

MIND-SOCIETY
From Brains to Social Sciences and Professions

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Chapter 8
Anthropology: Religion

Draft 2, 15OC2

Anthropology

Anthropology is the study of humans, covering the comparative study of cultures and the physical basis of human evolution and ecology. Historically, anthropology differs from sociology, politics, and economics by greater concern with cultures other than Western industrial society. Many anthropologists have tried to understand these cultures by the method of participant observation, placing themselves in societies for extended periods of time to understand local beliefs and practices. Cultural anthropologists investigate such topics as language, family, health, work, agriculture, and education. Physical anthropologists consider the relevance of human biology and evolution to understanding the abilities of humans to adapt to their environments.

Since cognitive science became organized in the 1970s, anthropology has been counted as one of the contributing disciplines, along with psychology, neuroscience, philosophy, linguistics, and artificial intelligence. In recent years, psychologists have paid increasing attention to cultural differences in thinking and acting. Psychology has been criticized for only studying people from WEIRD societies, ones that are Western, industrial, educated, rich, and developed. But social psychology is acquiring many interesting findings about how people in different cultures think differently about other people and their environments.

November 3, 2015

In contrast, cultural anthropology has largely ignored the potential of the study of cognition and emotion for illuminating social patterns and practices across cultures. Like sociologists, anthropologists prefer social descriptions to mechanistic explanations based on cognitive processes. This chapter shows the relevance of cognitive and emotional processes to anthropology by applying them to understand the widespread cultural practices of religion. I propose a social cognitive-emotional workup of one of the fastest rising religions in the world, the Church of Jesus Christ of Latter-day Saints, or Mormons. The social changes that I want to explain include the rise and fall of particular religions, and also changes in the general prevalence of religion in society.

Religion

Religion is often cited as a cultural universal, but there are some cultures, such as the Pirahã people of the Amazon, who have no religious rituals or beliefs in supreme spirits. Among the 7 billion people in the world today, more than 1 billion have no religious association. But that statistic leaves 6 billion people who do, including the big four of Christianity, Islam, Hinduism, and Buddhism. So religion is a major part of human culture, and many social changes are closely tied to the rise and fall of different religions. For example, when Muhammad started Islam in the seventh century, it quickly rose to become a prominent world religion with more than 1 billion adherents and strong political influence in many countries.

What is religion? A definition in terms of necessary and sufficient conditions would quickly find itself swamped with counterexamples and circularities, so a 3-analysis is more informative. Table 8.1 presents exemplars, typical features, and explanations for the concept of religion.

<i>Exemplars</i>	Christianity, Islam, Hinduism, Buddhism, Judaism, etc.
<i>Typical features</i>	Institutions like churches with prophets and leaders, stories and beliefs about supernatural agents, sacred texts, values and morals tied to supernatural agents, rituals, social norms
<i>Explanations</i>	Explains: individual behavior, social cohesion, powerful organizations Explained by: cognitive and social mechanisms

Table 8.1 3-analysis of *religion*.

In table 8.1, the standard examples of religion include Christianity, Islam, Hinduism, and Buddhism, and possibly Judaism even though it has comparatively few members. Within these religions, there are major subdivisions, such as between Catholic and Protestant Christianity, and between Sunni and Shia Islam. Further subdivisions include many Protestant variants and many Sunni variants. People may disagree about the essential features of religion, but no one denies that these are central cases of it.

The typical features of a religion include: church-like institutions, stories and beliefs about supernatural agents such as gods and angels, texts about these agents, values that provide moral guidance, rituals and prescribed practices, and prophets who are sources of stories and texts. Trying to turn these features into a definition that provides necessary and sufficient conditions would founder on counterexamples such as native religions that are scarcely institutional and lack literary texts, and Buddhism for which gods are of minor importance. Nevertheless, features such as institutions and gods are

found in many religions and are causally important for explaining their actions and successes.

A church is an institution, an organization of people bound together by rules that prescribes the continuation of beliefs and practices. Churches typically have religious leaders such as priests, ministers, rabbis, and imams. Through buildings such as temples and mosques, they provide places where people can meet and interact, under the guidance of the leaders. Often the leaders trace their authorities back to prophets such as Isaiah, Muhammad, or Gautama Buddha.

Religions generally propagate a set of beliefs about supernatural agents and worldly origins. Most religions have creation myths about how gods produced the Earth and the people on it. Most religions are polytheistic, as in the dozens of gods of the ancient Greeks and Romans, but monotheism has become predominant through the successes of Christianity (more than 2 billion people) and Islam (more than 1 billion).

Religions concern not only beliefs but also values that guide behavior and establish social norms. The values may be exhibited by specific rules such as the 10 Commandments of Christianity, but may also be captured by normative concepts such as *piety*, *fidelity*, and *humility*. The texts of the religion and the spoken and written words of the leaders and prophets provide moral prescriptions and advice. Like political ideologies, religious ideologies are systems of ideas and values, but differ in their subject matter: concern with supernatural agents rather than forms of government. The ideology of the Islamic State examined in chapter 6 is both political and religious.

Finally, religions typically have rituals, recurring procedures and ceremonies that mark important events such as birth, marriage, death, and worship. Rituals are behaviors

that gain their meaning from background beliefs and behaviors, for example when people go to church to pray in standard ways to display and reinforce their beliefs. Religions vary in the relative important of beliefs and practices. For some religions such as Judaism and Buddhism, practices are more important than adherence to creeds, whereas Christianity and Islam require agreement with doctrines.

The concept of religion has many explanatory uses, for both individuals and social groups. Religion can explain numerous aspects of individual psychology and behavior, such as why some people pray every day and go to church every week. At the social level, religion explains the existence of groups based on their social cohesiveness that derives from common beliefs and ongoing interactions. Religion also accounts for the existence of many moral codes, although philosophers since Socrates have disputed whether religion is actually required for morality.

Much more contentious is the question of what explains religion. A later section will consider various answers, ranging from divine intervention to genetics to epidemiology. My own answer will be that the development of religions is multilevel emergence from identifiable cognitive, emotional, and social mechanisms.

There is now an established field, the cognitive science of religion, that brings together psychologists, philosophers, anthropologists, and others who want to use the resources of cognitive science to answer questions about religious beliefs and practices. I will show that semantic pointer theories of cognition and communication have much to contribute to the understanding of why religion is so important in many human cultures, beginning with a case study.

