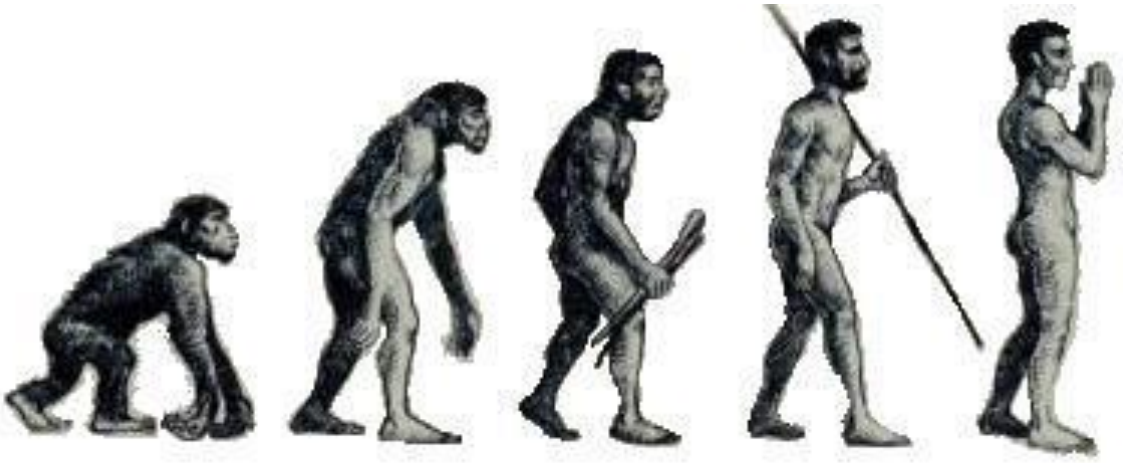


Evolution of Religion

Why do we have religious brains?

Science swallows religion?

- Previously we looked at arguments from Alvin Plantinga, to the effect that science as an enterprise presupposes theism.
  - (In effect, religion gave birth to science.)
- This week, we examine a completely opposite idea, that religious belief and practice can be understood from a naturalistic, or scientific, perspective. (Science swallows religion.)

1st reading – see iweb site

The New York Times
nytimes.com

March 4, 2007

Darwin's God

By ROBIN MARANTZ HENIG

God has always been a puzzle for Scott Atran. When he
the wall of his bedroom in Baltimore. "God exists," he w
in trouble." Atran has been struggling with questions ab

Religion is universal?

"Angels, demons, spirits, wizards, gods and witches have peppered folk religions since mankind first started telling stories. Charles Darwin noted this in "The Descent of Man." **"A belief in all-pervading spiritual agencies," he wrote, "seems to be universal."** According to anthropologists, religions that share certain supernatural features — belief in a noncorporeal God or gods, belief in the afterlife, belief in the ability of prayer or ritual to change the course of human events — are found in virtually every culture on earth."

Religion is universal?

"Similarly, when it comes to speculation about the origins of natural things, **children are very receptive to explanations that invoke design or purpose**. It seems more sensible to them that animals and plants were brought about for a reason than they arose for no reason. Margaret Evans of the University of Michigan in Ann Arbor has found that children under 10 tend to embrace creationist explanations of living things over evolutionary ones – even children whose parents and teachers endorse evolution."

- Justin Barrett, "We are all born believers", *New Scientist*, March 19, 2012.

Religion is universal?

- Barrett also describes an experiment that seems to show that babies (12-13 months old) expect only intelligent agents to cause an ordered stack of blocks. (Inanimate objects they expect only to destroy order.)

"Whatever some people say, children do not need to be indoctrinated to believe in god. They naturally gravitate towards the idea." (Barrett, p. 3)

Cui bono?

"Atran is Darwinian in his approach, which means he tries to explain behavior by how **it might once have solved problems of survival and reproduction** for our early ancestors.

But it was not clear to him what evolutionary problems might have been solved by religious belief. Religion seemed to use up physical and mental resources without an obvious benefit for survival. Why, he wondered, was religion so pervasive, when it was something that seemed so costly from an evolutionary point of view?"

