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# Scientific Explanations of Religious Experience and Their Implications for Belief

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*Leading contemporary philosophers of religion such as Richard Swinburne and Alvin Plantinga have appealed to some sort of religious experience in defending the propriety of religious belief. Recently, best-selling atheistic books such as Richard Dawkins' The God Delusion and Daniel Dennett's Breaking the Spell have popularised new scientific explanations that suggest that religious belief is a natural product of evolution. In this paper, I sketch the views of Plantinga and Swinburne, outline some of the recent scientific explanations of religious experience and belief and discuss their possible implications for the propriety of religious belief.*

**Key words:** Richard Swinburne; Alvin Plantinga; Cognitive Science of Religion; Justin Barrett, Scott Atran, Pascal Boyer, Naturalistic explanations of Religion; Reformed Epistemology; Warrant

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## Swinburne and Plantinga on believing without compelling arguments

### *Swinburne on Religious Experience*

Experiences that make it seem that there is a God play a crucial role in Richard Swinburne's case in his influential book *The Existence of God*.<sup>1</sup> Swinburne argues that simplicity is a key virtue of ultimate explanations and that God is a simple explanation of the cosmos and consciousness. Such explanatory arguments are strong enough to show that the existence of God is not very unlikely and, given this, it is rational to believe the testimony of countless people to have had apparently real experiences of God.

Swinburne argues that, unless we want to end up in a sceptical bog, we need to accept that if it seems to me that something is present then it probably is present, unless there are reasons to doubt this.<sup>2</sup> For example, if it seems to me that a dog is present, then probably a dog is present, unless there are reasons to doubt this.

Swinburne identifies four types of reason to doubt appearances.<sup>3</sup> The first

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1 Swinburne, R. *The Existence of God*, 2nd edn, Oxford: Clarendon (2004).

2 *ibid.*, p. 306.

3 *ibid.*, pp. 310-315.

two show that there is inductive evidence that this kind of claim is probably false. This might be because it was made by a person or in conditions known to produce generally unreliable beliefs – for example, I am known to see things a lot; or to have taken a hallucinogenic drug like LSD. Second, it might be that in particular circumstances these kinds of claim have proved false – for example, I am generally reliable, but I can't tell the difference between a dog, a cat or a goat. Third, it may be very, very improbable that there is, for example, a dog present. Fourth and finally, it may be that, whether or not, for example, a dog was present, my experience was probably caused by something else, not a dog.

Swinburne argues that, though religious experience is less compelling than the evidence of our five senses, it is rational to believe the testimony of countless people to have had apparently real experiences of God, unless the existence of God seems on other grounds very unlikely. Since his explanatory arguments are strong enough to show that the existence of God is *not* very unlikely it is rational to believe in God on the basis of widespread experience apparently of God.<sup>4</sup>

### ***Plantinga on Properly Basic Belief***

Religious experience, or at least religious belief that is not held mainly because of argument, is also a very important idea in the work of Alvin Plantinga. Plantinga himself reports having had an experience as if of seeing into heaven and hearing music playing, which left him convinced of the reality of God,<sup>5</sup> but he usually writes of more common experiences – for example, of gratitude in response to natural beauty, or of prayer in response to danger.<sup>6</sup>

In *Warranted Christian Belief*, Plantinga defends Christian belief from the charge that it is unwarranted, even if it happens to be true.<sup>7</sup> Warrant is the right and proper basis for true belief, enough of which can transform it into knowledge. Plantinga is mainly concerned with claims that religious belief is somehow unwarranted and intellectually objectionable, because it is held without sufficiently good evidence and argument, and/or is the result of projection, wish-fulfilment or some other psychological process that is not successfully aimed at truth.

In response to the complaint about insufficient evidence or argument, Plantinga appeals to *properly basic beliefs*. Some beliefs form in us without the need for argument and are in this sense *basic*, not based on additional, distinct arguments or evidences. Further, some beliefs are *properly basic*, that is, we

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4 *ibid.*, pp. 341-342.

5 See Shortt, R. *God's Advocates: Christian Thinkers in Conversation*, London: Darton, Longman & Todd (2005), p. 44.

6 *ibid.*, pp. 54-55.

7 Plantinga, A. *Warranted Christian Belief*, Oxford: Oxford University Press (2000).

can *rightly* hold them without further argument. Plantinga gives as an example people's belief in other minds. Belief that other people have minds with private feelings and experiences is typically held in a very strong way but without compelling arguments or direct empirical evidence. Belief that others have these experiences seems properly basic, even without argument. By analogy, Plantinga argues that belief in God can be properly basic, though an informed believer may need responses to potential defeaters, such as alleged disproofs of God and arguments that religious belief is unwarranted because it arises from psychological processes that are not successfully aimed at truth.

It should be noted that Plantinga defends the warrant of Christian belief, not just generic belief in God,<sup>8</sup> and that unusual experiences are not his central concern.<sup>9</sup> Though Plantinga mentions religious experiences, he is more concerned with faculties or processes that might produce properly basic belief. He proposes a model whereby humans have a *sensus divinitatis*, a natural sense of divinity, along with a non-natural internal testimony or instigation of the Holy Spirit that produces warranted Christian belief.<sup>10</sup> Nevertheless, belief in God is essential to his wider project, and the operation of the *sensus divinitatis* and the Holy Spirit is not primarily by reflective argument.

Summarising this section, we note that both the leading defences of religious belief in the Anglophone, analytic tradition appeal to some sort of experiential grounding besides explanatory argument. Though there are significant differences between them, both agree that this grounding is credible unless there are reasons to doubt it. This leads us to examine scientific explanations of religious belief that suggest that it can be explained naturalistically. Do these explanations provide good reasons to doubt?

