2020

Religious Belief and Culture: The Curious Case of the Intuitive Soul

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While Adventists recognize some of the straightforward and concrete ideas that are part of doctrinal training on human nature and the state of the dead, the core intuitive belief in mind-body dualism likely continues to influence how Adventists understand human nature.

Picture this: You are walking down a long hallway, holding a small ball in your hand. You stride toward the end of the hallway at a brisk pace, neither speeding up nor slowing down. Near the end of the hallway, a target has been painted on the floor. Your task, without slowing your pace, is to drop—not throw—the ball so that it hits the center of the target. When should you drop the ball? After you pass the target? When you are directly over the target? Before you reach the target?

When cognitive scientist Michael McCloskey asked college students to perform this task, and recorded the strategies that they used, he found that some students were betrayed by their intuitions about the physical world.[1] Most of the students with no training in physics waited until they were directly over the target before dropping the ball—too late, because the ball continued moving forward at the same rate as the students were walking, and landed beyond the target. Students with at least one completed physics course, on the other hand, were more likely to drop the ball before they reached the target, allowing them to accurately hit the target. Training in physics, then, had an impact on students' intuitions about the physical world—and thus on their behavior as they interacted with the world.

Students are not the only people affected by intuitions. Even expert scientists can find that their beliefs impact their research. Isaac Newton, for example, struggled with incorrect intuitions about physical forces for decades as he worked on his system of mechanics[2]—intuitions

that were rooted in common cultural ideas about forces acting on moving objects. It took years and intervention from other scientists for Newton to finally move away from these incorrect beliefs.

A more recent example from the history of the cognitive sciences serves to illustrate the role that experts' intuitions play in scientific discovery. In the 1980s and 1990s, cognitive scientists were debating the nature of imagery—the process of thinking or imagining things not present in the immediate surroundings. Some cognitive scientists took the position that internal models for imagery were based in linguistic representations. Others suggested that the internal models were based instead in perceptual and motor processes. While the debate was eventually resolved largely in favor of the role of perceptual and motor processes in imagination, what is interesting for our purposes is the original positions that scientists took in this debate. Of scientists who were surveyed about their role in the imagery debate, those who initially took the strongest position in favor of perceptual processes were all people who experienced imagination as perception-like—that is, as vivid visual images before their mind's eye.[3] In other words, the initial intuitions that scientists had were driven not by any theoretical framework, but by their personal experiences with and intuitions about imagery.

INTUITIONS AND FOLK BELIEFS

Intuitions about the world do not just exist in the realm of the study of physics or of the human mind—we have intuitions about almost everything that we encounter in the world around us.[4] Cognitive scientists refer to these intuitions as folk beliefs or lay theories—intuitions that people use to interpret their experiences and guide what they think, feel, and do. Folk beliefs develop through routine experiences during cognitive development and socialization in specific cultural contexts. They are one way to ensure efficient thinking, given the limits on human cognition—acting on culturally based intuitions requires less cognitive effort than reasoning through a problem fully. Folk beliefs are often the unexamined background assumptions behind habits of mind and action in everyday situations; small but frequent effects of folk beliefs on thinking can thus have substantial effects on the course of a person's life.

Indeed, culturally based folk beliefs link together to form larger intuitive systems for dealing with the world around us. Pascal Boyer[5] describes this process as follows: The objects, events, and people that we encounter "[trigger] inference systems that produce some picture of… possible intentions and beliefs. All of this happens automatically and for a large part unconsciously—all we are aware of are the results of these computations."[6] When these intuitions help us to uncover otherwise hidden patterns in the world or guide us in making accurate predictions about what is going to happen, folk beliefs can be part of an effective process of discovery. This is what Louis Pasteur meant when he said, "in the field of observation, chance favors the prepared mind"[7]—different frameworks of folk beliefs lead to different ways of understanding the same data. David Olson puts it this way: "Discovery is not merely a matter of hacking around until something interesting turns up. . . . Discovery relies more on the prepared mind than good luck. Discovery is the expression of theory-based exploration; it is premised on having a good idea of what to look for."[8]

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Religious belief involves many of the same issues as scientific discovery—people bring culturally based folk beliefs about God, themselves, and the world to the study of religious doctrine; the process and results of discovery when reading sacred texts depend in many ways on what people are prepared to find.[9] In our study of religious belief, we have been looking for evidence that folk beliefs and intuitions impact the way that believers acquire religious concepts. We recently examined some data from a study of almost 64,000 Seventh-day Adventist church members[10] from around the world that suggest that folk beliefs do indeed affect how easily we acquire religious concepts—and that folk beliefs develop in the context of the cultures in which we live.