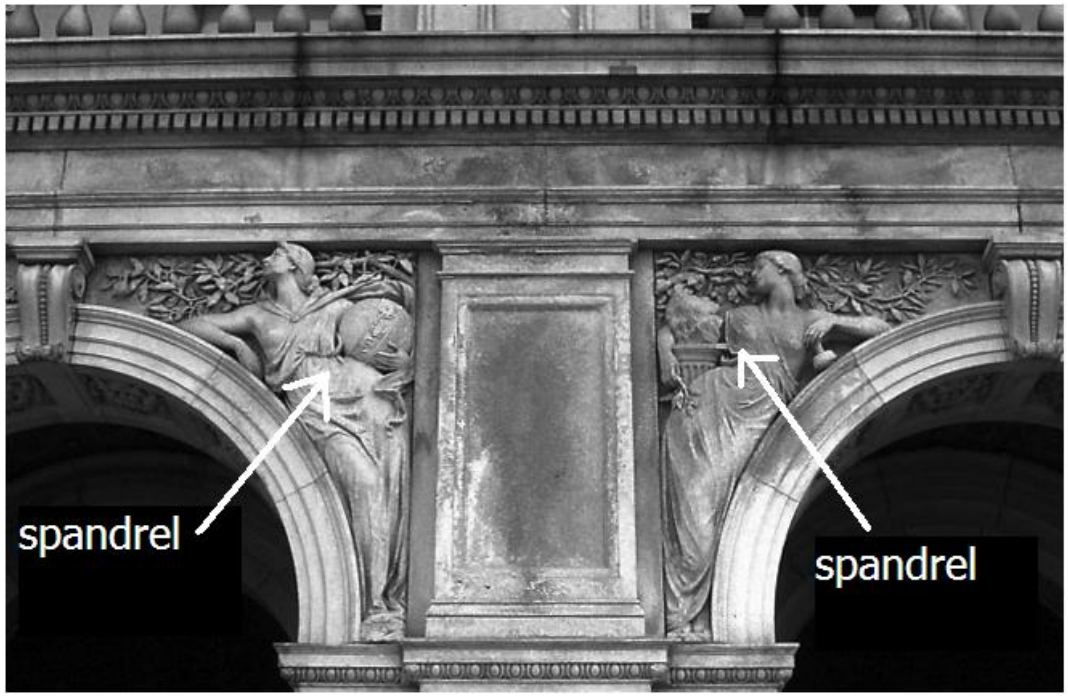
- Richard Dawkins thinks that religion is nothing more than a useless, and sometimes dangerous, evolutionary accident.

"Religious behavior may be a misfiring, an unfortunate byproduct of an underlying psychological propensity which in other circumstances is, or once was, useful"

“scholars tend to agree on one point: that religious belief is an outgrowth of brain architecture that evolved during early human history. What they disagree about is why a tendency to believe evolved, whether it was because belief itself was adaptive or because it was just an evolutionary byproduct, a mere consequence of some other adaptation in the evolution of the human brain.”

(Henig, p. 2)

N.B. evolutionary “spandrels”



A “spandrel” is a biological feature that isn’t itself adaptive (selected for), but is a by-product of other features that were selected for. (E.g. thumping sound of heart, redness of blood.)

Adaptation vs. spandrel

- If religious belief is *adaptive*, then what's the advantage?
  - Assuming that the brain evolved by natural selection, "religion genes" must somehow increase a person's average number of offspring.

- (Or is the religious inclination a spandrel?)

Cognitive tools (selected for):

- **Agent detection** – the ability to infer the presence of organisms that might do harm
- **Causal reasoning** – the ability to come up with causal narratives for natural events
- **Theory of mind** – the ability to recognize that other people have minds of their own with their own beliefs, desires and intentions. (Folk psychology, intentional stance.)

Theory of mind

“A classic experiment from the 1940s by the psychologists Fritz Heider and Marianne Simmel suggested that imputing agency is so automatic that people may 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 just see the random movement of shapes on a screen; they saw pursuit, planning, escape.”

Atran says that these cognitive tools “prime us for religion”:

- We see conscious agents everywhere
- We see cause-and-effect everywhere (and even impose this upon random events)
- We “see” a person as having their own mind, etc. even though it’s not actually visible. So we get the notion of minds as invisible, separate from bodies.

- Religious ideas “fit most comfortably with our mental architecture. Psychologists have shown, for instance, that people attend to, and remember, things that are unfamiliar and strange, but not so strange as to be impossible to assimilate. Ideas about God or other supernatural agents tend to fit these criteria.”