### How might science explain religious belief?

According to anthropologists, religions that share certain supernatural features – belief in a non-corporeal God or gods, belief in the afterlife, belief in the ability of prayers or rituals to change the course of events – are found in virtually every culture on earth.<sup>11</sup> Charles Darwin noted this in *The Descent of Man*. 'A belief in all-pervading spiritual agencies', he wrote, 'seems to be universal.'<sup>12</sup> How might we explain this belief naturalistically?

### Religion as consoling wish-fulfilment?

One influential kind of explanation, associated with Marx and Freud and dis-

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8 *ibid.*, chap. 8.

9 e.g. *ibid.* pp. 182-183, 326.

10 *ibid.*, chaps 6 – 8.

11 Atran, S. & Norenzayan, A. 'Religion's evolutionary landscape: Counterintuition, commitment, compassion, communion', *Behavioral and Brain Sciences*, (2004) 27, 713-770.

12 Darwin, C., Moore, J., Desmond, A. *The Descent of Man*, London: Penguin (2004), p. 682.

cussed in detail by Plantinga,<sup>13</sup> is that religious belief arises from wish-fulfilment, because it offers a consoling 'opiate' in the face of the troubles of the world.

This 'consolation' view of religion has numerous problems. As the cognitive scientist Steven Pinker reminds us,<sup>14</sup> we do not typically get consolation from propositions that we do not already believe to be true. Hungry people do not cheer themselves up by believing that they just had a large meal. Heaven is a consoling notion only in so far as people believe that such a place exists; it is this belief that an adequate theory of religion has to explain in the first place. The religion-as-consolation theory fits best with religions like Christianity, but what about those (many of the people in the world) who do not believe in an omnipotent, omniscient, omnibenevolent God? Every society believes in spiritual beings, but they are often limited or malevolent. Many religions simply do not deal with ultimate questions; gods and ancestor spirits are called upon merely to help cope with such mundane problems as how to prepare food and what to do with a corpse, not to offer ultimate meaning and purpose to existence. The consolation of ultimate justice or salvation is likewise far from universal. Furthermore, many elements of religions, such as divine commands and punishments, can be disturbing and challenging rather than consoling. Therefore, influential as it remains in the literature, the religion-as-consolation theory seems unsatisfying as an ultimate explanation of the widespread existence of belief in supernatural agency.

Recently, Dennett's *Breaking the Spell*<sup>15</sup> and Dawkins' *The God Delusion*<sup>16</sup> have both popularised more contemporary naturalistic theories of religious belief. Both Dawkins and Dennett defend the idea of memes, theoretical units of culture supposed to be analogous to genes. The soundness of the analogy is disputed and meme theory has not found general acceptance in the scientific community,<sup>17</sup> but apologists should note that the underlying idea that some beliefs spread faster than others for reasons other than their evidential support is widely accepted, and this remains relevant to religious belief, even if one thinks that talk of memes adds little to the discussion.

Dawkins' favourite explanation of religious belief seems to be that it is a harmful side effect of childhood gullibility. It is generally advantageous for children to absorb parental teaching uncritically, but they are prone to imbibe religious folly along with real wisdom and then pass it on to their children.<sup>18</sup>

By itself, this theory has numerous deficiencies. It does not explain the com-

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13 Plantinga *op. cit.*, (7) pp.137-153, 192-198.

14 Pinker, S. *How the Mind Works*, London: Penguin (1997), p. 555.

15 Dennett, D.C. *Breaking the Spell*, Viking Penguin (2006).

16 Dawkins, R. *The God Delusion*, London: Bantam (2006).

17 See e.g. Aunger, R. (ed.) *Darwinizing culture: the status of memetics as a science*, New York: Oxford University Press (2000).

18 Dawkins *op. cit.*, (16) pp.174-177.

monalities of religious belief across different cultures, nor the way children seem to take on and hold on to some ideas much more readily than others.<sup>19</sup>

However, Dennett and Dawkins also mention naturalistic theories that show more promise.

### **Cognitive science or religion**

Cognitive psychologists have in the last fifteen years or so developed a number of naturalistic explanations of religious belief. These explanations aim to show that human beings are naturally disposed towards religious belief and ritual because they have certain innate psychological tendencies. These psychologists tend to agree that religious belief results from brain architecture that evolved during early human history, though it should be emphasised that this is a new field where, as its practitioners are the first to admit, the theories in some cases are running well ahead of the data. Much of the data has been gathered in western countries with particular religious influences, although studies are being extended to other cultures with different religious traditions.

There is considerable debate about *why* tendencies to religious belief might evolve. We can distinguish between traits that are themselves adaptive, helpful for survival and reproduction, like having blood that transports oxygen well, and traits that are by-products of adaptations, like having red blood. There is no survival advantage to blood's being red. Rather, red blood is a by-product of a trait that is adaptive, having blood that contains oxygen-binding haemoglobin, which gives the red colour.<sup>20</sup>

Is religious belief itself adaptive or is it rather an evolutionary by-product, a side effect of some other adaptation in the evolution of the human brain?

### **Religion as an Adaptation**

Some theorists, for example, David Sloan Wilson, author of *Darwin's Cathedral*<sup>21</sup>, argue that we have these religious tendencies because they, or the religion that they spawn, helped in the struggle to survive and reproduce. They were adaptive for our ancestors, and were therefore inherited. For example, shared rituals can bring people together, and it may well be that a group that thus cooperates has a survival advantage over one that does not. Shared rituals of initiation and life help create a sense of shared society and community. Also, cer-

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19 Atran, S. *In Gods We Trust: The Evolutionary Landscape of Religion*, New York: Oxford University Press (2002), chap. 9 'The trouble with memes'.

20 Henig, R.M. 'Darwin's God' *New York Times* March 4, 2007 available at <http://www.nytimes.com/2007/03/04/magazine/04evolution.t.html> accessed 12 October 2008.

