

## Custom and Cognition: Towards an Understanding of Religious Belief

Matthew Hernandez

In Hume's *Natural History of Religion*, he finds two questions of utmost importance when studying religious belief; they are (1) "its foundation in reason" and (2) "its origin in human nature."<sup>1</sup> Hume pursues the second path of inquiry, tracing the origins of polytheism and how that brought about monotheism.<sup>2</sup> He does this not by looking at religious texts, but at historical texts. Spinoza on the contrary, in the *Tractatus Theologico-Politicus*, searches for the origins of belief using religious texts.<sup>3</sup> Despite these contrary approaches, both Hume and Spinoza find that religious belief rests on the passions, specifically the passions of fear and hope.<sup>4</sup> Contemporary neuroscience has begun to question Hume's first path of inquiry—reason as a religious foundation<sup>5</sup>—and started to validate his and Spinoza's assertion that belief rests on the passions.<sup>6</sup>

---

Matthew Hernandez is a fourth year philosophy major and McNair Scholar at Portland State University in Portland, OR. His primary interests are in David Hume scholarship (as well as early modern philosophy more generally), philosophy of mind, epistemology, ethics, philosophy of language, and cognitive science. He currently serves as a teaching assistant and research assistant in the philosophy department at Portland State. Matthew will be applying to philosophy graduate programs in fall 2014, and hopes to obtain his PhD. Previous versions of this paper were presented at undergraduate conferences at Pacific University and University of Puget Sound and at philosophy clubs at Portland State University and Columbia River High School. He'd also like to thank Peter Boghossian for his notes on multiple drafts of this paper and the constant advice and support of Angela Coventry and the rest of the Portland State philosophy department.

---

---

These findings suggest that to move toward an understanding of religious belief, the second path is the correct one.

In this paper I provide a two-pronged approach to an understanding of religious belief, as is rooted in human nature. The first prong is to understand how social custom plays a role in the passing down of religious belief. This is done by giving an analysis of Mill's account of custom in *On Liberty*, and then by arguing by analogy that those same attributes Mill accounts for are present in religious belief. The second prong is to understand how social cognition plays a role in religious belief. This will be done by first explaining why religious believers find their particular religion more reasonable than other religions.<sup>7</sup> The answer to this question should shed light on what makes religious belief different than religious disbelief, and form a cognitive model for religious belief. When I have finished my account of religious belief I will look back on the implications this has for Hume's and Spinoza's findings, as well as how this deals with an argument in the New Atheist movement.

## Custom

### *An Analysis of Mill*

In John Stuart Mill's *On Liberty*, he observes that when lawmakers gather, they create rules that appear to be "self-evident and self-justifying."<sup>8</sup> However, Mill claims this appearance of self-evidence is an illusion due to the "magical influence of custom."<sup>9</sup> By "magical influence of custom," Mill means that people time and again find certain rules self-evident when they are ubiquitous in their society. In order for a proposition to be self-evident it must be true without needing to be justified, that is, it automatically has warrant conferred upon it. Such lawmakers let an idea that has passed down from generation to generation influence the way they think, and ultimately what they think appears to be self-evident. Mill believes that rules should not be

like this and need to be justified because though such rules seem self-evident to a person who is a part of the specific custom in question, they are not self-evident among people outside of that custom.

Mill goes on to state:

The effect of custom...which mankind impose on one another, is all the more complete because the subject is one on which it is not generally considered necessary that reasons should be given, either by one person to others, or by each to himself [emphasis added].<sup>10</sup>

The subject Mill refers to here is "law making." "Law making" is the process by which an individual or group of individuals create rules (or, laws) for governing societies. Such an observation is fitting since during Mill's time it was not common for one to need reasons as a means of justifying a law. This practice could be due to the desire to come up with first or starting principles that do not need to refer back to other reasons or principles for support, but should be used to build upon. For example, a starting principle of laws could be free speech, from there one could derive a law such as, "People should be free to worship how they please," or "There should be freedom of press," etc.