- Henig, p. 8

Life after death

- “According to some adaptationists, this is part of religion’s role, to help humans deal with the grim certainty of death. Believing in God and the afterlife, they say, is how we make sense of the brevity of our time on earth, how we give meaning to this brutish and short existence.” (Henig, p. 8)

- “But the spandrelists counter that saying these beliefs are consolation does not mean they offered an adaptive advantage to our ancestors.” (Henig, p. 9)

  e.g. Pascal Boyer: “The human mind does not produce adequate comforting delusions against all situations of stress or fear … Indeed, any organism that was prone to such delusions would not survive long.” (p. 9)

- Studies where children are shown puppets that act out stories are used to investigate how children infer the mental states of other agents.

- “In this study, it seems, the reason afterlife beliefs are so prevalent is that underlying them is our inability to simulate our nonexistence.”

Religion as *adaptive* (e.g. David Sloan Wilson)

- "… trying to explain the adaptiveness of religion means looking for how it might have helped early humans survive and reproduce." (Henig, p. 10)

- "Religion made people feel better, less tormented by thoughts about death, more focused on the future, more willing to take care of themselves."
- "Such sentiments, some adaptationists say, made the faithful better at finding and storing food, for instance, and helped them attract better mates because of their reputations for morality, obedience and sober living."

- “The advantage might have worked at the group level too, with religious groups outlasting others because they were more cohesive, more likely to contain individuals willing to make sacrifices for the group and more adept at sharing resources and preparing for warfare.”

Religion is adaptive?

- In 2003, Sosis and Bradley Ruffle of Ben Gurion University in Israel sought an explanation for why **Israel's religious communes did better on average than secular communes in the wake of the economic crash** of most of the country's kibbutzim. They based their study on a standard economic game that measures cooperation.

  Individuals from religious communes played the game more cooperatively, while those from secular communes tended to be more selfish. It was the men who attended synagogue daily, not the religious women or the less observant men, who showed the biggest differences. To Sosis, this suggested that what mattered most was the frequent public display of devotion. **These rituals, he wrote, led to greater cooperation in the religious communes**, which helped them maintain their communal structure during economic hard times.

Reflection

- If we argue from such views about religion that religions are mistaken, are we committing the *genetic fallacy*?

  (The genetic fallacy is committed when coming up with a possible causal explanation for a belief is taken to be evidence that discredits the claim or thing itself.)

  Oddly perhaps, one prominent member of the byproduct (spandrel) camp, Justin Barrett, is an observant Christian who believes in “an all-knowing, all-powerful, perfectly good God who brought the universe into being”.

Barrett responds

"Christian theology teaches that people were crafted by God to be in a loving relationship with him and other people. Why wouldn't God, then, design us in such a way as to find belief in divinity quite natural?"

"Having a scientific explanation for mental phenomena does not mean we should stop believing in them. Suppose science produces a convincing account for why I think my wife loves me — should I then stop believing that she does?"

Justin Barrett, by e-mail (as reported by Henig, p. 13)

Is religious belief *childish*?

- IF RELIGION comes naturally to children, doesn't that put God on the same footing as Santa Claus or the Tooth Fairy – a being that children should outgrow? And does it not also mean that belief in God is childish?

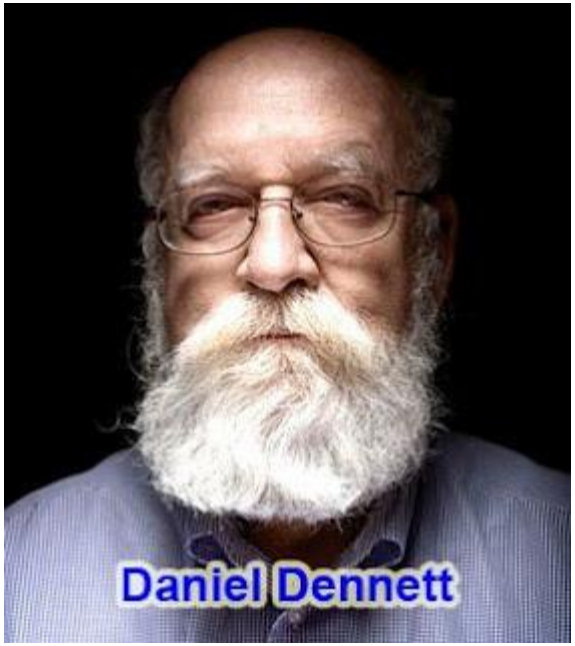
- (Barrett, p. 4)

“It is easy to be sympathetic to the idea that we should abandon “childish” thinking in adulthood. But why does labelling an idea childish automatically make it bad, dangerous or wrong? It is true that children know less than adults and make more mistakes in reasoning, so their judgements are not as trustworthy. But what follows from this is only that we should more carefully scrutinise the beliefs of children than those of adults, particularly if they deviate from what adults believe.”