21 Wilson, D.S. *Darwin's Cathedral: Evolution, Religion and the Nature of Society*, Chicago: University of Chicago Press (2002).

tain puzzling features of many religions, such as dietary restrictions and distinctive dress, make more sense once they are viewed as means to enhance group identity and solidarity. Nevertheless, it is not so clear why religion has to be involved. Why are supernatural gods, souls, an afterlife, miracles, divine creation of the universe, and so on the subject of the rituals and group identity? If religion is adaptive then this helps explain why it propagates and is selected for, but it does not explain why supernatural, religious beliefs arise in the first place.

### ***Religion as a by-product of our mental traits***

Another approach contends that human beings have identifiable mental tools that make religious belief easy, intuitive and 'natural'. Mental tools quickly generate non-reflective beliefs and expectations affecting our behaviour and seem to be present uniformly across cultures. These non-reflective, intuitive, folk beliefs provide the starting point for our slower, more deliberate and calculating reflective beliefs.<sup>22</sup> Humans seem to have mental tools for detecting agency, producing theories of other minds and facilitating social exchanges, among others. These tools are adaptive, but they produce religious beliefs as a *by-product*.

Some of the pioneers in this field, popularised by Dennett and Dawkins, include Scott Atran at Michigan University, author of *In Gods We Trust*<sup>23</sup>; Pascal Boyer, author of *Religion Explained*<sup>24</sup>, now at Washington University; Justin Barrett, author of *Why Would Anyone Believe in God*, now at Oxford; and Paul Bloom, author of *Descartes' Baby*<sup>25</sup>, now at Yale. These thinkers highlight half a dozen or so factors disposing us to religious belief.

#### *1. The hyperactive agency detection device (HADD)*

Justin Barrett cites evidence that we have a mental tool that makes us think there are agents around when we detect certain sounds, motions, or patterns in nature. This 'agency detector' disposes us to hypothesise unseen agents that, for example, control the forces of nature. Children impute intentions to the weather, to waves and currents and to falling rocks.<sup>26</sup>

A classic experiment from the 1940s by the psychologists Fritz Heider and Marianne Simmel<sup>27</sup> suggested that imputing agency is so automatic that peo-

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22 Barrett, J. *Why would anyone believe in God?*, Walnut Creek, CA: Altamira (2004).

23 Atran *op. cit.*, (19).

24 Boyer, P. *Religion Explained: The Evolutionary Origins of Religious Thought*, New York: Basic Books (2001).

25 Bloom, P. *Descartes' Baby: How the science of child development explains what makes us human*, New York: Basic Books (2004).

26 Barrett *op. cit.*, (22), chap. 3.

27 Heider, F. & Simmel, M. 'An experimental study of apparent behavior', *American Journal of Psychology* (1944) 57, 243-249.

ple will do it even for geometric shapes. For the experiment, subjects watched a film of triangles and circles moving around. When asked what they had been watching, the subjects used words like 'chase' and 'capture'. They did not see the random movement of shapes on a screen; they saw pursuit, planning and escape – that is, the activity of agents.

So, if there is motion just out of our line of sight, we presume it is caused by an agent, an animal or person with the ability to move independently. This usually operates in one direction only; lots of people mistake a rock for a bear, but almost no one mistakes a bear for a rock.

Human minds are thus disposed to interpret ambiguous clues as coming from agents, especially under conditions of stress or where quick decisions are required. HADD is more active in urgent or life-threatening situations, and situations (such as agricultural pursuits) where human effort is insufficient to guarantee results and in which humans seem small and relatively powerless.<sup>28</sup> Barrett also suggests that the tendency to greater religiosity among women might be predictable from their greater ability to think of possible reasons for agents' using their theory of mind.<sup>29</sup>

Plausibly, hypersensitive agent detection evolved because assuming the presence of an agent is more adaptive than assuming its absence. If you are a caveman on the savannah, you are better off presuming that the motion you detect out of the corner of your eye is an agent and something to run from, even if you are wrong. If it turns out to have been just the rustling of leaves, you are still alive; if what you took to be just leaves rustling was really a lion about to pounce, you are dead.

It is worth noting here that an evolutionary account amplifies the psychology but is peripheral. It helps it fit within the central paradigm in biology, neo-Darwinian evolution, but is not essential. A psychological trait may help to explain the frequency of supernatural beliefs whether or not we have a good evolutionary explanation of why humans have such a device. At its core, Cognitive Science of Religion describes how human cognitive function disposes us towards religious belief, rather than depending on putative evolutionary scenarios.

## 2. *Intuitive dualism*

Experiments and experience also suggest that we have distinct mental tools giving us an intuitive grasp of physical objects and of other minds. Autistic people have severely impaired intuitive, folk psychology, but not impaired folk understanding of the physical world. For those of us who are not autistic, the separateness of these two mechanisms, one for relating to the physical world and one for relating to the social world, gives rise to a duality of experience. We

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28 Barrett *op. cit.*, (22), pp. 39-40.

29 Barrett *op. cit.*, (22), pp. 43-44.

experience the world of material things as distinct from the world of conscious goals and desires. The biggest consequence has to do with the way we think of ourselves and others. We incline to mind/body dualism; it seems intuitively obvious that a physical body and our consciousness – our mind or soul – are distinct. We don't feel that we are identical with our bodies. Rather, we feel that we occupy, possess or own them. If you can posit minds in other people that you cannot verify empirically, suggests Paul Bloom, it is a short step to positing minds that do not have to be anchored to a body. From there, Bloom suggests, it is another short step to positing an immaterial soul and non-physical spirits.<sup>30</sup>

That is what young children seem to do, as a study at the Florida Atlantic University demonstrated a few years ago.<sup>31</sup> Jesse Bering and David Bjorklund, psychologists who conducted the study, used finger puppets to act out the story of a mouse, hungry and lost, who is spotted by an alligator. 'Well, it looks like Brown Mouse got eaten by Mr. Alligator,' the narrator says at the end. 'Brown Mouse is not alive anymore.'