It is noteworthy to recognize that reasons are not only unnecessary for others, they're also unnecessary for the person proposing the rule. Mill states this is because, "People are accustomed to believe...that their feelings on subjects of this nature are better than reasons, and render reasons unnecessary."<sup>11</sup> Again, people tend to believe that when it comes to the particular area of law making, their feelings are better than reasons for deriving first principles. This is due to wanting to create foundational principles from which one can then derive other laws. Mill states:

The practical principle which guides them to their opinions on the regulation of human conduct is the feeling in each person's mind that everybody should be required to

---

---

act as he, and those with whom he sympathizes, would like them to act.<sup>12</sup>

It is important to note Mill's terminology here, where he states that it is the *feeling* the lawmaker has that everyone ought to act as the lawmaker sees fit, instead of giving reasons for the validity of the rule to be in place. The use of the word "feeling" marks a shift from objective to subjective, which can be used to avoid making falsifiable statements. Feelings are not falsifiable because they, like matters of taste, are subjective and cannot be proven wrong since people's feelings are infallible. I cannot prove or disprove that someone *feels* a certain way, just as one cannot be wrong, for example, about the fact that he/she likes cherry pie or rock music. These are subjective states and cannot be independently adjudicated. Because of the infallibility of personal experiences and matters of taste, laws cannot be grounded in *feelings*; only reason can ground laws because independent, neutral third party arbiters can analyze and judge the validity of the lawmakers' reasoning.

Finally, Mill states that no one recognizes the standard they are holding is nothing but their personal opinion, unsupported by reasons. He states that such positions "can only count as one person's preference," and that if that person gives a reason for a position, it is simply trying to tie his/her opinion to others' opinion.<sup>13</sup> Mill rightly notices that this "is still only many people's liking instead of one," therefore making such an appeal is simply trying to win by numbers.<sup>14</sup>

### *An Analysis of Religion*

The following analysis frames my argument about custom's influence over religious belief. First, I will explain what is meant by religion and religious beliefs. Second, I will show how religious beliefs are influenced by custom just as law making is.

Steven Brutus, in his book *Religion, Culture, History*, looks at various common definitions of religion that have two consistent

ideas: Supernatural belief and worship.<sup>15</sup> I will focus primarily on the supernatural aspect because many common definitions also use the word “spiritual,”<sup>16</sup> a reference to “spirit,” which is immaterial, or again more than natural (or, super-natural). It is the supernatural aspect that determines what I term “religious.” Because of this, it is not unreasonable to attribute belief by faith to religion, that is, belief on the basis of no evidence.<sup>17</sup> Since we have no evidence of the supernatural, any belief in it must be on the basis of no evidence. (There are some religions that do not fit this definition. In Reform Judaism, for instance, it is not necessary to make supernatural claims or believe in a god. This paper only concerns religions that do.) With a definition of “religion” in place, the foundation for my argument should follow quite easily by reexamining Mill’s passage on law making;<sup>18</sup> that is, by changing the subject from “law making” to “belief in *x*” where *x* is any given religious belief—from an entire doctrine or just a specific god or deity—it is easy to see that custom influences religious beliefs.

In the first passage I quoted,<sup>19</sup> Mill introduces his idea of custom as appearing to be self-evident. Believers will often see the tenants of their own faith as self-evident truths, which is due to the “illusion” of custom. If people are born in a predominantly Christian culture, for example, they are likely to see many Christian tenants as self-evident, especially if they were born within this particular religion. The same could be said about those born in a predominantly Muslim culture. This is not merely conjecture. There is overwhelming evidence that children take their parents’ religious beliefs.<sup>20</sup> Furthermore, Eaves, Hatemi, Prom-Womley, and Murelle noted that not only does the phenomenon of belief transfer exist, but it is also primarily due to social influence.<sup>21</sup> The result of being so ingrained in custom is that anything outside of society seems unreasonable due to the obviousness of the initial belief system.

The next passage examines how custom influences law making by observing how certain laws seem self-evident when they are not.<sup>22</sup> Again, this observation by Mill can be applied to reli-

---

---

gious belief because religious beliefs are sometimes considered self-evident.<sup>23</sup> However, it is not the case that a particular religion is self-evident; otherwise everyone would be following that religion. The takeaway point is that when you are raised within a specific religious tradition, that religion appears self-evident because you develop your other ideas around that one system of thought.

