United States and Canada: The Psychology of Religion up to 2020

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Historical Background

Origins. The area that we now call North America has long been a hub of religious diversity and religious inquiry. For hundreds of years, Native American groups practiced and shared religious beliefs and practices. In the Sonoran Desert of current-day Arizona, the O'odham people practiced a ritual called doajido in which Shamans sung songs and blew smoke over people suffering from illness to summon spirits who could lift the illness from patients' bodies (Bahr, 1983). Hundreds of miles northwest, near California's Klamath River, the Yurok people told myths of a great lake in the sky where pure souls could ascend in the afterlife (Buckley, 1982). Across the continent on America's East Coast, the Moscogee (or Creek) tribe told myths of a high god named the "Giver of Breath" who presided over deities named the Moon, Thunder, Corn, and the Four Winds (Innes, 2004). These sprawling religious expressions across the North American continent illustrate the many functions and mysteries that human religion can address, and that lie at the heart of the science of religion.

North America has changed dramatically in the last 200 years, and the legacy of colonialism has reshaped the face of this country, often with tragic consequences. But the spirit of religious pluralism and religious appreciation has remained an important part of American identity. In the early colonial era, the United States became famous as a haven for religious freedom, where persecuted groups such as the Quakers could practice freely (Hamm, 2003), and decades later during the terror of World War II, the United States accepted more Jewish refugees than any other country in the world (Kochavi, 2003).

Partly because of this religious pluralism, the academic study of religion has also flourished in the United States and Canada. The US was arguably home to the first PhD

dissertation in a psychology department to focus solely on religious belief (see White, 2008), and North American scholars have since contributed to thousands of papers and books about the psychology of religious belief and ritual. The goal of this chapter is to review this material, and to cultivate future studies of religion by highlighting some of the resources and future directions that may help new students of the psychology of religion within North America.

Formative people and places. The science of religion in North America is somewhat unique because it has been so broad in scope. It is impossible to pinpoint a short list of formative people and places within North America because dozens if not hundreds of influential North Americans have made significant contributions to the psychology of religion. Here we roughly carve up these contributions into two driving questions that help organize the massive literature on the psychology of religion: "Why do people believe?" and "What is it like to believe?" These questions cut to the core of religious experience and functionality, and have deep roots in North American scholarship on religion.

Why do people believe? For most people in the world, the purpose of belief seems obvious: people believe in gods because they exist. But in the last two centuries, the origins and functions of belief has become a major question in the social sciences. Although this is now an active area of inquiry in the North American science of religion, some of the earliest scholars pursuing this research worked outside of North America. Edward Burnett Tylor, an English anthropologist, proposed in the late 19th century that religious beliefs originated as a means of explaining major metaphysical puzzles, like the content of dreams and the nature of life after death (Tylor, 1871). Max Muller, a German sociologist and contemporary of Tylor's, theorized that religion originated as a means of explaining the natural world (Muller, 1892). In the early 20th century, the French sociologist Emile Durkheim proposed that religious belief played a

largely social function by binding people into cohesive groups and bonding people via shared rituals (Durkheim & Swain, 1912/2008). Religion also received treatment in Darwin's influential body of work. In a famous scene from *The Descent of Man*, Darwin compares human beliefs in supernatural agents to his dog's tendency to growl at a parasol blowing in the wind (Darwin, 1909). In both cases, Darwin argues, animals perceived and responded to invisible agents.

What is it like to believe? William James, the American philosopher and psychologist, was one of the first scholars to consider how religion changes the human experience. In his landmark book, *The Varieties of Religious Experience,* James explored human behavior during religious rituals and religious services (James, 1902/1985). James's work largely put aside the question of God's existence, and instead focused on religious conviction and ritual as a psychological phenomenon. This choice foreshadowed many contributions to the 20th century science of religion in North America.

Contemporary Status

Influential factors. Research on the origin of religious belief and the phenomenology of religious belief has flourished in contemporary North America, partly because of the infrastructure and funding vehicles available to North American psychologists of religion.

There are many funding vehicles in the psychology of religion, but none more prolific than the John Templeton Foundation (JTF). JTF is a philanthropic organization endowed by the late Sir John Templeton, a businessman who also wrote extensively about the relationship between faith and science, and who pledges much of his money to funding scientific research on life's big questions, especially focused on big questions involving religion and spirituality. JTF is unique in its focus on religion, and it is at least partially responsible for the recent surge of high-quality research on religion and spirituality. To apply for a JTF grant, researchers must submit an

"official funding inquiry," a short summary of a proposed research program. OFIs are extremely competitive, and only about 5% of OFIs are invited as full proposals. However, this system means that researchers don't expend time on long grants that are eventually unfunded, since the invited full proposals have a roughly 50% chance of being funded.