Afterwards, Bering and Bjorklund asked their subjects, aged four to twelve, what it meant for Brown Mouse to be 'not alive anymore.' Is he still hungry? Is he still sleepy? Does he still want to go home? Most said the mouse no longer needed to eat or drink, but a large proportion, especially the younger ones, said that he still had thoughts, still loved his mother and still liked cheese. The children understood what it meant for the mouse's body to cease to function, but many believed that something of the mouse remained alive.

Children seem more prone to believe this than adults. The notion that there is some sort of life after death may thus be a by-product of how we naturally think about the world, though we have to learn specific beliefs from our culture – for example, about heaven, reincarnation or a spirit world. 'Our psychological architecture makes us think in particular ways,' says Bering, now at Queen's University Belfast. 'In this study, it seems, the reason afterlife beliefs are so prevalent is that underlying them is our inability to simulate or imagine our total non-existence.'

### 3. *Minimally counter-intuitive (MCI) agents*

Why are ideas about spirits, deities and other invisible agents so widespread? Pascal Boyer has produced data suggesting that our minds are naturally disposed to remember and pass on *minimally counter-intuitive* ideas, ideas that violate just a few intuitions we have about the workings of the world, in interesting ways.<sup>32</sup> Ideas that are *intuitive* are grasped easily, but are not so interesting and memorable, while ideas that are *maximally* counter-intuitive are

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<sup>30</sup> Bloom *op. cit.*, (25).

<sup>31</sup> Bering, J.M., & Bjorklund, D.F. 'The natural emergence of reasoning about the afterlife as a developmental regularity', *Developmental Psychology* (2004) 40, 217-233.

<sup>32</sup> e.g. Boyer *op. cit.*, (24).

hard to grasp and distorted and forgotten in transmission. Religious ideas are often slightly or *minimally* counter-intuitive. For example, we naturally think that agents are visible, physical things. When humans (using the agency detection tool) are led to assume that agents are causing natural events, they are led to assume that there are invisible agents. Invisible agents are slightly counter-intuitive and interesting. As a result, humans easily remember them and talk about them, thus making such ideas spread rapidly (and therefore beliefs that there are invisible agents are more likely to become widespread).

Within this conceptual framework, the so-called ‘Mickey Mouse Problem’ appears: non-religious fantastic stories and characters, such as Mickey Mouse, are also successful in impressing people’s minds and in being remembered via the same psychological mechanisms as beliefs about gods. If the psychological mechanism responsible for their spreading is the same, how do we account for the difference between religious stories and fantastic but non-religious stories? Atran notes that ‘Previous cognitivist accounts of religion by Boyer, Sperber, Atran, and others failed to explain why people make costly commitments to some counter-intuitive beliefs (e.g. biblical stories of Moses and the talking bush, the resurrection of Jesus Christ) but not to others (e.g., cartoons of a talking mouse). The issue soon became known in cognitivist e-mail circles as “The Mickey Mouse Problem”.’<sup>33</sup>

Plausibly, religious concepts and particularly god concepts differ from mere fantasies because they receive additional cognitive support – for example, by their ability to make sense of HADD experiences and their importance to everyday life, dealing with issues of sociality and death. Additional motivation to talk about and believe in gods may come from their ability to account for striking events that otherwise have no intuitive explanation, such as diseases, disasters and lucky escapes. When our intuitive reasoning systems fail to find satisfying natural explanations for an emotionally salient event – for example, a series of illnesses or a devastating natural disaster, we seem prone to turn to psychosocial explanations, in terms of the actions of other minds, rather than to rest easy with assumptions of chance or randomness. What is more, studies suggest that people naturally have a poor idea of what randomness looks like, interpreting random coincidence as signs of intention more than they need. As invisible psychosocial agents that have different powers from people, gods may readily be incorporated into such reasoning – for example, ‘The gods are angry with my cousin and so have afflicted him with illness.’ If exercised repeatedly, such patterns of reasoning may gain cumulative plausibility and reinforce belief in and the transmission of god concepts. Being invisible agents, gods may be privy to social information that is not only intrinsically interesting but is also potentially relevant to social beings like ourselves, who have intuitive mental tools for dealing with other minds. Perhaps, too, belief in gods gains selective reinforcement because of its tendency to produce reputation-enhanc-

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33 Atran & Norenzayan *op. cit.*, (11).

ing or moral actions. The belief that the gods are watching, and perhaps punishing and rewarding, may sustain co-operative moral action.<sup>34</sup> Thus, religious beliefs arising as a by-product of cognitive tools may *also* be adaptive.

#### 4. *Teleological and creationist perspectives on nature*

There is strong evidence that we are naturally disposed, from an early age, to see goal-directedness in everything, including the natural world. This tendency has been termed 'intuitive theism' by developmental psychologists like Deborah Keleman, since it is a tendency to see purposiveness throughout our world. This naturally disposes us to believe in a purpose-giving force in the universe: gods or a God.

It is not surprising, then, that nascent teleological and creationist views are found in young children. Four-year-olds insist that everything has a purpose, including lions ('to go in the zoo') and clouds ('for raining'). When asked to explain why a bunch of rocks are pointy, adults prefer a physical explanation, while children choose a functional one, such as 'so that people won't sit on them'.<sup>35</sup>

Recent research suggests that even twelve-month-olds think that order arising from disorder indicates intentional agency. When asked about the origin of animals and people, children tended to prefer 'creationist' explanations until late childhood, even if the adults raising them preferred evolutionary explanations. Preschoolers regard gods and not people as the origin of natural design.<sup>36</sup> Though more cross-cultural studies are required, creationism and hence belief in a creator seems in some sense natural and intuitive.