The Mormon Religion

Mormonism, officially called the Church of Jesus Christ of Latter-day Saints, originated in Western New York state in the 1820s, when a young farmer named Joseph Smith began to experience visions. He later claimed that he encountered an angel named Moroni, who presented him with gold tablets written by Moroni's father, Mormon. Smith was given a key to translating the tablets and produced the Book of Mormon, which provides a historical account of how North America was settled in 600 BC by Jewish tribes who were later visited by Jesus Christ.

Smith's stories and writings convinced his family and a growing number of neighbors that his book was the basis for the correct form of Christianity. By 1847 the new sect had tens of thousands of members and began the huge trek to settle in Utah under the leadership of Brigham Young, who replaced Smith who had been killed by an angry mob. The Mormons flourished in Utah and have grown worldwide to include more than 15 million members. Figure 8.1 shows the dramatic increase in the number of adherents to the church over the last 200 years. The church now has members on all continents, making it the first new world religion since Islam arose in the 7th century.



Figure 8.1 Growth in membership in the LDS Church.

Proponents, defenders, and scholars of the Mormon church debate whether it is a form of Christianity or a new religion. The question is difficult because Mormons have many beliefs in common with other Christian groups, such as that Jesus Christ is the son of God. But they also have beliefs and practices that are novel to their own institution. Rather than answer this question, my concern is to understand the nature and success of the Latter-day Saints by performing a social cognitive-emotional workup.

Concepts and Values

The Mormons have many concepts and values in common with Christianity such as God, the Bible, Jesus Christ, prophets, and saints. But they also add new representations such as the Book of Mormon, the Church of Jesus Christ of Latter-day Saints, and Joseph Smith. Figure 8.2 is a value map of some of the most important Mormon mental representations, showing the important interconnections arising from Joseph Smith's vision and organization.

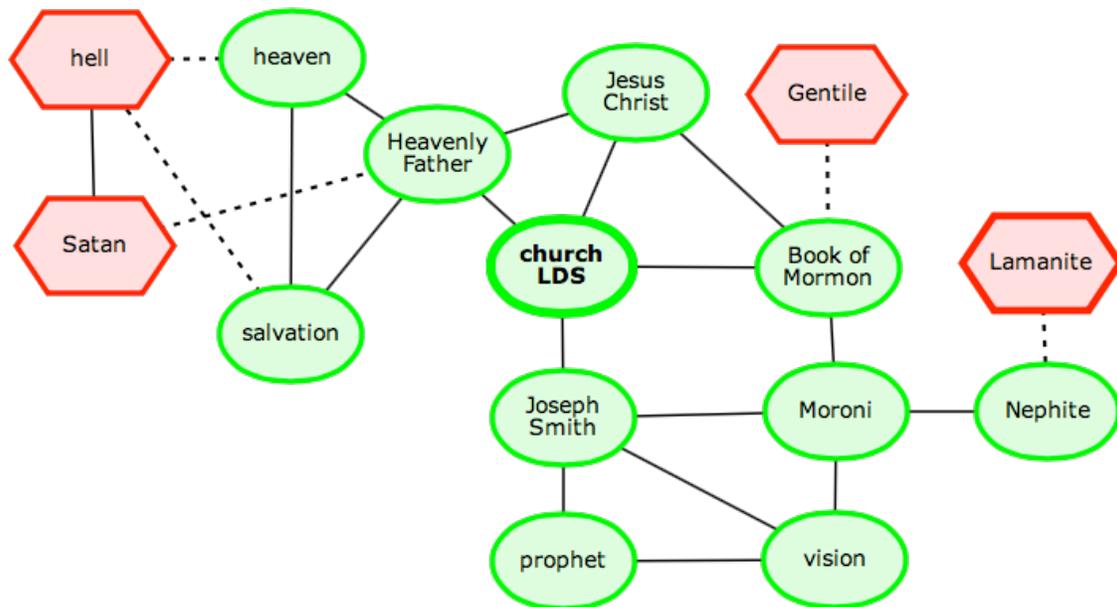


Figure 8.2 Value map of Mormons.

Central to the map is the church of Jesus Christ of Latter-day Saints. Whereas in Christianity saints are rare and mostly ancient, any member of the church in good standing can be taken as a saint, where “latter-day” means modern in contrast to ancient. The church is positively associated with its founder and prophet Joseph Smith, and with the book of Mormon which he translated from the tablets given to him by Moroni. Being a member of the church and becoming a saint provides salvation which gets you to heaven and enables you to avoid suffering in hell. Mormons generally refer to God as “heavenly father”.

Joseph Smith was the first prophet of the church but subsequent leaders are also judged to be prophets, from Brigham Young to the current president. Prophets are capable of having revelations that reveal the essence of reality. Revelation is an important concept because it is the basis for the truth and authority of the church and its documents.

Mormons use the term “gentile” to refer to all non-Mormons, including Jews. Whereas critics of the church have considered Joseph Smith to be either a madman or a fraud, Mormons revere him for founding the church. They assign the same moral centrality to the Book of Mormon and other documents he produced that Christians assign to the Bible and Muslims assign to the Quran. Nephites are the ancient tribe of Israel who came to North America centuries before Jesus, but who were defeated by another tribe, the Lamanites, whose descendents are the American Indians, according to Smith. Moroni and Mormon were among the last of the Nephites. The positively valued representations shown by ovals in figure 8.1 provide a highly coherent and interconnected set that contrasts with the despised ones shown by hexagons.

A Christian or Muslim who converts to Mormonism must undergo substantial conceptual change. New representations such as *Book of Mormon* and *sealing* (a marriage ritual) must be added to their minds, and old concepts such as *prophet* and *saint* must be modified to include many more kinds of people including the current leaders and members of the LDS church. Most important, representations must be revalenced to acquire new emotional values, so that the church and Joseph Smith become intensively positive. Because Mormons who are exalted to heaven become godlike, the former distinction between gods and humans is undermined, a form of conceptual change called coalescence.

Images and Embodiment

Although concepts such as *church*, *prophet*, and *salvation* are too abstract to be reduced to sensory inputs, the mental representations of the Mormons are not only verbal. Visual images also contribute to the thinking of leaders and ordinary members, dating back to Joseph Smith's visions of meeting with God and Jesus in 1820, and later with Moroni. Figure 8.3 is a typical depiction of this vision used by Mormons in history books and children's books. This image makes Moroni seem like a real historical figure, not a fictional character. The gold plates that Moroni provided to Joseph Smith for translation similarly operate as visual images shown in pictures, useful since the plates were given back to Moroni after only a few associates of Joseph Smith had seen them. Other visual images that contribute to the stature of the Church of Latter-day Saints are the many imposing and architecturally impressive temples in which members worship. Many temples are capped by a statue of Moroni blowing a trumpet.