It is worth noting Mill's observation that not only do lawmakers not need to give reasons *for* belief to others, but they also do not need to give reasons to themselves. This observation is noteworthy because if we take a religion like Christianity that states that human reason is unmatched by God (the story of Job comes to mind), then reasons (i.e. epistemic justifications) are not a necessary aspect of belief. However, some believers often give non-epistemic "reasons" for faith, which have more to do with *feeling* than with reason and evidence. These extra-epistemological appeals are meant to establish the validity of the belief and mirror Mill's observation about feeling over reason guiding the lawmakers. An example would be: people have faith because of how it makes them feel, or because of a type of appeal to emotion. For instance, continuing with Christianity, evangelizers often lead with the story of Jesus dying on the cross for our sins; this appeal to emotion creates a positive feeling for faith in God. The focus on *feeling* within religion can be backed up by research showing that, "Adopting religious beliefs depends on cognitive-emotional interactions."<sup>24</sup> Essentially, religious beliefs take part within brain networks that are also used for processing emotions. In addition, using the word "feeling" creates the infallibility problem, seen earlier in Mill.<sup>25</sup> Religious beliefs are about the nature of how things truly are; if beliefs are grounded in feeling, they can't be proven or disproven, creating an issue with the verifiability of religious beliefs. Given this issue, faith is the only option left for holding these beliefs.

Furthermore, we can see that believers manifest the idea that their belief system should be held by others and often argue based on the sheer number of believers in their system as reason

enough to believe.<sup>26</sup> This is again in direct parallel to Mill's statements about people's preference in law making, and the appeal to similar opinion among others.

In my analysis, I have demonstrated that given the similarities between law making, as described by Mill, and religious beliefs, custom has the ability to influence one to think something is self-evident when it actually is not, and that these subjects are not commonly expected to have reasons as justification for belief. In addition to the current research in the field, this adequately shows how social custom plays a role in belief transfer.

### Cognition

#### *An Analysis of Belief*

In order to gain an understanding of the role social cognition plays in religious belief I will first attempt to answer why religious believers find their particular religion more reasonable than other religions.<sup>27</sup> I will argue that this is the case because religious believers think about their religion socially while thinking about other religions analytically. This answer will effectively house religious belief in social cognitive processes, which will then lead the way for a cognitive model of religious belief. This argument is as follows:

1. If analytical (/critical) thinking promotes religious disbelief then believers are most likely not thinking about their belief analytically.
2. Analytical thinking promotes religious disbelief.<sup>28</sup>
3. Religious believers are most likely not thinking about their belief analytically. (from 1, 2)
4. Religious belief takes places in social cognitive processes.<sup>29</sup>
5. If one does not accept a religious belief, he/she may be thinking about it analytically. (from 2)
6. If one believes in a specific religion but denies all other religions, he/she must be thinking about his/

---

---

her religion socially while thinking about other religions analytically. (from 2, 4, 5)

7. There are religious believers that believe in a specific religion, but deny all other religions.<sup>30</sup>
8. Religious believers think about their religion socially while thinking about other religions analytically (from 6, 7)

The first premise shouldn't be problematic. If an activity promotes religious disbelief then those who believe in religious propositions are not likely engaging in that activity. In this instance I'm using analytical or critical thinking as the activity that promotes religious disbelief. I'm comfortable with either analytical or critical thinking because analytical thinking is the methodological aspect of critical thinking.<sup>31</sup> The terms "most likely" are used because of the research by Gervais and Norenzayan, which shows how strong of an effect analytic thinking has on religious belief. For example, the mere act of viewing Rodin's *The Thinker* as a way to initiate analytical thinking, "significantly promoted religious disbelief."<sup>32</sup>

The second premise will probably be met with conflict, but is based upon the aforementioned research, which employs a rigorous methodology. The third premise follows from the first and second due to *modus ponens*.

