Beliefs](#)

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