Figure 8.3 Picture of Joseph’s Smith vision of meeting Moroni.

Blowing the trumpet is also an auditory image, with the sound of the trumpet serving as a metaphor for the spreading of the gospel. Singing has played an important role in Mormon practices from the beginning, and the large and famous Mormon Tabernacle Choir originated in 1847. Mormons sing hymns that melodically are similar to Christian hymns but with unique lyrics reflecting Mormon doctrine such as Joseph Smith’s first vision. Hymns are therefore multimodal, combining the sound of music, verbal descriptions, visual images, and mouth movements.

Mormons are told to expect to experience a “burning in the bosom”, an intense feeling claimed to result from a visit by the Holy Spirit. This burning is a pleasant feeling that may result from attending rituals, singing hymns, or just thinking about the church. It is partly a bodily image reflecting a good feeling in the chest, but also indicates an emotional experience like those discussed below. Another kinesthetic image comes from laying on of hands, which is commonly used in various rituals such as confirmation. Similarly, baptism for Mormons requires total immersion in water with a person being held by a priest, generating kinesthetic experiences. These practices also generate visual images when people observe priests performing the rituals.

Through these sensory images and ritual practices, Mormonism is embodied, although with many transbodied components through concepts like *God* and *prophet*. Another aspect of embodiment arises because of the physiological component of emotions that is important for confidence in the church and its leadership and for religious experiences such as the burning in the bosom.

Beliefs and Rules

Mormons share many beliefs with mainstream Christians, such as that Jesus Christ is the son of God and that the Bible is the word of God. But they also have many beliefs rejected by other churches such as that Joseph Smith is a prophet who translated the book of Mormon originally written by Nephites. Mormons believe that individual humans existed before birth, and that our status in this life depends on how righteous we were during the pre-existence of life before birth. Similar beliefs are found in Hinduism and ancient Greek philosophy, but not in Christianity. For Mormons, salvation depends on knowing Christ, knowledge that can only be gained through the LDS priesthood. Exaltation to heaven involves a whole family, not just an individual, and allows exalted humans to become god-like.

Central to Mormonism is a belief about belief: the primary reliable source of knowledge is revelation to prophets as documented in holy books such as the Book of Mormon. Rarely, revelation can lead to changes in official doctrine, such as the 1890 decision to abandon the practice of polygamy and the 1978 decision to allow blacks as priests. The belief in polygamy, which is still held by some fundamentalist splinter groups, was instituted in 1852 by Joseph Smith, who had more than 20 wives, some of whom were also married to other men. Brigham Young had more than 50 wives. The

abandonment of polygamy was required for Utah's admission to the United States, but was justified solely by a revelation to the presidential prophet of the day.

Some of the Mormons' general beliefs are in the form of rules such as: *if the president of the church says something, then it must be true; if you follow the principles and practices of the LDS church, then you will be saved and go to heaven.* The practices are codified in rules that tell people what they must do in order to remain Mormons. Here are some examples. If you are not married, then do not engage in any sexual activity including masturbation and pornography. If you are a male over 19, then spend two years doing missionary work. If you are Mormon, then do not drink alcohol or coffee. If you are married, then do not divorce. If you have a job, then tithe 10% of your income to the church. If you are old enough to go to the Temple, then wear special undergarments at all times. These rules constitute social norms with which Mormons feel obliged to comply.

Like all institutions, the LDS church is an organization of people directed by rules that operate in the minds of members to ensure that they act in accord with Mormon principles and sustain the institution. As established by Joseph Smith, the LDS church is highly hierarchical, with the presidential prophet at the top assisted by two counselors. Below them is the quorum of the 12 apostles and next is the quorum of the 70 who oversee the church's local leaders including bishops. All of these leaders are priests, and therefore male. Detailed rules govern the methods by which people ascend to the leadership.

Some of the descriptive and normative rules are multimodal in that they involve sensory, motor and emotional representations. The descriptive rule *if you believe, then you will feel a burning in the bosom* has a nonverbal component because of the positive

bodily feeling that it mentions. On the other hand, Mormons are taught that if they violate the principles of the church, then they will feel uncomfortable, guilty, and ashamed, all of which have substantial physiological components. Prescriptive rules about how to perform rituals involve bodily movements such as laying on of hands. Like all religions, Mormonism employs rules that are best understood as cognitive-emotional mental representations.

Analogies and Metaphors

The most important analogy in the Mormon church is between it and the early Jews and Christians. Joseph Smith is taken to be a prophet whose revelations express the will of God, just like prophets in the Bible. The Book of Mormon is analogous to the Bible both in its authoritativeness and its style: Joseph Smith's writing sounds a lot like the King James version of the Bible, with frequent occurrences of “verily” and “it came to pass”. Mormons think of their great trek to Utah as analogous to the Jewish exodus from Egypt, with Brigham Young corresponding to Moses.

Like other systems of thought, Mormons rely on metaphors to capture their beliefs and activities. Leaders refer to ordinary people as their flock, like sheep to be tended by a shepherd. LDS history often use the motif of light breaking into darkness, as in Joseph Smith’ vision of Moroni. The name “heavenly father” commonly used by Mormons for God invokes the Christian metaphor of God as a caring parent.

Emotions and Actions

The Mormon church engages people's emotions in many ways. The 1820s when Joseph Smith started it were times of great uncertainty, but the strong, confident leadership of the church provided comfort and reassurance. With conversion and

adherence, anxiety about the future gives way to the happy conviction that salvation can be gained by following the precepts of the church. People get to enjoy the pleasant, confident feeling that comes with the burning in the bosom. Because Mormons are not allowed to divorce, people can feel secure in their families and their celestial future.

Sticking with the church alleviates two kinds of fear, of an eternity of torture in hell, and of social isolation that would result from abandoning family, friends, and acquaintances. People who leave the church are viewed as apostates, a status even more negative than Gentile, analogous to how Islamic extremists view apostates as even worse than infidels. Like other forms of Christianity, Mormonism offer the attractive prospect that forgiveness by God can alleviate guilt about past wrongdoings. For Joseph Smith and subsequent Mormon leaders, feelings are information about what God wants and what should be done.