Premise four is also based upon a study showing that religious belief is a part of "cognitive processes and brain networks used in social cognition."<sup>33</sup> That is, religiosity takes place in the networks of the brain that are a part of social processing. This, in addition to the other Gervais and Norenzayan research, supports premise five, "If one does not accept religious belief he/she may be thinking about it analytically."

All of the previous premises act to build the conditional for premise six. If one believes in a specific religion but denies all other religions, he/she must be thinking of his/her religion socially (Kapogiannis et al.), while denying other religions due to analytical thinking, since analytical thinking promotes disbelief

(Gervais & Norenzayan). There are those who believe in a specific religion while denying others.<sup>34</sup> This successfully confirms the antecedent, which proves that the conclusion, “Religious believers think about their religion socially while thinking about other religions analytically,” must necessarily follow due to *modus ponens*.

### A Cognitive Model

Accepting that religious believers think about their religion socially while thinking of other religions analytically leads to a new question: “Why aren’t religious believers thinking about their beliefs analytically?” My answer to this question will come by way of a cognitive model for religious belief, which I will present now.

Recent research shows that it is difficult to start thinking analytically about something one has only thought about socially, while also lending evidence to the proposition that there is a split between analytic and social cognition. In Jack et al., neuroscientists show that one brain network is used primarily for social reasoning and a separate network is used for mechanical and logical reasoning.<sup>35</sup> The former is the default mode network (DMN), which has been linked in numerous studies with social, emotional, and moral processing.<sup>36</sup> The latter is the task-positive network (TPN), which is the analytically active part of the brain. The reason it is so hard to think analytically about something one has only thought about socially has to do with how these two networks interact. The study shows that when the DMN is active there is a negative corollary effect in the TPN. That is, when areas of the brain associated with the DMN are active, the areas associated with the TPN deactivate.<sup>37</sup> The inverse is also true; when the TPN is active the DMN deactivates. When one is engaged in standard social, emotional, and moral processing (DMN), the analytic part of the brain (TPN) functions less as the DMN sections function more, and *vice versa*.

The research by Jack et al. shows just how the difference in thinking I have argued for actually exists in cognitive function-

ing, making it the case that religious believers think about religions differently. In other words, it is more difficult for believers to interact with their own religion analytically than it is for them to interact with other religions with which they are not socially engaged. This explains why the believer finds his/her particular religion more reasonable than other traditions. For the believer, other traditions are mere ideas that can be manipulated and refuted.

This idea, that beliefs exist in separate networks, has also been studied by Michael Shermer and claims that our brains have different “modules” or “compartments.” He writes, “... our logic-tight compartments are influenced by our moral emotions, which lead us to bend and distort data and evidence through a process called motivated reasoning.”<sup>38</sup> Essentially, we pick and choose facts that support preconceived beliefs, showing how a belief can exist in one of these modules—safe and sound from one’s own critical rigor.

These studies and the argument I’ve put forward directly form the cognitive model that I am proposing. Furthermore, in order for custom to influence religious belief, such beliefs must be transferred from one person to another via social means and avoid critical examination. This model shows how social custom protects religious beliefs when being transferred from neighbor to neighbor, parent to child. When such a belief is accepted, it is active in the brain as a point of social cognition, while outside beliefs are subject to criticism and analytical rigor.<sup>39</sup>

### **Implications**

I will now briefly look at two implications of my two-pronged approach, the first of which is how this relates back to Hume and Spinoza’s view that religious belief has its origins in the passions, specifically fear and hope. The second is for a popular argument in the New Atheist movement known as the “outsider test for faith.”

### Hume and Spinoza

For Hume, fear and hope is what first agitated humans to make an “inference concerning invisible intelligent power.”<sup>40</sup> This is because humans were initially too primitive to be driven by passions such as “speculative curiosity” or “the pure love of truth.”<sup>41</sup> Spinoza finds any religion to be superstition,<sup>42</sup> and that in “desperation” one loses all “solid judgment” and “fluctuate[s] wretchedly between hope and fear.”<sup>43</sup> It is due to this fluctuation between passions that allows one to readily believe anything, according to Spinoza.<sup>44</sup>

Despite their different approaches to the issue of religion, both Hume and Spinoza appear to find that fear and hope play a vital role in coming to religious belief. Though Hume is speaking of the origins of polytheism,<sup>45</sup> and Spinoza is attending to why humans practice religious rituals,<sup>46</sup> they both recognize the emotional drives behind these beliefs and actions. My own account of religious belief gives credit to their initial arguments. On the cognitive model I presented it is clear that religious belief is a phenomenon of the DMN where emotional cognitive processing takes place. However, it is not clear based on the model what specific emotion(s) are initially present. While my model can give an initial reason for supporting Hume and Spinoza, complete validation rests upon further scholarship.