#### 5. *Super powers*

Children also appear ready to believe in a super knowing god who can perceive hidden things. Across various experiments, a single developmental pattern emerged: three-year-old children assume that all intentional agents have super knowledge and super perception – for example knowing even hidden things and seeing in the dark. As children mature they learn that people and some animals (but not God) have mental limitations. By the age of five, children are capable of distinguishing God's super abilities from more mundane human ones, but it is the human limitations that have to be learned. Unlimited knowledge and power is the starting point, and this is refined as we learn.<sup>37</sup>

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34 Barrett *op. cit.*, (22), chap. 4.

35 See Bloom, P. 'Is God an accident?' *The Atlantic Monthly*, December 2005 <http://www.theatlantic.com/doc/200512/god-accident> accessed 12 October 2008

36 Barrett, J. 'Cognitive Science of Religion: What is it and why is it?', *Religion Compass* (2007) Vol. 1 Issue 6, 768 – 786, available at [http://users.ox.ac.uk/~theo0038/pdf%20files/Religion%20Compass\\_Barrett%202007.pdf](http://users.ox.ac.uk/~theo0038/pdf%20files/Religion%20Compass_Barrett%202007.pdf) accessed 12 October 2008.

37 e.g. Richert, R.A., & Barrett, J.L., 'The child's God and cognitive development', *The Encyclopedia of Spiritual Development in Childhood and Adolescence*, Thousand Oaks, CA: Sage Publications (2006).

Research on imaginary friends also demonstrates that normal children readily reason about the mental and emotional states and actions of invisible beings. Thus, the invisibility of gods and spirits is no great obstacle to belief in young children.<sup>38</sup>

There is significant additional evidence supporting the above points, reinforcing the idea that religion is a natural product of the mental tools of a properly functioning human mind.<sup>39</sup>

Thus, it appears that many notions to do with unseen agents, life after death, purpose and design in the world, and unlimited knowledge do not need to be culturally inculcated and reinforced in order to be acquired, sustained and passed on. Rather, though unusual and interesting, these notions are only minimally counter-intuitive, readily and easily acquired and transmitted. Contrary to the claims of some, basic religious beliefs do not require severe brain-washing or indoctrination by parents. Rather, the common themes of religion require minimal or even no schooling and emerge naturally. If much of what we call religious belief is in this sense 'natural', we can probably expect religion to persist and to be difficult to eradicate (e.g. through schooling in non-religious world-views).<sup>40</sup>

This is not to say that *all* elements of religion are minimally counter-intuitive. Cognitively complex concepts of the sort often propounded by religious intellectuals, such as omnipresence and the Trinity, appear to require considerably greater teaching, rehearsal and reinforcement in order to be transmitted and sustained accurately.<sup>41</sup> They may, therefore, be more susceptible to distortion and decline than cognitively intuitive concepts. Boyer calls this 'the tragedy of the theologian'.<sup>42</sup>

#### *6. Non-evidential belief reinforcement*

Psychologists have also identified ways in which beliefs can be reinforced apart from rational argument.<sup>43</sup> A willingness to make sacrifices and endure unpleasantness indicates to others and oneself the sincerity and strength of one's belief, which in turn increases the persuasive force of the testimony.

Psychologists have shown that in some situations our actions may change our attitudes and beliefs. If we do something that does not seem to fit with our beliefs, we may unconsciously resolve the dissonance by altering our beliefs to fit our actions. Thus, someone who goes to church to please a relative and who

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38 Taylor, M. *Imaginary companions and the children who create them*, New York: Oxford University Press (1999).

39 e.g. Henig *op. cit.*, (20).

40 e.g. Bloom *op. cit.*, (35).

41 e.g. Barrett *op. cit.*, (22), pp.11, 29, 87.

42 Barrett *op. cit.* (36).

43 Barrett *op. cit.*, (22), chap. 5.

takes part in the service because of an unconscious desire not to stick out may find that her Christian beliefs strengthen to fit better her Christian practice. Defending a belief against objections can also make us believe it more strongly. Successfully linking a belief to more aspects of life strengthens belief in it. The beliefs and assumptions of those we are with also influence us. In such ways religious practice, discussion and association will strengthen religious belief, even without good arguments.

Because reflective effort will be required to overcome the psychological and sociological inclinations to believe in supernatural agency, non-belief should tend to flourish only in situations encouraging such reflective thought and reducing such inclinations. Atheists seem to comprise only a few per cent of the world's population, (though the number not believing in a theistic creator God, while still a minority, is much larger) and the non-religious tend to be more common in developed countries with good state welfare provision fostering a sense of security.<sup>44</sup> This would fit with a role in religious belief for the stress-sensitive HADD described above, though there are clearly other factors involved.

### **Do we have a complete explanation for religious belief?**

Despite Boyer's title, *Religion Explained*<sup>45</sup>, not even Dawkins, a polemical naturalist, claims that we have comprehensive or conclusive explanation.<sup>46</sup> Many of the concepts and claims of cognitive psychology of religion – for example, the origin, nature and even existence of native cognitive tools, modules and devices – are controversial.<sup>47</sup> The approach deliberately concentrates on perceived commonalities rather than on the origins of distinctive doctrines. Nonetheless, there is a convergence of experimental data suggesting that childhood dispositions favour belief in spirits and in the theistic God in particular.<sup>48</sup>

In this light, I suggest that the Freudian-Marxist explanations of religion as a consoling wish-fulfilment discussed by Plantinga<sup>49</sup> increasingly seem to be straw men, lacking scientific credibility in comparison to the newer theories outlined above. Future apologetics will need to get to grips with Cognitive Science of Religion.

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44 See Zuckerman, P. 'Atheism: Contemporary numbers and patterns', in Martin M. (ed.) *The Cambridge Companion to Atheism*, Cambridge: Cambridge University Press (2007) and Norris, P. & Inglehart, R. *Sacred and Secular: Religion and Politics Worldwide*, Cambridge: Cambridge University Press (2004).