Membership in the LDS church provides many specific positive emotions. People are happy that their eternal lives, marriages, and social structures are secure. The emotional mechanism of attachment-based learning ensures that children will acquire the values and emotional attitudes of their parents, teachers, and religious leaders. From the age of 12, children are questioned individually by bishops about their sexual practices of masturbation and pornography. Even thinking about breaking the commands of the church can make people unhappy. Men who ascend in the priesthood can feel pride in their accomplishments and their contributions to the church. All members can feel gratitude for what the church provides, which includes financial and social support when people encounter hard times.

People gain emotional energy from their religious confidence and from the ongoing interactions with like-minded people. The Mormon church demands many actions from its members, including the missionary activities of young men, many weekly social activities, and participation in unusual rituals described below. Strong emotions such as attachment to the church, pride, and fear of disapproval cause people to believe in Mormonism and to act in accord with its rules. Mormons are urged to follow their conscience, described metaphorically as the light of Christ, which brings forgiveness and peace in contrast to the negative emotions of remorse and guilt.

Mormons are encouraged to trust in God, their leaders, and each other. Chapter 4 argued that trust is a brain process that binds representations of self, other, situation, and emotion into a semantic pointer. Then trusting in God is a positive emotion that includes representations of the individual and the heavenly father. Similarly positive feelings of trust in leaders and members that derive from them all being part of the same church are supported by rituals described below. Missionaries are told to try to get prospective converts to trust them by displaying caring and empathy.

Through this rich complex of positive and negative emotions and resulting actions, the LDS church makes its members feel good about themselves and the church, which helps to make it attractive to prospective converts. Hence emotions are a major part of the answer to the question addressed below of why the church has grown so rapidly and spread around the world.

Inferences

Like other religions, Mormonism supports and is supported by various deductive, abductive, and emotional inferences. The strict principles of the Mormon church license a

variety of deductive inferences such as the following. Whatever the church leader says is true. The church leaders says that blacks can be priests. Therefore blacks can be priests. Apostasy and sex outside marriage are always wrong. Such unambiguous moral rules can make proper behavior a simple matter of making deductive inferences, if you accept the premise that the church is always right.

Mormon beliefs and practices can also be supported by abductive inferences. The Book of Mormon provides a novel explanation of the origins of American Indians as a lost tribe of Jews, the Lamanites. So Mormonism got abductive support in the nineteenth century by its ability to explain something puzzling. People were impressed by Joseph Smith's feat of dictating the Book of Mormon without hesitation, and thought that the best explanation was indeed that he was translating from the gold plates provided by Moroni, rather than just making it up. Opposition to the LDS church can be explained by assuming that critics simply have not had a chance to appreciate the power and cogency of the Mormon story. Members of the church are encouraged to make inter-agent inferences about the intentions of God, leaders, and other members.

Above all, Mormonism is supported by emotional coherence, when people perceive its doctrines and practices as fitting with their desires and fears. In place of the uncertainty and anxiety common in the 1820s and today, the church offers certainty and eternal happiness. People can naturally infer that continuing membership in the church will contribute to their goals of social solidarity and economic security in this life, and the eternal happiness in the afterlife. Motivated inference is not just wishful thinking where people believe something because they want to, but requires recruitment of memories and other evidence to support the desired belief. People are able to incorporate large amounts

of information about Joseph Smith, the Book of Mormon ,and practices of people they know into a coherent story about how being a Mormon will improve their lives.

Fear-driven inference also encourages belief in the LDS church because worries about personal lives and death make people focus on the strong claims that the church makes about what is required to achieve eternal reward. People may not want to be missionaries, attend many church ceremonies and events, and donate 10% of their income to the church. But they are sufficiently worried about their everyday and eternal lives to focus on what the LDS church offers with respect to beliefs and practices. Fear-driven inference makes people intensely concerned about their futures, and motivated inference addresses the concern by offering salvation through the church.

For Joseph Smith's early followers and for modern-day converts, adopting the Mormon faith is an emotional gestalt shift. Conversion replaces the uncertainty and anxiety of a chaotic world with an all-encompassing worldview of facts and values. Like the Islamic state ideology described in chapter 6, Mormonism offers an emotionally coherent solution to problems about what to believe and what to do.

Communication

The cognitive anthropologist Dan Sperber compares the study of cultural transmission to epidemiology, which looks at the spread of diseases. As with other biological metaphors criticized in chapter 7, this comparison underestimates the complex mental and social processes by which mental representations move from the minds of some people to the minds of others through communicative interactions. The ways that people come to acquire the concepts, values, and beliefs of others are very different from the ways in which germs such as viruses invade the human body. The semantic pointer

theory of communication allows much closer examination of the spread of religious and other cultural ideas.

Although the Mormon church invests enormous resources in missionary efforts, relatively few new members come from this route. The Mormon church encourages more subtle means of conversion in which established Mormon families watch for new families in their acquaintance who might be open to recruitment. Following a specified pattern provided by the church, Mormon families are encouraged to befriend the new family in an area and only gradually indicate that they are Mormon and how the church improves their lives. Besides these two kinds of conversion, a third method by which the Mormon church grows is through having large families and ensuring that their children maintain Mormon beliefs and values.

How are Mormon beliefs and values transmitted in these three methods of proselytizing and child-rearing? Conversion works partly by telling people about Joseph Smith and the Book of Mormon, with communication that is both verbal and nonverbal through the inclusion of inspiring pictures. Just as important is the transfer of values and emotions, convincing hearers to adopt the attitudes of the proselytizers. The conviction and enthusiasm of Mormons can be conveyed to newcomers through a variety of nonverbal means, including tone of voice, facial expressions, and body language. Once Mormon missionaries are through the door, their sincere excitement can inspire listeners to think about ways in which the Mormon way of life can help to provide solutions to their own personal problems as well as their worries about death.

The major function of communication with nonbelievers is to provide them with the Mormon's emotionally coherent system of beliefs and values. Communication is

unavoidably slow and serial, with hearers gradually being exposed to the fundamental doctrines and practices of Mormonism. But emotional contagion via unconscious mimicry of facial expressions and body language can lead prospective members to become interested and eventually adopt the values held by missionaries and parents. For teaching children, the social mechanism of attachment-based learning helps to pass values from parents to the next generation. Conversion by missionaries and friends can be made more effective by empathy in which the Mormons become appealing by identifying with difficulties faced by the potential convert.