Furthermore, another area of future scholarship is with regard to Hume’s first path of inquiry: what role does reason play in the foundation of religious belief?<sup>47</sup> This cognitive model questions whether or not reason has a foundation in religion, or if reason is an after-the-fact consideration with regards to religious belief. In addition, given the reciprocal inhibition, it is unclear to what extent reason can fully grapple with one’s own religious beliefs. However, this issue is not within the scope of this paper.

### The “Outsider Test for Faith”

The second implication concerns New Atheist John W.

---

---

Loftus' "outsider test for faith."<sup>48</sup> Loftus asks religious believers to test their own "beliefs as if [they] were an outsider to the faith [they] are evaluating."<sup>49</sup> One can easily apply this by thinking to themselves, "Would this reason convince me if someone from another faith gave it?" In addition to being a strong rebuttal to religious objections, the test is also a tried concept and has stood up against many objections.<sup>50</sup> The model presented in this paper helps explain why the "outsider test for faith" is difficult for the religious believer because of custom's influence. Custom has kept believers from truly dealing with their own religious beliefs as they would deal with other religious beliefs and could potentially account for many other beliefs that are not based upon reason.

### Conclusion

The twin approaches of custom and cognition I've used in this paper gives a potential explanation for religious belief. First I showed how social custom plays a role in the passing down of religious belief by giving an analysis of Mill's account of custom in *On Liberty*. Second I showed how social cognition plays a role in religious belief by first explaining why religious believers find their particular religion more reasonable than other religions and used that answer to form a cognitive model for religious belief. I also briefly looked at how this account relates to Hume and Spinoza, as well as the New Atheist argument called the "outsider test for faith." I believe the greatest strength of this paper is the empirically testable cognitive model for religious belief. However, there are many topics that have not been considered due to the scope of this paper. Therefore, it should be viewed as a jumping off point for new avenues of scholarship including but not limited to, the process of belief transfer, the role of reason in religious belief, accuracy of historical accounts of religious belief, and how this model could be related to belief more generally outside the realm of religion.

---

---

**Notes**

1. David Hume, "Natural History of Religion," in *Dialogues and Natural History of Religion*, ed. J. C. A. Gaskin (Oxford/New York: Oxford University Press, 1993), 134.
2. Dennett, in *Breaking the Spell* (2006), continues on this second path and like Hume, focuses not on religious texts but instead on *memetics*.
3. Benedict de Spinoza, *Theological-Political Treatise*, ed. J. Israel and M. Silverthorne (Cambridge/New York: Cambridge University Press, 2007).
4. *Ibid.*, 3; and David Hume, "Natural History of Religion," 140.
5. W. M. Gervais and A. Norenzayan, "Analytic thinking promotes religious disbelief," *Science* 336, no. 6080 (2012): 493-496.
6. D. Kapogiannis, A. K. Barbey, M. Sue, G. Zamboni, F. Krueger, and J. Grafman, "Cognitive and neural foundations of religious belief," *PNAS* 106, no. 12 (2009): 4879.
7. Guy P. Harrison, *50 Reasons People Give for Believing in a God* (Amherst, New York: Prometheus Books, 2008), 231.
8. John Stuart Mill, *On Liberty*, ed. G. Himmelfarb (London England: Penguin, 1974), 64.
9. *Ibid.*
10. *Ibid.*
11. *Ibid.*
12. *Ibid.*
13. *Ibid.*
14. *Ibid.*
15. Steven Brutus, *Religion Culture History* (Portland, OR: Daimonion Press, 2012), 1.
16. *Ibid.*
17. "Faith," *Merriam-Webster Dictionary*. accessed February 15, 2013, <http://www.merriam-webster.com/dictionary/faith>.
18. John Stuart Mill, *On Liberty*, 64.
19. *Ibid.*
20. C. J. Boyatzis, and D. L. Janicki, "Parent-child communication about religion: Survey and diary data on unilateral