45 Boyer *op. cit.*, (24).

46 Dawkins *op. cit.*, (16), chap. 5.

47 See for discussion Hagen E.H. 'Controversies surrounding evolutionary psychology', in Buss, D.M. (ed.), *The Evolutionary Psychology Handbook*, New York: Wiley (2005), pp. 5-67, available online at <http://itb.biologie.hu-berlin.de/~hagen/papers/Controversies.pdf> accessed 22 October 2008.

48 Barrett *op. cit.*, (36).

49 Plantinga *op. cit.*, (7), pp.367-373; see the brief discussion above of religion as consoling wish-fulfilment.

I therefore proceed to discuss, briefly, whether Cognitive Science of Religion undermines religious belief or strengthens the case for atheism, and whether it might offer some encouragement to religious believers.

### **Does Cognitive Science of Religion show that religious belief is false?**

Do the theories outlined above suggest that belief in gods is false? Not on their own, they don't. To argue that belief in gods is false purely because of the way it is caused would be an instance of the 'genetic fallacy'. Genetically fallacious reasoning infers the falsity of a belief simply from considerations of its origins or genesis. But, of course, perfectly true beliefs can emerge even from bizarre sources. Suppose that because of what I read in my horoscope I believe that a certain horse will win the Grand National. Can we conclude that my belief is false because it came from a disreputable source? No. The horse may yet win, despite the strange origin of my belief. On their own, natural origins for beliefs need not disprove them. Indeed, cognitive psychology suggests that humans have innate mental tools helping them count and understand the behaviour of physical objects, and many of the beliefs thus formed are true.<sup>50</sup>

That said, the scientific claim that religious belief is explained naturally might contradict specific religious claims, for example, that Christian belief is the result of miraculous processes that defy natural explanation. Although claims that there are spiritual forces at work in the formation of religious belief seem common (e.g. Matt. 16.17; 1 Cor. 12.3), it is doubtful that these *require* the further claim that natural explanations are impossible.

### **Does Cognitive Science of Religion show that religion is unwarranted?**

Still, as Swinburne<sup>51</sup> and Plantinga<sup>52</sup> both note, questions about the origins of belief are very relevant to deciding whether a belief is warranted, well grounded and a suitable candidate for knowledge. If the basis of my belief that a certain horse will win is that my horoscope predicted it then most scientifically educated people would think this belief badly grounded, unreliable and unwarranted, even if by chance it turned out to be correct, and the horse did win. It is therefore necessary to examine whether the origins of religious belief tend to suggest that it has no warrant.

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50 See e.g. Pinker, S. *The Blank Slate: The Modern Denial of Human Nature*, London: Penguin Putnam (2002), pp. 220-221 and Tremblin, T. *Minds and Gods: the cognitive foundations of Religion*, Oxford: Oxford University Press (2006), pp. 66-68.

51 Swinburne *op. cit.*, (1), p. 311.

52 Plantinga *op. cit.*, (7), p. 194.

### ***Problems for warrant from evolution?***

One problem, suggested both by Plantinga's own work on warrant, and by the language of Bloom<sup>53</sup> and Dawkins<sup>54</sup> about accidents, misfirings, and the like, is that these belief-forming processes are not aimed at truth, but are merely by-products of evolutionary adaptations that aided survival and reproduction in the past.<sup>55</sup> The problem might be that we cannot trust mere by-products of evolution to lead us to truth.

Of course, if atheistic Darwinism is correct, then there is a sense in which *all* our beliefs are by-products of evolution. Even evolutionary adaptations are not adapted to truth seeking per se, but to survival and reproduction. Whether a cognitive faculty is itself adaptive or a by-product, we can still wonder whether it is successfully aimed at truth. Natural selection acts on behaviours, rather than directly on the beliefs causing those behaviours. Claiming that evolutionary by-products are unreliable and unwarranted therefore looks set to leave us with no warranted beliefs at all.

The fact that neither evolutionary adaptations nor evolutionary by-products necessarily seek truth lies behind Plantinga's Evolutionary Argument against Naturalism. He argues that atheistic Evolutionary Naturalism is self-defeating because it undermines our confidence that our minds are adapted to discover truth, including the truth of Evolutionary Naturalism.<sup>56</sup>

Evolutionary naturalists are aware of such arguments and are not greatly worried.<sup>57</sup> Despite Plantinga's arguments, they find it plausible that tendencies to discover truth about the world will be adaptive and naturally selected.

Leaving aside this debate, presumably Dawkins and other scientific atheists believe our beliefs *all* ultimately result from natural, evolutionary processes, but they do not therefore conclude that they are unreliable. Having a natural explanation for mental phenomena therefore does not mean we should stop believing in them. We normally assume our beliefs are warranted even if they have natural origins. Justin Barrett writes, 'Suppose science produces a convincing account for why I believe my wife loves me – should I then stop believing that she does?'<sup>58</sup> Indeed, given that Cognitive Science of Religion may explain why some people are atheists<sup>59</sup>, scientific atheists should agree that the presence of a scientific explanation for a belief need not undermine it or render it unwarranted.

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53 Barrett *op. cit.*, (22).

54 Dawkins *op. cit.*, (16).

55 See pp. 64-65 of Barrett, J. 'Is the spell really broken? Bio-psychological explanations of religion and theistic belief', *Theology and Science*, 2007, vol. 5, no. 1, pp. 57-72, for longer discussion.

56 Plantinga *op. cit.*, (7), pp.227-240, 281-284, 350-351.

57 e.g. Ruse, M. *Can a Darwinian be a Christian?*, Cambridge: Cambridge University Press (2001), pp. 106 -110.

58 Henig *op. cit.*, (20).

59 Barrett *op. cit.*, (22), chap. 8.

To conclude this section, there appears no general reason to think that beliefs with natural, evolutionary or scientific explanations are unwarranted or especially dubious.