Conversion is only superficially like disease transmission, because people's brains are far more complicated than cells that can be invaded by viruses. Rather, mental representations are complex patterns of neural firing that integrate sensory, motor, and emotional information as well as verbal beliefs. Spread of ideas requires transferring, prompting, and instigating semantic pointers, not infection or contagion.

Once people are raised as or converted to be Mormons, many forms of communication serve to ensure their pious continuation. The church encourages intense participation in numerous gatherings that include many community activities as well as weekly religious services and regular family prayer. Church officials hold substantial powers over members because of the threats of disapproval, excommunication, eternal damnation, and social abandonment. As chapter 3 described, the social mechanism of power can motivate people to adopt beliefs and emotions both by fear of punishment and by the prospect of personal and social benefits of compliance.

Members of the LDS church are encouraged to make frequent public testimonies about their beliefs in the fundamental doctrines of the church. Engagements in church

activities also attest to this commitment. Through both their words and actions, people communicate to other members their commitments to the church. The point of messages from the leaders and among the members is to increase the perceived emotional coherence of the religion. People are told about and perceive the daily and heavenly advantages of the church, fostering their motivated inferences that the church really is a solution to their problems. Threatening communications about what will happen if people abandon the church incite fear-driven inferences that feed into motivated inferences about how the church can provide a solution to anxieties about daily and eternal life.

A major form of religious communication is ritual, which requires special attention because of the way in which it combines values, embodiment, and emotion.

Rituals

Anthropologists agree that rituals are important in cultures, but debate how to define the concept. As with religion, it is difficult to find the set of necessary and sufficient conditions for rituals because they vary so much across cultures. But table 8.2 provides a 3-analysis that captures how most anthropologists discuss religious rituals. Everyone agrees that baptisms, church services, and weddings are good examples of rituals even if not all rituals share exactly the same set of features.

Typically, rituals have agents such as priests performing actions on recipients such as church members, for example when a Mormon leader baptizes a child or convert. Rituals often are designed to have effects on the recipients, which may include supernatural agents as when priests perform sacrifices to appease the gods. Rituals of different kinds have expected frequencies, ranging from daily for prayers to once in a lifetime for baptism. Rituals can have emotional significance for agents and recipients,

for example when weddings reinforce commitments and increase trust, in line with values such as that marriage is desirable. Rituals typical require bodily movements such as hand blessings along with verbal communications including chants and songs. Various physical instruments can contribute to rituals, from the water used in baptism to special garments used in the Mormon endowment ritual.

<i>Exemplars</i>	church services, baptisms, weddings, funerals, observing holidays, regular prayer, etc.
<i>Typical features</i>	Agents performing actions on recipients with anticipated effects, expected frequency, emotional significance, associated values, bodily movements, modes of social communication, instruments.
<i>Explanations</i>	Explains: individual behavior, social cohesion, emotional transmission Explained by: cognitive and social mechanisms

Table 8.2 3-analysis of *religious ritual*.

The concept of ritual is anthropologically valuable for explanatory as well as descriptive purposes. It helps to explain why people do unusual activities such as getting together to watch babies get wet. Rituals are also important for explaining the social bonds among people who are connected through a church, by virtue of the sharing and transfer of emotions. The accomplishment of these functions is explained by the combination of cognitive mechanisms such as emotional inferences operating in individuals with social mechanisms such as the interactions of church members during rituals. Rituals are social mechanisms interdependent with cognitive mechanisms in individuals, who may believe that they are interacting with supernatural agents as well as

with people. Rituals are embodied through physical motions, sensory pageantry, and emotional effects; but also transbodied through their invocation of non-observable deities and mental states. The elicitation and transmission of emotions combines changes in physiological states through actions and cognitive appraisals provided by church doctrines and interpretations. Even regular rituals such as weekly worship can have emotional effects such as commitment and reassurance.

Mormons have many of the rituals practiced by other churches, such as daily prayers, weekly church services, blessings, and recognition of births and weddings. But they also have a set of rituals unique to Mormonism including the following.

Marriage is celebrated by a ceremony of sealing, in which couples affirm eternal commitments. Marriage is not only a relationship in this life but a crucial part of salvation for the next. According to 19th-century Mormons and current fundamentalists, plural marriage is essential for salvation. Some current sects maintain that a man requires sealing with at least three wives to be eligible for heaven. But even for mainstream Mormons, sealing is a private ceremony open only to members of the church.

The Mormon endowment is a set of rituals that prepares people for being priests and leaders of the church. It is experienced by men before they undertake missionary work and by women before they become married. The endowment can also be repeated on behalf of deceased individuals. Here is a description of the endowment from an LDS website:

The Mormon Endowment includes four basic aspects. One is a preparatory ordinance of ceremonial washing and anointing, and dressing in sacred temple garments or so-called "Mormon underwear," plus temple robes,

always white as a symbol of purity and equality between everyone in attendance. Another aspect is a course of instruction that features the creation of the world, some of the experiences of Adam and Eve, and the plan of salvation or redemption available to every human thanks to the sacrifice of Christ. Covenants constitute yet another aspect of the Endowment: Mormons solemnly promise the Lord to be obedient, giving of self, chaste, and loyal to the restored Church of Christ and its cause; in return, God is enabled to fulfill promised blessings of joy, protection, progress, and eventual return to His glorious presence. Finally, temple visitors can actually feel a degree of divine presence even now, for Mormon temples are specially dedicated as places of holiness, of light, of peace and revelation and understanding.

Thus the endowment ritual integrates beliefs such as salvation, actions such as anointing, and emotions such as joy.

Another unusual Mormon ritual is baptism for the dead, the practice of baptizing a person on behalf of a deceased person who never had the opportunity to be baptized. Mormons are baptized just once when they are eight years old or when they convert, but Mormon temples also perform regular ceremonies in which people stand in for dead people. Hence the baptism ceremony and all the beliefs and emotional commitments that go with it can be repeated as a communicative social gathering much more frequently than in mainstream Christianity.

Along with all the more common practices of collective prayer, temple services, and preaching, these rituals provide powerful vehicles for emotional communication.

Sealing, endowment, and baptism of the dead are all occasions that reinforce the beliefs and values of the church in individuals through interactions with others. Verbal and nonverbal interactions help to ensure that individuals will maintain their Mormon convictions and continue to share them with others. With the abandonment of plural marriage, the sealing ceremony is usually a one-time event for most couples but many other church members can participate when a couple is sealed, reinforcing or anticipating their own sealings. Repeated endowment and baptism ceremonies provide further occasions not found in other religions for strengthening beliefs and attitudes.