- transmission and bi-directional reciprocity styles," *Review of Religious Research* 44, no. 3 (2003): 252-270.
- J. A. Erickson, "Adolescent religious development and commitment: A structural equation model of the role of family, peer group, and educational influences," *Journal for the Scientific Study of Religion* 31, no. 2 (1992): 131-152.
- E. W. Ozorak, "Social and cognitive influences on the development of religious beliefs and commitment in adolescence," *Journal for the Scientific Study of Religion* 28, no. 4 (1989): 448-463.
21. L. J. Eaves, P. K. Hatemi, E. C. Prom-Womley, and L. Murrelle, "Social and genetic influences on adolescent religious attitudes and practices," *Social Forces* 86, no. 4 (2008), 1623; 1639.
22. John Stuart Mill, *On Liberty*, 64.
23. Guy P. Harrison, *50 Reasons People Give for Believing in a God*, 17.
24. D. Kapogiannis, A. K. Barbey, M. Sue, G. Zamboni, F. Krueger, and J. Grafman, "Cognitive and neural foundations of religious belief."
25. John Stuart Mill, *On Liberty*, 64.
26. Guy P. Harrison, *50 Reasons People Give for Believing in a God*, 231.
27. *Ibid*, 213.
28. W. M. Gervais and A. Norenzayan, "Analytic thinking promotes religious disbelief."
29. D. Kapogiannis et al., "Cognitive and neural foundations of religious belief," 4879.
30. Guy P. Harrison, *50 Reasons People Give for Believing in a God*, 213.
31. American Philosophical Association, *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction. "The Delphi Report."* (Millbrae, CA: The California Academic Press, 1990), 6-11.
32. W. M. Gervais and A. Norenzayan, "Analytic thinking promotes religious disbelief," 494-495.

- 
- 
33. D. Kapogiannis et al., "Cognitive and neural foundations of religious belief," 4879.
  34. Guy P. Harrison, *50 Reasons People Give for Believing in a God*, 213.
  35. A. I. Jack, A. J. Dawson, K. L. Begany, R. L. Leckie, K. P. Barry, A. H. Ciccio, et al., "fMRI reveals reciprocal inhibition between social and physical cognitive domains," *NeuroImage* 66, no. 1 (2013): 5.
  36. *Ibid*, 10.
  37. *Ibid*, 5.
  38. Michael Shermer, "The mind's compartments create conflicting beliefs: How our modular brains lead us to deny and distort evidence," *Scientific American*, last modified January 12, 2013, <http://www.scientificamerican.com/article.cfm?id=the-minds-compartments-create-conflicting-beliefs>.
  39. An alternative account to mine would be the theory set forward by Dan Dennett in *Breaking the Spell*. However, it is outside of the scope of my paper to compare the views here.
  40. David Hume, "Natural History of Religion," 140.
  41. *Ibid*.
  42. Steven Nadler, "Baruch Spinoza," *The Stanford Encyclopedia of Philosophy* (Fall 2013 Edition), ed. E. N. Zalta, last modified July 15, 2013,
  43. Benedict de Spinoza, *Theological-Political Treatise*, 3.
  44. *Ibid*.
  45. David Hume, "Natural History of Religion," 140.
  46. Benedict de Spinoza, *Theological-Political Treatise*, 3.
  47. David Hume, "Natural History of Religion," 134.
  48. Outlines of Loftus' "outsider test for faith" can be found in the following places:  
 John W. Loftus, "The Outsider Test.....," *Debunking Christianity* (blog), February 11, 2006, <http://debunkingchristianity.blogspot.com/2006/02/outsider-test.html>.  
 John W. Loftus, "The Outsider Test For Faith," *Debunking Christianity* (blog), July 2, 2010,

<http://debunkingchristianity.blogspot.com/2007/03/outsider-test-for-faith.html>.