BELIEFS ABOUT MIND-BODY DUALISM: A CASE STUDY

Many folk beliefs are relevant to understanding religion. One of these has to do with the whether there is a nonmaterial part of human beings that can exist apart from the body and can remain aware of and take action following a person's death—that is, an immortal soul. The idea that human beings are composed of separate—and separable—material and nonmaterial components is known in philosophy as *mind-body dualism.* Archeological evidence suggests that ancient human societies believed in an active afterlife, as evidenced by the burial of materials and tools that might be needed following death.[11] Research in the cognitive sciences indicates that most modern humans are also intuitive mind-body dualists.[12] Matthias Forstmann and Pascal Burgmer[13] report that when people were asked to engage in a wide variety of thought experiments about minds, bodies, and

souls, they were likely to consider mental properties separately from physical properties—especially when they were placed in situations where only some of their cognitive resources were readily available. Moreover, holding dualistic views or being encouraged to think in dualistic terms (that is, having a dualistic mindset) increases the likelihood that people will make decisions that neglect their physical health.[14] Thus, holding dualistic beliefs is not simply some sort of esoteric philosophical exercise; these intuitions are part of a worldview that shapes how people make everyday decisions.

Although mind-body dualism seems to be the default folk cultural belief for most people across the globe,[15] it is not the position that is taught by the Seventh-day Adventist Church. Adventists teach that human beings are an "indivisible unity of the body, mind, and spirit."[16] Thus, for Adventists, no separate, nonmaterial part of the human person can feel, think, or act following the death of the body. As one of the Adventist fundamental beliefs asserts, "until [Christ returns] death is an unconscious state for all people."[17] Given that most people on this planet are intuitive mind-body dualists, then, this would suggest that Seventh-day Adventist beliefs about the nature of the human person and the state of people following their death will run counter to the dominant folk beliefs and intuitions in most cultures. These counter-intuitive (relative to most cultural norms across the globe) beliefs provide an interesting test case for the effectiveness of doctrinal training in changing folk beliefs and intuitions.

Just as Isaac Newton struggled with escaping his intuitions about mechanics in order to adopt a new way of seeing the physical world, many Adventists struggle with changing from mind-body dualism to an integrated understanding of the human person. Across our global sample of church members, one-third of the respondents agreed or strongly agreed with the statement "the soul is a separate, spiritual part of a person and lives on after death." On the other hand, only 12 percent affirmed that "the dead have powers to communicate with or influence the living," while 19 percent thought that "people who have died believing in Christ are in heaven right now." However, almost 90 percent of those surveyed agreed with the statement summarizing the Adventist belief concerning the state of the dead that when people die, their bodily remains decay, and they have no consciousness or activity until they are resurrected.

This suggests that while Adventists recognize some of the straightforward and more concrete ideas that are part of doctrinal training on human nature and the state of the dead, the core intuitive belief in mind-body dualism is "sticky" and likely continues to influence how Adventists understand human nature—even as church members agree with basic statements of denominational belief. These background dualistic ideas are indicative of systems of general cultural folk beliefs that are constantly influencing the beliefs of church members in subtle ways.

When we looked at the distribution of beliefs about dualism across the globe, we found some evidence that their prevalence was related to intuitions in the surrounding national or regional culture. For example, there was a close positive relationship between the general level of religiosity in the culture and the prevalence of belief in mind-body dualism among Adventist church members. As most religions adopt some form of mind-body dualism, this suggests that some religious beliefs and practices might be more difficult to fully acquire in some cultural contexts.