Unlike Scientology, the Church of Jesus Christ of Latter-day Saints was not designed by a science fiction writer to draw people in. But it has developed effective ritual practices that help to convince millions of people of its ongoing value. Like missionary work, rituals that are costly in time and money send signals to other people and also to members that Mormons are serious about their religion. Costly signals generate abductive inferences: the best explanation of why Mormons expend so much on their religion is that they really believe in its truth and value. Rituals serve to establish social norms about what to believe as well as what to do.

Performances are based on multimodal rules that can be expressed in words such as *if you baptize people, then immerse them in water*. But a more accurate expression is the semantic pointer rule $\langle \textit{baptism} \rangle \rightarrow \langle \textit{immerse} \rangle$ that can capture the motor action and visual appearance of immersion, as well as the positive emotional value of the whole rule and the concept of baptism. Rituals help to establish mutual trust and tighter social bonds by increasing emotional communication that in turn increases people's willingness to participate in rituals. Rituals can work through molecular processes such as the

dopamine surges that accompany religious ecstasy, and the cortisol reductions that accompany the calming of prayer and meditation. In sum, rituals are social mechanisms that have effects on the minds and behaviors of participants through interactions that draw on cognitive, emotional, neural, and molecular mechanisms to produce multilevel emergence of properties of individuals and groups.

Why is the LDS Church Successful?

The LDS church has grown from a few associates of Joseph Smith in the 1830s to a worldwide organization with more than 15 million members. Its numerical success has depended on three factors: having abundant children and raising them to be Mormons, converting people newly exposed to the religion to become Mormons, and retaining members. What are the neural, mental, and social mechanisms responsible for this growth?

One possibility is that people become Mormons because of rational choices. Once provided with relevant information about the church, people decide that the best way for them to maximize their expected utility is to become members. People realize that, given their preferences, they should join the church. This explanation is both shallow and implausible. It is shallow because it does not say anything about where converts' preferences come from, or about what the Mormon church contributes to their utilities. It is implausible because conversion is rarely a matter of deliberate calculation in which people assess the costs and benefits of joining a church compared to the alternatives of joining a different church or remaining unaffiliated. An exception might occur when a prospective spouse converts primarily to make a marriage work.

An alternative explanation, along the lines of the social constructionism popular in some social sciences, is that the rise of Mormonism is the result of power relations, with people coerced to join the church and remain in it. Power is indeed an important factor in people remaining in the church, as the strict rules and hierarchical control make it difficult for people to deviate from the principles of the LDS church or to abandon it altogether. There are also elements of power and coercion in the ways that Mormon parents educate their children to share their doctrines and practices. But a large part of the growth of the Mormon church has resulted from missionary work, both the explicit proselytizing carried out by young people and the informal and more effective family-to-family method. In these situations, the proselytizers have no power over the prospective converts, so the growth of the Mormon church cannot be explained just by power relations.

A more plausible explanation of the success of the Mormons views it as a result of a confluence of cognitive, emotional, and social mechanisms. Joseph Smith and his followers put together a compelling package of concepts, beliefs, and images that answer many questions for people beset by uncertainty. Even more important, the package includes values and emotions that fit well with the desires and needs of many people. Uncertainty is not merely a cognitive state of being unable to attach high probabilities to future events, but an emotional state often attended with anxiety, especially when the events concern matters of great importance to people such as health, relationships and death. Mormon doctrines also reduce uncertainty about actions, through their strict prohibition of extramarital sex and alcohol consumption, along with their precise social norms about frequent activities in the church.

The decision to undergo a religious conversion, like other decisions such as choosing what political party to support, is a matter of emotional coherence. People choose those actions that fit best with their emotional goals and values. There is no need for prolonged calculation of expected utilities based on unknown outcomes, because people only need to feel that there is a good fit between what the church or party offers and what they perceive as their own needs. Needs are not arbitrary wants, but derive from fundamental biological requirements such as food, shelter and health, as well as from psychological requirements for relatedness, competence, and autonomy. Mormon missionaries are told not to instruct people in order to convert them, but rather to empathize and share the joy of their beliefs.

The Mormon church helps to satisfy biological needs by guaranteeing distressed members help with food and shelter. Relatedness is satisfied through the strong social networks in LDS churches that go far beyond weekly prayer meetings. In general, researchers have found that participants in many churches are happier than non-participants, although this effect may have as much to do with the social connections that churches provide as with theological reassurances. Nevertheless, the Mormon church is very strong on theological reassurances, providing guarantees about health that go beyond death thanks to the promise of a happy afterlife for people who stick with the religion.

Once people are in the church, there are strong social mechanisms to ensure that they will remain. Regular rituals such as church services, public testimony, repeated endowment, and baptism of the dead bring people together to maintain their commitment to the church and to each other. The appealing emotional coherence of the Mormon

church is maintained by frequent re-exposure to the values and benefits of the church. Rituals and other church activities help to meet people's social and psychological need for relatedness. The need for competence is partly met by people's accomplishments in the activities of the church and their progress through the ranks of being priests, bishops and other leaders. The price of these benefits is unavoidably a loss of autonomy, as people's choices are highly constrained by the strict rules and social control of the church. But if people think that they are voluntarily choosing to join and continue with the church, then these limitations may not be viewed by them as losses of autonomy.

On the face of it, it seems surprising that a church with such demanding expectations could be so successful. Why would anyone want to acquire all the obligations such as frequent church activities, tithing, and restricting alcohol and extramarital sex? For some people, however, such strictness can be attractive, because it alleviates anxieties about what to believe and what to do. Like other strict and dogmatic religions, Mormonism has all the answers.

These cognitive and emotional benefits explain why Mormonism is successful with particular individuals, but are not sufficient to explain the general rise of the church, because many other religions from Christianity to Islam to Buddhism can provide similar psychological benefits. Social mechanisms are needed to explain why the Mormons have been proportionately more successful at adding converts.

First, the LDS church does much more proselytizing than most denominations, through the requirement that young men do years of missionary work and the systematic plan for family-to-family conversions. Similarly, the fundamentalist Sunnis described in

chapter 6 make vigorous attempts to add adherents, unlike established churches that are much more complacent about their membership.