“But adults generally do believe in gods. That such belief begins in childhood and typically endures into adulthood places it in the same class as believing in the permanence of solid objects, the continuity of time, the predictability of natural laws, the fact that causes precede effects, that people have minds, that their mothers love them and numerous others. If believing in gods is being childish in the same respect as holding these sorts of beliefs, then belief in gods is in good company.”

- (Barrett, p. 4)

Religion as a Meme?



Is religion to be understood as a biological or a cultural phenomenon?

If it's cultural, then religion is a kind of *meme*, a self-replicating mental entity, e.g. a language, story, song, joke, etc.

Daniel C. Dennett
An Evolutionary Account of Religion, (on the iweb)

Religion still has a biological basis

E.g. the *hyperactive agent detection device,* or HADD.

We need to detect agents, e.g. to be safe from predators. But our "agent detection device" can be hyperactive, or overshoot.

"This overshooting is not restricted to human beings. When your dog leaps up and growls when some snow falls off the eaves with a thud that rouses him from his nap, he is manifesting a 'false positive' orienting response triggered by his HADD."

- N.B. memes are not themselves conscious agents, even though they require conscious agents to exist.
- Memes have no foresight, no desires or goals, etc. They either reproduce themselves effectively or they don’t. (Bad jokes don’t get retold, some songs stick in your head, others don’t, etc.)

“Put these two ideas together—a hyperactive agent-seeking bias and a weakness for certain sorts of memorable combos—and you get a kind of fiction-generating contraption. Every time something puzzling happens, it triggers a sort of curiosity startle, a “Who’s there?” response that starts churning out “hypotheses” of sorts: “Maybe its Sam, maybe it’s a wolf, maybe its ... a tree that can walk—hey, *maybe it’s a tree that can walk!*’””

- Most of these funny ideas will die out. But occasionally one will fit our psychology nicely enough that it will *stick* – reproduce, etc. It becomes a meme.

- The memorable nymphs and fairies and goblins and demons that crowed the mythologies of every people are the imaginative offspring of a hyperactive habit of finding agency wherever anything puzzles or frightens us. This mindlessly generates a vast overpopulation of agent-ideas, most of which are too stupid to hold our attention for an instant....

Parental authority

- Children are hard-wired to trust and believe their parents. (It's highly adaptive.)
- Certain memes "abuse" this psychological feature.
- E.g. the Father-God-is-all-knowing-and-must-be-obeyed meme.
- This supports the very common practice of *divination*, in decision making. (If there's no clearly best option, and flipping a coin is (well) flippant, then consult the spirits.)

- Rituals, community story telling, etc. are very reliable ways to transmit information. “high fidelity”

  (Even if some forget, most will remember.)

Stewards (priests, etc.)