### **Problems for Religious Warrant from Unreliability?**

A different sort of objection arises in connection with the hypersensitive, error-prone nature of the cognitive modules posited by Cognitive Science of Religion. Given these errors, can we conclude that these modules are not successfully aimed at truth? If so then they will not produce warranted belief.<sup>60</sup> As Swinburne also notes, we discount experiences from sources known to be unreliable or incompetent.<sup>61</sup>

Dawkins argues that reports of religious experience will be unconvincing to those aware of all the illusions to which the human mind is prone,<sup>62</sup> but he is inadvertently preparing the way to an argument for general scepticism; we are prone to many sensory and conceptual illusions, but we do not usually discount our senses or our thinking wholesale. The mere fact that a cognitive tool is subject to some errors and illusions does not mean we should consider it generally unreliable or discount it.

That said, it may seem that some of the cognitive tools identified by Cognitive Science of Religion have proved to be especially unreliable. The HADD is admittedly hyperactive and hypersensitive – that is, prone to give false positives – which would seem to reduce one’s confidence in it.

Plantinga notes in connection with Freudian/Marxist consolation-type theories that it would not follow from the fact that a mechanism for belief formation is inaccurate in *some* contexts that it is inaccurate in *all*.<sup>63</sup> So, might we claim that the agent detector, say, is inaccurate with regard to created agents but accurate with regard to God? I think not. To claim this without further argument seems arbitrary and ad hoc. We need some independent reason to think that our psychology with regard to God is reliable, otherwise we are left with the evidence of hypersensitivity.

A more promising defensive strategy seems to be to note that HADDs hypersensitivity does not mean outright unreliability. The HADD need not be so hypersensitive that it is wrong more often than it is right. Furthermore, even if HADD were thus unreliable, it would not follow that our *overall* judgements of agency are unreliable, when other aspects of our psychology are brought in as well. Conversely, if the general fallibility of HADD undermines belief in supernatural agents, then it equally undermines our belief in natural agents

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60 Plantinga *op. cit.*, (7), p.156.

61 Swinburne *op. cit.*, (1), p.311.

62 Dawkins *op. cit.*, (16), pp. 88-92.

63 Plantinga *op. cit.*, (7), p.186.

as well, and we might begin to doubt the existence of other minds.<sup>64</sup>

Further possible problems for the reliability of religious beliefs might arise from the unscientific nature of the beliefs generated by our cognitive modules. For example, our natural, dualistic understanding of mind and body is thrown into question by the profound and detailed dependence of thought on brain that science reveals, which suggests that conscious thought will not naturally continue when the body dies. Admittedly, this dependence might produce problems for some dualistic theologies, but need not imply that all idea of mind existing without body is impossible.

Another potential problem is that present science disconfirms projections of purpose on to inanimate objects. Indeed, science arguably made a breakthrough when it abandoned teleological causation in inanimate nature for mechanical explanations, and Darwin showed how mechanical explanation could account for the appearance of design in the biological world. However, these scientific breakthroughs do not show that the cosmos has no ultimate purpose, or that God is not ultimately responsible for creating the cosmos with its natural powers and dispositions. So they do not show that our religious intuitions about the cosmos are ultimately mistaken or unreliable.

To summarise this section, while science suggests that our intuitive beliefs are fallible and imperfect, it has not shown that our natural, religious beliefs are so unreliable as to be unwarranted.

### **Lack of causal connection?**

Perhaps natural explanations of belief raise particular problems for beliefs about supernatural entities. We might put the worry this way. In the case of our disposition to believe in natural entities, the beliefs are caused by natural entities acting on our minds (through our senses, for example). But in the case of religious belief, belief in gods and other supernatural entities arises from, for example, our HADD activating in the presence of the wind or other such natural processes. Thus, belief in natural entities is caused by natural entities, but belief in supernatural entities is plausibly caused by natural entities, *not* supernatural ones. We do not need to appeal to supernatural agents to explain the belief. Ockham's razor might suggest we should make do with the simpler, purely natural explanation for belief in gods, rather than a more complex one appealing to both natural causes and gods. It thus seems there is plausibly no causal link between the belief and the thing believed in. So, one might conclude, we would still believe in gods, even if there were no gods there. The beliefs are plausibly not causally grounded in the supernatural reality they represent. As Swinburne notes, if an experience were probably caused by something other than its apparent object then that would undermine an appeal to

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64 Barrett *op. cit.*, (55), pp. 67-70.

experience in justifying a belief in the apparent object.<sup>65</sup> To take a famous example from epistemology, the realisation that one were in an area full of fake barns would undermine confidence in one's belief that one sees a barn in the distance, since a fake barn rather than a real one probably causes the experience.

***Non-creator supernatural beings are plausibly not causally connected to experience***

This does seem a problem for belief in spirits, ghosts and other supernatural beliefs that are plausibly not caused by their apparent objects. If belief in supernatural agents like ghosts or demons is probably caused by inanimate, natural causes like the wind, creaking floorboards or diseases activating HADD then this does seem to undermine confidence in the belief in supernatural agents, since it seems superfluous to appeal to supernatural beings when natural beings are sufficient to do the job. One might have *additional* reasons, beyond the action of the HADD, for thinking that, say, the creaking floorboards or the disease have supernatural causes, but without such additional reasons, awareness of Cognitive Science of Religion will cause doubts about such supernatural beliefs, since it does indeed suggest that they lack supernatural causes. This will reduce the warrant of such beliefs.

***A supernatural Creator could well be causally connected to experience***

On the other hand, it is not clear that the same goes for the special case of a creator God who makes the world and our mind. Is it true that there seems no causal link between a creator God and the belief in him? Plausibly not. First, it is *not* clear that the natural world needs no explanation and that belief in God violates Ockham's razor. Second, if one experiences the world as the creation of God, then one is inclined to see God as the ultimate cause of the whole world, including one's mind and its tendency to believe in him. On this view, if God were not present there would be no nature and no mind at all. The scientific theories indicate natural causes between God and our beliefs, but this does not mean that our belief in a creator God is not caused *ultimately* by God.<sup>66</sup> So, contrary to the alleged objection, the natural causes posited by Cognitive Science of Religion need not remove the causal connection to a creator God and therefore need not show that belief in a creator God is unwarranted.