Second, the Mormon missionaries are generally sincere, enthusiastic, and well trained in methods of communication. Convincing someone to become Mormon is a social process in which people learn from others both the available beliefs and also the emotional gains that conversion can bring. Once people are members of the church, they are constantly reminded both by observation and exhortation that the church provides many benefits. People do not just hear reports that they can be saved and redeemed, but get them from members who really believe and act on them.

Social mechanisms are similarly significant for raising children to be Mormons, as they are for all kinds of education (ch. 14). Children naturally pick up beliefs from their parents because most of what parents tell children is true. Just as important, children pick up emotional values by the combination of the processes described in chapter 3, including mirror neurons, emotional contagion, and attachment-based learning.

Hence the rise of Mormonism cannot be explained as the result of any single cognitive, emotional, or social factor. Rather, it results from the interaction of numerous mental and social mechanisms, all of which can be understood through the semantic pointers operating in the brains of individuals and the semantic pointer transmission and instigation occurring through communicative interactions. Also relevant are molecular mechanisms such as the role of oxytocin in increasing convert's trust in Mormon leaders and the role of dopamine in the pleasurable expectations of an exalted afterlife. Therefore, Mormon success is a case of multilevel emergence, just like previous

chapters' explanations of functioning of romantic couples, spread of prejudice, rise of political ideologies, and occurrence of economic booms and crashes.

Why is Religion Generally So Successful?

Multilevel emergence also provides an answer for the challenging question of why religion in general is such a widespread part of human culture. Although not universal, religious beliefs and practices have been common in human groups for many thousands of years, and prevail in most countries today. Attempts to eradicate religion in communist countries have often failed. Although secular, science-based views have become much more common in Western Europe and North America, the majority of people in the world belong to some religion. The success of religion might have a theological explanation derived from the existence of real gods who actually do communicate their existence and wishes to humans, but this hypothesis fails to explain the existence of so many different religions that postulate many very different gods.

Simple biological explanations for the prevalence of religion are also implausible. Proposals that brain evolution has favored a genetic basis for religious belief have the same problem as proposals that the brain contains a distinct module for religion or an instinct for spirituality. First, no biological evidence has been found for the existence of such genes, modules, or instincts. Second, given the occurrence of a few traditional cultures without apparent religion and the more than 1 billion people currently without religion, is hard to make the case that the need for religion or spirituality is actually innate.

Third, these biological proposals fall afoul of contemporary understanding of genetics and neuroscience. There may be specific genes for producing a specific protein,

but human characteristics are almost always the result of interactions of numerous genes and social environments. Even height is the result of hundreds of genes as well as of nutrition influenced by social processes such as famine and war. The hypothesis that there could be a brain module for religion made sense in the context of 1980s psychology, but decades of brain scanning experiments have replaced the expectation of modularity with emphasis on the intensity of interconnections among different brain areas. As Volume One argued, emotions and other mental processes show that the relation between brain areas and psychological functions is many-to-many rather than one-to-one. For example, emotions such as happiness result from the interactions of numerous brain areas, each of which is involved in other emotions and other psychological functions. Therefore, there is little hope of explaining the prevalence of religion as the direct result of evolution by natural selection.

Some anthropologists and sociologists prefer purely social explanations for the prevalence of religion. Religions exist because they serve important social functions, such as organizing people together, supporting the state, and providing a moral code that can help govern the behavior of people operating in large societies. Hence societies that have religions are more likely to survive and grow than societies that lack them. That religion can serve all these social functions does not explain why individuals enthusiastically adopt some religions rather than others. Social explanations need to be supplemented by and integrated with cognitive explanations, and fleshed out to indicate the social mechanisms of transmission of values and beliefs.

Purely mental explanations understand religion as arising, not from an innate disposition to religion, but from cognitive mechanisms that are much more plausibly

innate. Humans and other animals are capable of surprise resulting from unexpected occurrences. Thanks to our larger brains and binding capacity, humans are capable of generating explanations for surprising events such as thunderstorms by hypothesizing unobserved causes - the actions of gods. People also want to explain emotional experiences of amazement and awe provoked by nature as well as religious rituals.

One form of explanation that people habitually use for explaining each other's behavior is the attribution of mental states, so people naturally explain puzzling events in the world using hypotheses about unseen agents with beliefs and desires analogous to those of humans. The most immediate explanation of religious experiences such as awe is that people actually are touched by the gods. Such explanations do not require any innate module for theorizing about minds or detecting agents, merely cognitive abilities to be surprised, generate explanations, and use analogies. Therefore, religious beliefs about supernatural agents have a partial cognitive basis in abductive and analogical inference.

But many theorists such as Freud have noticed that the appeal of religion is not just cognitive but also emotional. People have numerous anxieties about what will happen in this world and what will result from their deaths. Religion is very successful in giving reassurances about how to cope with the vicissitudes of life and how to have positive expectations of an afterlife. Religion is not just wishful thinking, because people are given numerous pieces of information that feed into the beliefs they want to have that religion, a particular church, and God are the solution to all their mundane and eternal problems. Conversion builds on motivated inferences that a particular religion is the right one for them to believe. Religion has many documented personal benefits, including

longer life, less depression, more prosocial behavior, better marriages, less crime, and better health behaviors.

For religion as for the personal and political views discussed in previous chapters, motivated inference can operate in a powerful loop with fear-driven inference. Threats of social isolation, material deprivation, and eternal damnation or nothingness can make people ruminate on worries about the present and the future. Fear-driven inference keeps people focused on worries about these intense problems and makes them think that they must be resolved by extreme measures. Then motivated inference encouraged by true believers steps in to resolve the worries through religious solutions to the problems. Religious belief is not just terror management, however, because religion offers many positive emotional benefits beyond relief from fear, such as joy, pride, gratitude, and social solidarity. Cross-nation comparisons show that religiosity correlates with fear of death, but it is not clear whether fear of death causes religiosity or vice versa.

As my discussion of the success of the LDS church showed, social, cognitive, and emotional mechanisms are not competing explanations, but rather complementary and interacting parts of a full explanation. Religion thrives in both individuals and groups because of its ability to satisfy social demands for cohesion and morality, cognitive demands for explanation, and emotional demands for comfort and reassurance. At the individual level, cognition and emotion interact intensively. Cognitive processes have a large emotional component because the surprise and uncertainty that drive explanation are inherently emotional, as are the pleasurable and exciting results of finding satisfactory explanations. At the same time, the emotional power of religion is in part

cognitive because emotions result from appraisals tied to goals and beliefs as well as from physiological changes.