We can illustrate this point with a very simple analysis that shows the substantial role that culture plays in the retention of mind-body dualism among some Adventist church members. In this analysis, we geographically grouped church members who had completed the survey into either country or regional groups.[18] We also calculated a broad measure of Adventist religious behavior that included attendance at religious gatherings, socialization with other Adventists, personal and family religious practices, and the impact of religious practice on daily life.[19] We were able to identify more than 70 geographical areas (countries or regions) in our study in which we had at least 50 church member responses for the dualism and religious-behavior items. We put the geographical areas in order by rates of belief in dualism and average levels of religious behavior, and compared those rankings to a very simple measure of the culture in each geographical area—the percentage of people in each area identifying as "non-religious"[20] (a proxy for the level of secularism in a culture).

Despite the simplicity of this variable, we found that the ranking of percentages of non-religious people within our defined geographical areas accounted for more than 25 percent of the variance[21] in the rankings of both rates of belief in mind-body dualism and levels of religious behavior. Areas with more secular cultures had lower rates of belief in mind-body dualism among Adventist church members, but also had lower rates of religious behavior among those church members. This indicates that culture can both facilitate religious learning (secular cultures may make it easier for Adventists to acquire the Adventist belief in mind-body integration) and interfere with religious learning (secular cultures may make it more difficult for Adventists to develop habits of religious practices).

Of course, the effects of culture on religious belief and practice are not fixed. Older Adventist church members were more likely to reject dualism (70 percent) than were emerging adults (48 percent)—with the percentage of church members rejecting a belief in dualism increasing progressively with older age cohorts.

We also examined this effect for individuals who identified as Adventist but had not yet been baptized,

and for cohorts of church members by number of years since baptism. We found that compared to individuals who had not yet been baptized (33 percent rejection of dualism rate), those recently baptized were more likely to reject mind-body dualism (48 percent rejection rate), and those who had been baptized for the longest period of time were even more likely to reject dualism (70 percent rejection rate). These patterns are consistent with the slow, steady effects of belief socialization and discipling in Sabbath school, church sermons, and church publications, resulting eventually in changed intuitions.

Jesus' mission in Matthew 4 is summed up in the concept of *metanoia*—re-examining everything about how a person thinks.[22] Key parts of Jesus' discourse[23]—and later the writing and preaching of the apostles[24]—focused on questioning intuitions and cultural folk beliefs that were blocking people from accessing the power of God's kingdom. Our work on the prevalence of belief in mind-body dualism among Adventist church members suggests that these concerns are still relevant for the church. The call of Revelation 18:4 to "come out of [Babylon], my people" (KJV) can find an application in a continuing appeal to believers to examine the hidden intuitions and folk beliefs that exert a silent but persistent influence on how we understand our religious beliefs, practices, and relationships.