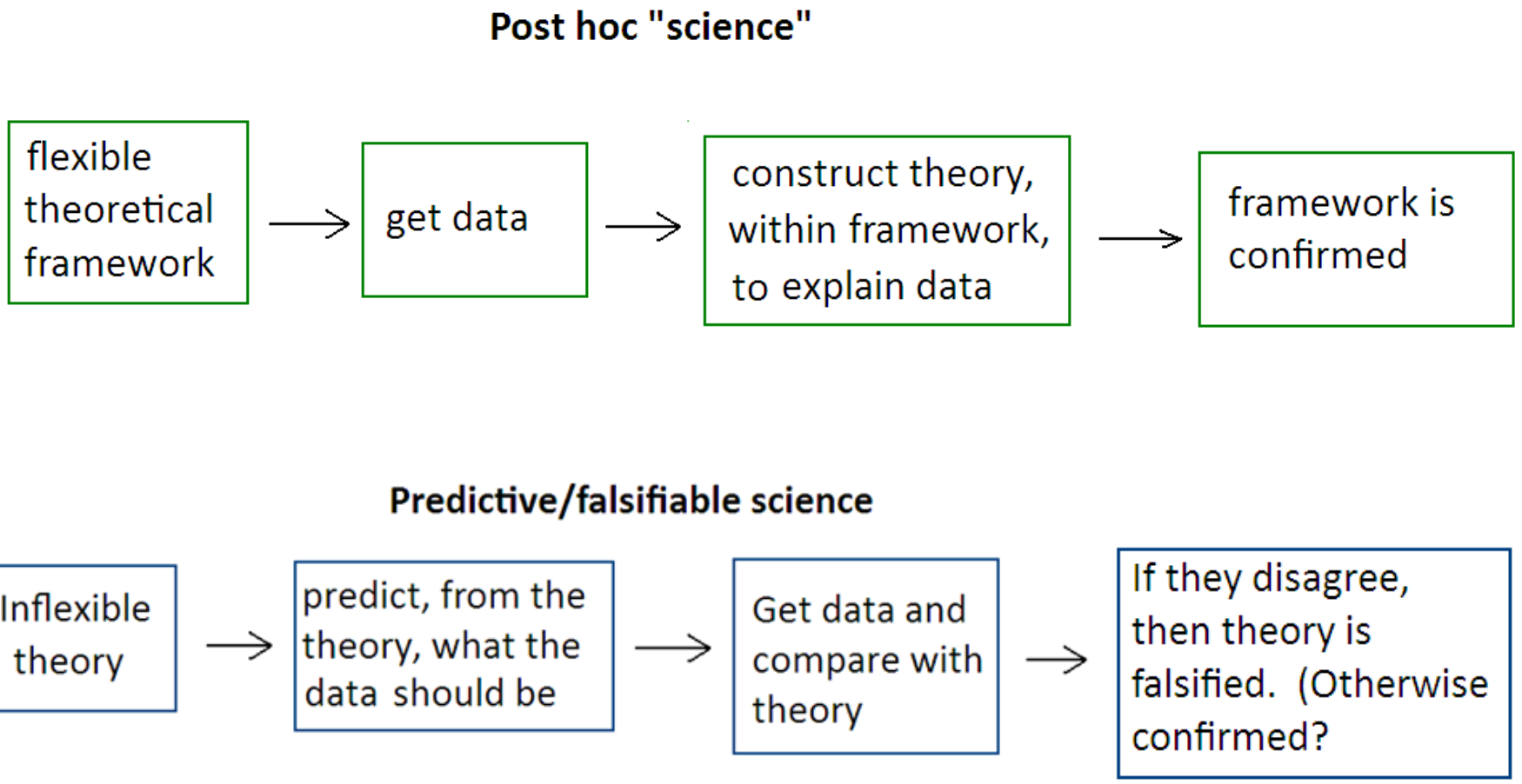
…there was a gradual process in which the wild (self-sustaining) memes of folk religion became thoroughly domesticated. **They acquired stewards**. Memes that are fortunate enough to have stewards, people who will work hard and use their intelligence to foster their propagation and protect them from their enemies, are relieved of much of the burden of keeping their own lineages going....

“The wild memes of language and folk religion, in other words, are like rats and squirrels, pigeons and cold viruses—magnificently adapted to living with us and exploiting us, whether we like them or not. The domesticated memes, in contrast, depend on help from human guardians to keep going....”

Reflection

- Which of these accounts of religion is most convincing?
- Are they scientific accounts, or mere “post-hoc theorizing”?

Science vs. post hoc theorizing



Evolutionary theorizing is flexible

"… evolutionary theorizing … seems to possess a disquieting amount of elasticity or flexibility with regard to explaining organic phenomena. Anything and everything in the empirical biological world seems to be compatible with evolutionary explanations. Refuting evidence or crucial experiments that could realistically jeopardize an evolutionary account seem extremely few and far between."

ARTHUR CAPLAN, "TESTABILITY, DISREPUTABILITY, AND THE STRUCTURE OF THE MODERN SYNTHETIC THEORY OF EVOLUTION", *Erkenntnis* 13 (1978) 261-278.

Why is the brain religious?

"Which is the better biological explanation for a belief in God — evolutionary adaptation or neurological accident? Is there something about the cognitive functioning of humans that makes us receptive to belief in a supernatural deity?

And if scientists are able to explain God, what then? Is explaining religion the same thing as explaining it away? Are the nonbelievers right, and is religion at its core an empty undertaking, a misdirection, a vestigial artifact of a primitive mind? Or are the believers right, and does the fact that we have the mental capacities for discerning God suggest that it was God who put them there?"

Henig, p. 2