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The origins of faith; If humans are hard-wired to be moral, what is the point of religion?

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RELIGION occupies a strange position in the world today. Religious belief is as powerful as ever, yet religion is under attack, challenged by science and Enlightenment thought as never before. Critics like Richard Dawkins would have us believe that it is a delusion, and a dangerous one at that. He is one of many thinkers who are challenging the traditional view of religion as a source of morality. Instead, they argue that it provides a means for justifying immoral acts.

Their views have recently been bolstered by evidence that morality appears to be hard-wired into our brains. It seems we are born with a sense of right and wrong, and that no amount of religious indoctrination will change our most basic moral instincts.

Many biologists are not convinced by such radical views, however. Recent years have seen a flurry of activity by researchers who want to assess the effects of religion on human behaviour. It is a fiendishly difficult area for science, but they are starting to address the issue by looking at how religion might have evolved, what purpose it has served, and whether it really can make you a moral person - or an immoral one.

As a result of this work a new view is emerging that challenges simplistic ideas about the link between religion and morality. Instead of religion being a source of morality or immorality, some researchers now believe that morality and religion are both deep-rooted aspects of human nature. We do not need religion to live moral lives, but without it morality might never have evolved. This kind of thinking could explain the complex and apparently contradictory relationship between religious beliefs and moral behaviour that is being demonstrated. It could also make some sense of religion's remarkable staying power, as well as highlighting the futility of attempts to persuade believers to abandon their faith by rational argument.

There is no shortage of research supporting the case for religion as a force for good. In the late 1970s and 1980s sociologists Rodney Stark and William Sims Bainbridge, then at the University of Washington in Seattle, forcefully argued the line that religious beliefs correlated with moral behaviour. Their studies showed that church attendance and religiosity increase the collective understanding of moral norms and make people less likely to turn to crime. More recently, various surveys have suggested that moderate religious people are happier, more caring, just and compassionate, and give more money to charity. Other studies show that religion can help people quit smoking, drugs and alcohol. Religion can also affect people's sexual morality. Recent research by RAND Health, a US non-profit policy

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research group, has found that people with HIV who professed religious beliefs had fewer sexual partners than those who were not religious (Journal of Sex Research, vol 44, p 49).

However, religious belief is not the only moral guide, even for believers. The RAND study also found that HIV-positive Catholics were more likely to use condoms than other groups despite their church's prohibition on birth control. "Catholics increasingly are inclined to consider their individual consciences as sources of moral authority," says David Kanouse, one of the study's authors. The work certainly doesn't contradict the view that moral values come from within, suggesting instead that religion can provide an additional source of rationalisation to help us interpret our innate sense of right and wrong.

How does this square with claims that religion makes for bad people and bad societies? Dawkins and others point to many examples of the use of religious beliefs to rationalise acts of hatred or war. They also cite morally reprehensible acts endorsed in religious scripture - stoning adulterers, heretics and homosexuals, beating or killing disobedient children, acceptance of slavery, even prostituting one's own daughter. They argue that religion is just a by-product of other cognitive processes and has nothing to do with our underlying morality. Besides, many atheists manage to be good without **God** - and religious believers are not necessarily better at following their own moral codes than non-believers. Philosopher Dan Dennett from Tufts University in Boston points out that the prison population - at least in the US - has the same religious structure as the rest of society, and that divorce rates among Christians are if anything higher than among non-religious Americans.

In 2005, Greg Paul, an independent researcher from Baltimore, Maryland, published a study that attempted to quantify negative effects of religion (Journal of Religion and Society, vol 7, p 1). He compared levels of religiosity with various indicators of social dysfunction in 18 developed nations. He concluded that countries with higher rates of belief and worship had higher rates of homicide, death among children and young adults, sexually transmitted diseases, teen pregnancy and abortion. Paul now believes that morality does not stem from religion, and that religion arises from insecurity within society. "Mass belief in **gods** is primarily a fear and anxiety-based response to insufficiently secure financial circumstances, and does not have a deep neurobiological, genetic or other basis," he says.

His study has not been without critics, however. Some researchers have argued that his choice of nations and indicators of moral health were selective. In an attempt to provide a more rigorous test, sociologist Gary Jensen from Vanderbilt University in Nashville, Tennessee, conducted a more detailed analysis of just one of Paul's indicators, homicide, to see how it correlated with various religious beliefs. He found that homicide rates were indeed linked with passionate beliefs, though the strongest correlation occurred in societies with prominent dualist beliefs in good and evil, **God** and the devil. The highest rates were seen in the US - where as many as 96 per cent of the population claim to believe in **God** and 76 per cent in the devil - along with the Philippines, the Dominican Republic and South Africa. The correlation was much weaker in societies with a belief in **God**, but no strong beliefs in the devil, such as Sweden, where only 18 per cent claim to believe in both. "**Gods** do matter," Jensen says, "but in a far more complex manner than proposed." (Journal of Religion and Society, vol 8, p 1).