The apparent gap between the social functions of religion and its operation in individuals can be filled by the semantic pointer theory of communication that shows how cognitions and emotions can spread among individuals. Cognition, emotion, and social communication are all rooted in a common set of neural processes of representation, binding, and competition among semantic pointers. Communication among individuals allows religion to have social functions such as increasing cohesiveness, compliance with authority, and fostering morality. Societies that are too large for everyone to be monitored by everyone else may well benefit from organized religions with Big Gods who encourage moral behavior. But understanding the nature of the benefits and the spread of religions within and across societies requires close attention to mechanisms of individual thinking and group communication.

In sum, religions emerge and survive as common in human societies because of the interactions of cognitive, social, and social mechanisms, another striking case of multilevel emergence. Religion lacks a direct biological basis in genetics, modularity, or instinct, but rather results from cognitive, emotional, and communicative processes carried out by neural mechanisms that are biologically universal. The development of secular societies in the West has shown that peoples' cognitive, emotional, and social demands can be met by alternative intellectual and social operations. Science provides far more effective solutions than religion to cognitive problems about why things happen. Other fields such as psychotherapy and philosophy can provide answers to questions about life and death. Families, friends, work, and nonreligious organizations such as

clubs provide alternatives to religion as a way of satisfying social needs. Nevertheless, I expect that many people will continue to seek the cognitive, emotional, and social benefits of religion.

Summary and Discussion

The anthropology of religion is a sub-field of social science aimed at describing and explaining religious beliefs and practices across human cultures. However, its narrative explanations need to be developed and interconnected with mechanistic ones based on the minds of religious individuals and the social groups in which they interact. There is no question of replacing anthropology or any other social science by cognitive science, which depends on anthropology for its attention to the diversity of social processes that occur in thousands of very different human cultures. Thick descriptions of cultural practices can be enriched by understanding the cognitions and emotions occurring in the minds of the people enacting the practices. Claims about how the mind works cannot be based solely on Western data, but must also take into account the cultural variations that occur in humans despite their common neural architecture.

Scanty information is available about the origins of most religions, but the church of Jesus Christ of Latter-day Saints is sufficiently new that its historical developments and ongoing practices are well documented. To explain these developments and practices, I described the images, concepts, values, beliefs, rules, analogies, and emotions that are the most important mental representations operating in Mormon minds. These representations have a neural basis in semantic pointer processes of representation and binding, and they contribute to a variety of deductive, abductive, and emotional inferences. The social process by which Mormon beliefs and practices spread from one

individual to another can best be understood as the results of semantic pointer communication carried out by interactions ranging from church rituals to missionary work.

Explaining the ascent of the LDS church to a world religion in under 200 years requires integration of cognitive and social mechanisms. The concepts, beliefs, and practices of the church offer to members and prospective converts a high degree of emotional coherence with their fundamental goals and needs. At the same time, the effective Mormon social practices of verbal and nonverbal communication provide ways of ensuring that a growing number of people will be exposed to Mormon beliefs and values, so that they too might be able to appreciate its emotional coherence. As with the development of political movements, a church that wants to grow needs to be effective both psychologically and socially.

Similarly, a plausible answer to the general question of why religion is so prevalent in human societies needs to look beyond simplistic biological explanations to the interaction of cognitive, emotional, and social mechanisms. Mormonism is just one example of how religions can provide appealing solutions to people's cognitive problems about why things happen, emotional problems about dealing with life and death, and social problems about dealing with others. Like many other important features of human culture, religion exemplifies multilevel emergence.

My account has avoided the perils of both methodological individualism, which requires the social to be reduced to the individual, and social holism, which insists on the independence of social facts from psychological processes. Rather, developments within or across religions can be explained by interactions among social, mental, and neural

mechanisms. Speaking about shared beliefs and collective goals is legitimate as long as it is recognized that what is common to people is similar mental functioning in individuals. An important part of this functioning is how the individuals mentally represent the group and how their communications and inferences are influenced by the existence of the group. Minds and groups are real, but group minds and group mental states are just metaphors pointing to cognitive mechanisms in individuals influenced by social communication.

Durkheim insisted that a human institution such as religion cannot rest upon error and falsehood or else it could not endure, so he approached the study of primitive religions with the certainty that they express the real. But what is real about religions need not be the supernatural agents and processes that they propose, but rather the human needs and social interactions that can explain the initiation and spread of doctrines, practices, and churches.

The next chapter completes the application of social cognitivism to the social sciences by considering how history and international relations try to explain the occurrence of wars. Semantic pointer theories of interacting cognitive and social mechanisms will continue to be employed, and will also prove useful for understanding professions such as medicine and law discussed in later chapters.

Notes for Chapter 8

On the anthropology of religion, see Bowie 2000, Eller 2007, and Winzeler 2008. For information on membership of world religions, see <http://www.adherents.com>.

On cultural psychology, see: Heine 2011; Henrich, Heine, and Norenzayan 2010; Kitayama and Uskal 2011; Nisbett 2003.

Beller, Bender, and Medin 2012, and Levinson 2012, discuss the place of anthropology in cognitive science. On cognitive anthropology, see D'Andrade 1995 and Hutchins 1995.

Important books in the cognitive science of religion include Boyer 2001, McCauley 2011, McCauley and Lawson 2002, Norenzayan 2013, Norenzayan et al. 2014, Whitehouse 2000, and Whitehouse and Laidlaw 2007. Pargament 2013 reviews many studies on the psychology of religion.

Everett 2008 describes the language and culture of the Pirahã.

My account of Mormonism is primarily based on Shipps 1981, Stark 2005, Worthy 2008, and <https://www.lds.org/>. The quote about the endowment ritual is from <http://www.ldschurchtemples.com/mormon/endowment/>.

Sperber 1996 advocates the epidemiological metaphor.

On human needs, see Deci and Ryan 2002 and Thagard 2010.

McCullough 2013, p. 123, reviews the benefits of religion with references to empirical studies. That religiosity correlates with fear of death is shown by Ellis, Wahab, and Ratnasingan 2013.

Durkheim 1995, p. 2, makes the argument about the reality of religion.

Projects: Make the value map of Mormons multimodal. Provide a full list of multimodal rules from Mormon rituals. Analyze other religions, including aboriginal ones, using value maps. Produce a full list of multimodal rules for rituals.

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