As is discussed below, there may be *additional* reasons to doubt that belief

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65 Swinburne *op. cit.*, (1), p. 314.

66 It should be noted that a credible description of how God brought this about is desirable, as noted e.g. by Van Till, H. J. 'How firm a foundation? A response to Justin L. Barrett's "Is the Spell Really Broken?"', *Theology and Science* (2008) 6:3, 341-349, on 347-348.

in a creator God is causally connected to the existence of such a God. However, without such reasons, it seems reasonable for the Christian to hold that God created the world, human beings and human minds in such a way that when they are functioning properly, they naturally form beliefs in the existence of God. Thus, God remains the ultimate cause of belief in him and warrant is not removed.

### ***An additional reason to think that God is not the cause of religious experience?***

One additional reason to doubt that God is the ultimate cause of our natural disposition to believe might come from the finding that it is not equally active in all people. HADD is more active when people feel vulnerable. Women seem more disposed to piety and this might be explicable in terms of female psychological tendencies.<sup>67</sup> It might seem odd that God does not bless all people equally with awareness of his presence, but, on the other hand, divine concern for the poor, vulnerable and needy might make mechanisms in them encouraging belief less surprising. Additionally, some religious belief may be erroneous or otherwise not beneficial in certain circumstances.

To sum up this section, none of the attacks on the reliability or warrant of religious belief we have considered seem very good grounds for doubting religious experience as interpreted by Swinburne and Plantinga.

### **A cumulative case for atheism**

Atheists might respond: 'We know religious belief is produced in unwarranted ways because we know religious belief is almost certainly false.' As Plantinga notes,<sup>68</sup> in this case the objection to the warrant of belief really depends on a judgement that the belief is false. On its own, without additional argument, such a claim just begs the question against theism, assuming what is in question, but atheists usually support their unbelief by appeal to such things as contradictory alleged 'revelations'; factual and moral criticism of the Bible and other Scriptures; contradictory religious experiences; disconfirmatory experiences of apparently senseless evil and of God's inexplicable absence, and problems arising from the concept of God.<sup>69</sup> Clearly, an atheist need not merely assume atheism, but can offer reasons for it.

There are responses to these atheistic arguments and whatever force they possess might be outweighed by one's conviction that there is a God or by positive arguments. However, if one grants that the overall case for atheism out-

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67 Barrett *op. cit.*, (22), pp. 43-44.

68 Plantinga *op. cit.*, (7), p. 190.

69 See e.g. Martin, M. (ed.) *The Cambridge Companion to Atheism*, Cambridge: Cambridge University Press (2006).

weighs the case for theism, then Cognitive Science of Religion increases the explanatory power of atheism, even if it does not itself disprove theism or directly deprive it of warrant or rob religious experience of all force. Cognitive Science of Religion would explain why religious belief is so widespread, even though it is false. It would thus provide an ‘error theory’ of religious belief. Cognitive Science of Religion can therefore play a part in a cumulative case for an atheistic, naturalistic view of the world, increasing its explanatory power, enabling it to explain apparently contrary evidence such as the prevalence of religious belief. It can thus leave atheists more intellectually satisfied than they would be without it, even if it neither directly nor independently undermines belief in God.

### **Implications for God’s simplicity and prior probability**

Swinburne’s claims that unlimited knowledge and power are relatively simple properties, and that God is a simple being who explains the cosmos may well gain support from the findings described above that children find it natural and easy to grasp personal explanations, to ascribe super power and super knowledge to agents, and to interpret the natural world as an artefact. A natural disposition to believe in God may also seem more likely to occur given the existence of God, increasing the explanatory power of theism somewhat.

### **Implications for Reformed epistemology**

The Reformed believer might find encouragement and interest in scientific documentation of how human nature predisposes people to believe in God because it fits with Calvin’s idea that people are divinely designed to know and believe in God. Calvin’s *sensus divinitatis* is viewed in a new perspective, not simply theological or anecdotal, but with scientific support. Light may also be cast on Paul’s claim in Romans 1.19-20 that God’s power and nature is plain through creation. A human tendency to ascribe chance events to supernatural agency and to struggle with non-intuitive doctrines may also help support Calvin’s claim that human nature is ‘a perpetual factory of idols’.<sup>70</sup> This new perspective also needs to be related to the doctrine that human nature is fallen and to scientific views of the origins of humanity. How can we explain idolatrous tendencies in terms of original sin if they are evolved and natural?

### **Conclusions**

Cognitive Science of Religion offers a more credible scientific explanation of religious belief than the Freudian-Marxist consolation account that has loomed

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70 Calvin, *J. Institutes of the Christian Religion*, McNeill, J.T. (ed.), Battles, F.L. (trans.), Philadelphia: Westminster Press (1960), p. 68.

large in many philosophical discussions. This science does not necessarily show that belief in a creator God is mistaken, unreliable or unwarranted, though it does provide atheists with a promising error theory of religious belief, explaining why many people would believe in supernatural agency even if there were none. These theories and their attendant data seem to offer some support to Swinburne's arguments that God provides a simple and intuitive explanation for the existence of the cosmos. They also offer an interesting perspective on Reformed epistemology and its ideas of a *sensus divinitatis* and tendencies to idolatrous belief. Religious belief does not seem to be primarily the result of parental brainwashing or indoctrination. It therefore seems that Cognitive Science of Religion is a promising scientific field and that both atheists and theists have reasons to be encouraged by it. All have won and all shall have prizes...<sup>71</sup>

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