A similarly complex picture has emerged about the role of religion as a force for good. Daniel Batson, a social psychologist from the University of Kansas in Lawrence, looked at two categories: "intrinsic" religiosity - belief in **God** and a motivation to attend church as an end in itself - and "extrinsic" religiosity - where religion and churchgoing are seen primarily as social activities, often undertaken for personal gain. He found some correlation between intrinsic religious beliefs and compassion or reduced prejudice. By contrast, extrinsic religiosity is linked to increased prejudice - people in this group tend to be less helpful to others, and when they do assist it is only for people they see as the "right" sort.

Batson also identifies a third category he calls "quest" religiosity - a more questioning form of spirituality. His experiments reveal that while people in this category show intolerance of behaviour that violates their own values, they are nevertheless the most tolerant and helpful towards people who exhibit such behaviour.

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Such studies lend some support to the idea that religion influences moral behaviour. Yet they also raise the question of whether it does this primarily within a believer's own social group, or whether it engenders a more universal compassion and altruism. Peter Richerson, a specialist in cultural evolution, and human ecologist Brian Paciotti, both from the University of California, Davis, used economic games to examine this distinction.

The dictator game tests people's altruism and sense of fair play. One person gets \$10 and is told to offer some of it to another, anonymous player - the amount offered is due to the first player. The recipient can either accept the offered amount, in which case both parties keep their share, or punish perceived unfairness by rejecting the offer so that nobody gets a payout. In the trust game, a person is given \$10 and can hand any amount to another unknown person, but this time the sum they give is doubled, and the recipient then chooses how much to return. Here the best strategy is to hand over all the money - provided that the recipient reciprocates your trust. Finally, in the public goods game, people contribute to a public fund that is then doubled by the organisers and shared out equally. The game is played anonymously and tests all kinds of morality, including the amount of altruism and cheating. The group does best if everyone donates the maximum, but generally lots of people cheat.

Richerson and Paciotti conducted all three games both in a secular university and with churchgoers who had just attended a service. They found that secular and religious people did behave differently. "There are weak and subtle effects where people who [say they are] highly religious give more," Paciotti says. This might suggest that religion fosters universal cooperation. However, like Batson, the team found that only people with intrinsic or questing religiosity were more generous and trusting, and less likely to punish unfairly. Extrinsically religious people were actually less altruistic than the non-religious. These results will please no one, says Richerson, as they show that religion is neither vital for morality nor always has a negative effect. Paciotti believes the findings support the idea that humans are hard-wired to be moral and cooperative, with religion serving to define the nature and scope of that moral behaviour and influence with whom we cooperate.

Another reason that the effects of religiosity on morality have been hard to tease apart is highlighted by a new study that also uses the dictator game. Psychologists Azim Shariff and Ara Norenzayan from the University of British Columbia in Vancouver, Canada, found that by presenting people first with a word game unscrambling either religious or non-religious phrases, even atheists could be primed to be more generous to an anonymous partner by exposure to the religious words (Psychological Science, in press). People did not notice when the game had a particularly religious theme, say the researchers, suggesting that the priming effect is unconscious. Likewise, psychologist Brad Bushman from the University of Michigan, Ann Arbor, found that both Christian and non-religious people were more aggressive towards an anonymous person after reading a religious text describing how a husband took revenge for the torture and murder of his wife - but only if they had been told that the story came from the Bible or if it contained an additional verse in which **God** seemed to sanction the husband's violence (Psychological Science, vol 18, p 204).

You are being watched

So why do religious concepts provoke moral behaviour even in non-believers? It's because both religion and morality are evolutionary adaptations, says Jesse Bering, who heads the Institute of Cognition and Culture at Queen's University, Belfast, UK. Morality does not stem from religion, as is often argued, he suggests: they evolved separately, albeit in response to the same forces in our social environment. Once our ancestors acquired language and theory of mind - the ability to understand what others are thinking - news of any individual's reputation could spread far beyond their immediate group. Anyone with tendencies to behave pro-socially would then have been at an advantage, Bering says: "What we're concerned about in terms of our moral behaviour is what other people think about us." So morality became adaptive.

At the same time the capacity for religious belief would also have emerged. Our reputation-conscious ancestors would have experienced a pervasive feeling of being watched and judged, he says, which they would readily have attributed to supernatural sources since the cognitive system underlying theory of mind also seeks to attribute intentionality and meaning, even where there is none. So the same adaptations that led to morality could also have

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driven the evolution of religion.