John W. Loftus, *The Outsider Test For Faith: How To Know Which Religion Is True*, (Amherst, NY: Prometheus Books, 2013).

49. John W. Loftus, "The Outsider Test....."

50. John W. Loftus, "The Outsider Test For Faith."

### Bibliography

American Philosophical Association. *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction. "The Delphi Report."* Millbrae, CA: The California Academic Press, 1990.

Boyatzis, C. J., and D. L. Janicki. "Parent-child communication about religion: Survey and diary data on unilateral transmission and bi-directional reciprocity styles." *Review of Religious Research* 44, no. 3 (2003): 252-270.

Brutus, Steven. *Religion, culture, history: A philosophical study of religion*. Portland, OR: Daimonion Press, 2012.

Dennett, Daniel C. *Breaking the spell: Religion as a natural phenomenon*. New York, NY: Viking, 2006.

Eaves, L. J., P. K. Hatemi, E. C. Prom-Womley, and L. Murelle. "Social and genetic influences on adolescent religious attitudes and practices." *Social Forces* 86, no. 4 (2008): 1621-1646.

Erickson, J. A. "Adolescent religious development and commitment: A structural equation model of the role of family, peer group, and educational influences." *Journal for the Scientific Study of Religion* 31, no. 2 (1992): 131-152.

"Faith." *Merriam-Webster Dictionary*. Accessed February 15, 2013, <http://www.merriam-webster.com/dictionary/faith>.

Gervais, W. M., and A. Norenzayan. "Analytic thinking promotes religious disbelief." *Science* 336, no. 6080 (2012): 493-496.

Harrison, Guy P. *50 reasons people give for believing in a god*. Amherst, NY: Prometheus Books, 2008.

- 
- Hume, David. "The Natural History of Religion." In *Dialogues and Natural History of Religion*, edited by J. C. A. Gaskin, 134-193. Oxford/New York: Oxford University Press, 1993.
- Jack, A. I., A. J. Dawson, K. L. Begany, R. L. Leckie, K. P. Barry, A. H. Ciccio, et al. "fMRI reveals reciprocal inhibition between social and physical cognitive domains." *NeuroImage* 66, no. 1 (2013): 385-401.
- Kapogiannis, D., A. K. Barbey, M. Sue, G. Zamboni, F. Krueger, and J. Grafman. "Cognitive and neural foundations of religious belief." *PNAS* 106, no. 12 (2009): 4876-4881.
- Loftus, John W. "The Outsider Test....." *Debunking Christianity* (blog). Published February 11, 2006, <http://debunkingchristianity.blogspot.com/2006/02/outsider-test.html>.
- Loftus, John W. "The Outsider Test For Faith. Debunking Christianity." Published July 2, 2010, <http://debunkingchristianity.blogspot.com/2007/03/outsider-test-for-faith.html>.
- Loftus, John W. *The Outsider Test For Faith: How To Know Which Religion Is True*. Amherst, NY: Prometheus Books, 2013.
- Mill, John Stuart. *On Liberty*. Edited by G. Himmelfarb. London, England: Penguin, 1974.
- Nadler, Steven. "Baruch Spinoza." *The Stanford Encyclopedia of Philosophy* (Fall 2013 Edition). Edited by E. N. Zalta. Last modified July 15, 2013, <http://plato.stanford.edu/entries/spinoza/>.
- Ozorak, E. W. "Social and cognitive influences on the development of religious beliefs and commitment in adolescence." *Journal for the Scientific Study of Religion* 28, no. 4 (1989): 448-463.
- Shermer, Michael. "The mind's compartments create conflicting beliefs: How our modular brains lead us to deny and distort evidence." *Scientific American*. Last modified January 12, 2013, from <http://www.scientificamerican.com/article.cfm?id=the-minds-compartments-create>

---

---

conflicting-beliefs.

Spinoza, Benedict de. *Theological-Political Treatise*. Edited by J. Israel and M. Silverthorne. Cambridge/New York: Cambridge University Press, 2007.