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3. Daniel Reisberg, David G. Pearson, and Stephen M. Kosslyn, "Intuitions and Introspections About Imagery: The Role of Imagery Experience in Shaping an Investigator's Theoretical Views," *Applied Cognitive Psychology* 17:2 (March 2003): 147-160. doi:10.1002/acp.858.
4. Claire M. Zedelius, Barbara Müller, and Jonathan W. Schooler, eds., *The Science of Lay Theories: How Beliefs Shape Our Cognition, Behavior, and Health* (New York: Springer, 2017).
5. Paschal Boyer, *Minds Make Societies: How Cognition Explains the World Humans Create* (New Haven: Yale University Press, 2018).
6. Ibid., 122.
7. In his December 7, 1854, inaugural speech at the new Faculté des Science at Lille, Pasteur is quoted by Vallery-Radot as making this statement during a discussion of the importance of theory for invention in the case of the electric telegraph. The original French reads, "dans les champs de l'observation, le hasard ne favorise que les esprits préparés" (René Vallery-Radot, *La Vie de Pasteur* [Paris: Librairie Hachette et Cie, 1903]).
8. David R. Olson, *Jerome Bruner, The Cognitive Revolution in Educational Theory* (London: Bloomsbury, 2007), 9.
9. John 5:37–43.
10. We use the term "church members" throughout to refer to people who identify as Seventh-day Adventist, whether or not they have been baptized. While we recognize that baptism is a prerequisite for membership in the Seventh-day Adventist Church, the impact of identification with the church on belief and practice often precedes baptism.
11. Hervey C. Peoples, Pavel Duda, and Frank W. Marlowe, "Hunter-Gatherers and the Origins of Religion," *Human Nature* 27 (September 2016): 261–282. doi:10.1007/s12110-016-9260-0.
12. Matthias Forstmann and Paschal Burgmer, "Adults Are Intuitive Mind-body Dualists," *Journal of Experimental Psychology: General,* 144:1 (February 2015): 222-235. doi:10.1037/xge0000045; K. Mitch Hodge, "On Imagining the Afterlife," *Journal of Cognition and Culture* 11:3–4 (January 1, 2011): 367–389. doi:10.1163/156853711X591305.
13. Ibid.
14. Paschal Burgmer and Matthias Forstmann, "Mind-body Dualism and Health Revisited: How Belief in Dualism Shapes Health Behavior," *Social Psychology* 49 (2018): 219–230. doi:10.1027/1864-9335/a000344; Matthias Forstmann, Paschal Burgmer, and Thomas Mussweiler, "'The Mind Is Willing, but the Flesh Is Weak': The Effects of Mind-body Dualism on Health Behavior," *Psychological Science* 23:10 (2012): 1,239–1,245. doi:10.1177/0956797612442392. We replicated this pattern in our data. The relationship between belief in mind-body dualism and the belief that a person can choose which aspects of healthy living must be followed correlated positively in the Global Church Member Survey (r = .23).
15. Paul Bloom, *Descartes' Baby: How the Science of Child Development Explains What Makes Us Human* (New York: Basic Books, 2004).
16. Seventh-day Adventist Fundamental Belief No. 7: Nature of Humanity: https://www.adventist.org/en/beliefs/humanity/nature-of-humanity/.
17. Seventh-day Adventist Fundamental Belief No. 26: Death and Resurrection: https://www.adventist.org/en/beliefs/restoration/death-and-resurrection/.
18. The Global Church Member Survey contained information about union conference, union mission, or other union-level administrative unit for each case in the data set. When possible, we matched that data to countries for comparison with other international data sets—otherwise, we created regions defined by countries within the union and aggregated data in other international data sets weighted by population within those countries. We thank David Sherman for his assistance in creating these geographical definitions.
19. We also worked with David Sherman to develop this analysis for a separate study of the influence of Adventist religious practices on well-being across the globe.
20. Davis Brown and Patrick James, contributors, "Religious Characteristics of States Dataset Project - Demographics v. 2.0 (RCS-Dem 2.0), COUNTRIES ONLY" (February 19, 2019). doi:10.17605/OSF.IO/7SR4M.
21. Spearman's rank-order correlations were -.52 for the relationship between percent of non-religious individuals and the rate of belief in mind-body dualism, and -.65 for the relationship between percent of non-religious individuals and the average level of religious behavior. 73 and 71 geographical areas were included in the correlations respectively—differences in the number of areas were due to the number of areas with at least 50 church member responses contributing to the score for that geographical area. People who believed in dualism were more likely to have higher levels of religious behavior; when we controlled for one variable (e.g., belief in dualism) when assessing the relationship to secularism with the other variable (e.g., religious behavior), the relationships were slightly weaker, but still accounted for more than 20 percent of the variance for each variable (a substantial effect for a bivariate relationship in the social sciences).
22. The verb *metanoeō* is translated as *repent* in most English translations, but the colloquial understanding of *repent* as "feel sorry" obscures the breadth of Jesus' mission as revealed in the Gospels.
23. See, for example, Mark 8:11, 12; John 3:1–21; John 9; Matthew 13:14, 15; Mark 4:12; Luke 8:10; and John 12:40.
24. See, for example, Romans 3:9–20; 1 Corinthians 1:18–25; 1 Corinthians 2:6–16; 1 Peter 1:13, 14; James 1:13–15.