Meanwhile, evolutionary biologist David Sloan Wilson of the State University of New York argues that religious practices are also important for group cohesion and are therefore subject to . As humans have become ever more social over the past 100,000 years, and especially from 10,000 years ago, when agriculture led to huge division of labour in societies, religion and morality would have co-evolved as ways to promote social cohesion. "Religion did play a crucial role in giving us our moral nature, at least evolutionarily speaking," says psychologist Jonathan Haidt from the University of Virginia.

Nowadays, adds Bering, whether we believe in a **God** or not, the brain architecture that causes us to behave as though we might get caught behaving badly is still present. As a result, atheists are no more likely to be immoral than believers. Indeed, his own experiments show that, regardless of whether people believe in supernatural beings, both adults and children cheat less when performing a task in private if Bering has first primed them with the idea that there may be a "**god**" or a "ghost" watching.

Cultural and technological advances have also changed the way we live, making western liberal societies poor models for understanding the link between religion and morality, according to Haidt. He argues that we are now far more individualistic than our ancestors. "Technology has changed our lives so we can live in new ways. We can now be moral without religion. We have developed other means of social control," he says, such as laws, police forces and CCTV cameras.

Yet religion does still have the power to galvanise individuals in any society. Brain-imaging experiments by Andrew Newberg at the University of Pennsylvania indicate that people in religious or meditative states show a transient decrease in brain activity in regions representing our map of the body and our sense of self. Religious feelings do seem to be quite literally self-less, which may be one of religion's biggest draws. Many human activities - from music festivals to military service - tap into our powerful urge for group bonding. Haidt believes that we also have an evolved desire to elevate ourselves beyond our own selfish interests to a more helpful, group-oriented and selfless plane.

Haidt says this sense of elevation is mediated through a physiological response in the release of a hormone called oxytocin, which makes us feel happy and good about ourselves. Elevation can come in many forms: we might get it from pursuing a noble goal, doing good, reading great prose, witnessing something skilful, experiencing awe or empathising with someone else who is feeling good. Still, religious people have an extra source of elevation that many atheists lack - and scientists like Dawkins may do well to realise that even the most logical and articulate argument against religion will never eradicate this evolutionary sense of meaning.

Even if many no longer need religion for social cohesion or moral guidance, and think that atheism is the only rational route, we should nevertheless recognise that religion has had a pivotal role in our evolutionary history. It can still reinforce moral values and work with our innate moral sense. It can also be used to justify immoral behaviour towards those who do not embrace our beliefs. Like it or not, religion remains an important part of what we are.

Born to be moral

Helen Phillips

The idea that we have an innate sense of right and wrong has been brought to prominence again by the Harvard University cognitive psychologist Marc Hauser, with the publication of his book . He likens morality to language and its innate core to our innate sense of grammar. In other words, at the heart of human moral codes lie common rules and features that come hard-wired at birth.

Hauser suggests that each culture and generation learns to interpret the moral grammar slightly differently, but the rules, fixed in the biology of the brain, remain the same.

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One reason he believes this is that the origins of morality, altruism and fair play can be seen in our group-living primate cousins, in behaviours such as loyalty to kin, intolerance of theft and punishment of cheats.

Another reason is that moral decisions are made intuitively, rather than consciously or rationally. People come up with similar answers when faced with a particular moral dilemma, yet Hauser and his colleagues have shown that their reasoning to justify their answers is variable and inconsistent, suggesting it is done after the choice has already been made.

They also find no difference in fundamental moral choices made by thousands of people of different faiths and none in answer to questionnaires posing moral dilemmas. This suggests that inbuilt morality is independent of learned religious codes.

Undeniably, there are differences over time and cultures in attitudes towards issues such as slavery, racism, capital punishment and abortion. Even so, Hauser argues, the innate sense remains the same; it is the interpretation that changes.

So how is morality hard-wired into our brains? The consensus among brain scientists is that emotions such as fear, guilt and pride are vitally important.

Jonathan Haidt from the University of Virginia used a hypnosis experiment to show how important emotions are. Under hypnosis, he induced people to feel disgust when they heard a couple of arbitrary words. When these words later came up in connection with moral dilemmas, the subjects judged certain scenarios to be wrong when people who had not been hypnotised did not. When asked to justify their choices, they could not do so to the researchers' satisfaction. Without knowing how or why, their emotions had altered their sense of right and wrong.

Brain-scanning studies have shown a link between damage to the brain regions that house the social emotions and a tendency to make aberrant moral choices. Still, there is more to morality than emotion. Most researchers now think that emotions influence the way our moral decisions are turned into actions or choices, rather than how the decisions are made in the first place. Other brain regions involved in empathy and attributing beliefs about intentions are important too.

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