JTF is a private foundation, but other public funding bodies also provide grants for research on the psychology of religion. In the United States, the National Science Foundation (NSF) and the National Institutes of Mental Health (NIMH) both fund research on religion. Basic science research on the evolution or social correlates of religion will likely be better suited for the NSF, whereas applied research on religion and mental illness or well-being will have a better chance of being funded at the NIMH. In Canada, the Canadian Institute of Health Research (CIHR) is a rough equivalent of the NIH, whereas the Social Sciences and Humanities Council (SSHRC) and the Natural Sciences and Engineering Research Council (NSERC) will fund similar research to the NSF.

Publication Options. The United States and Canada boast dozens of journals focused on the psychology of religion and spirituality, which range in their impact factors (IF; the frequency with which the average article is cited in a year) and focus. For example, journals such as the International Journal for the Psychology of Religion (IF = 1.64), the Journal of Religion and Spirituality (IF = 2.33) and the Journal for the Scientific Study of Religion (IF = 1.83) are all religion specialty journals that typically publish psychology surveys or experiments about religion, whereas Religion, Brain, and Behavior (IF = 1.36) is a religion specialty journal that focuses more on cultural and evolutionary research about religion.

Many other generalist journals publish research on religion. Large-scale studies of religion, evolution, and culture have been published in Nature (IF = 49.96), Science (IF = 47.73),

Proceedings of the National Academy of Sciences (IF = 11.20), Proceedings of the Royal Society B (IF = 5.35), and Psychological Science (IF = 4.90). High-quality empirical studies of social psychology and personality with a focus on religion are often published in the "Personality and Individual Differences" section of Journal of Personality and Social Psychology (IF = 7.67), Social Psychological and Personality Science (IF = 3.61), Personality and Social Psychological Bulletin (4.38), and Journal of Experimental Social Psychology (IF = 3.60), whereas review papers are typically featured in Psychological Review (IF = 8.93), Psychological Bulletin (IF = 17.74), and Personality and Social Psychological Review (IF = 9.28). Many CSR papers about the psychology of religion have been published in journals that bridge the gap between cognitive and social psychology such as Cognition (IF = 3.65), Motivation and Emotion (IF = 3.53), and Journal of Experimental Psychology: General (IF = 4.91). And many papers on the developmental and mental health aspects of the psychology of religion have been published in Child Development (IF = 5.02), American Psychologist (IF = 10.89), and the Journal of Consulting and Clinical Psychology (IF = 5.35). It is more difficult to publish papers in these journals, but such papers will be sure to attract a broader audience, beyond just scholars who focus on religion. A major goal for the future of the psychology of religion will be to continue to attract these audiences.

Topical emphases.

General themes. Psychology is a wide-ranging discipline that is broadly the study of people. Psychologists study human behavior, cognition, and sociality. Psychology classically operates at the individual level but has expanded to also study social groups. The most popular domains of psychology are cognitive (the science of the mind), developmental (how humans grow and change across the lifespan), social (situating beliefs, emotions, and personality in a

social context), clinical (promoting mental and behavioral health), and biological (neuroscience and psychophysiology). The psychology of religion is a relatively small branch, yet itself comprises a wide variety of questions.

Psychology of religion themes. Here we divide up contemporary research on religion into the topical themes we identified earlier: "Why do people believe?" and "What is it like to believe?"

Why do people believe? Several psychology of religion theories in the 20th century sought to explain and classify religious devotion. Bernard Spilka noted the explanatory nature of religious beliefs and theorized that religion helps make sense of phenomena that are unexplainable through other means, fulfilling a sense of meaning and control. Religious attribution theory posits that events are likely to be attributed to religious forces when they cannot be understood through naturalistic causes (Spilka, Shaver, & Kirkpatrick, 1985).

Around the same time, classic research by the American psychologists Gordon Allport and Michael Ross distinguished between "extrinsic" religiosity and "intrinsic" religiosity (Allport & Ross, 1967). Extrinsic religiosity involves participation in religious obligations, such as attending services or tithing, whereas intrinsic religiosity involves strong identification with religious principles and personal motivation to translate religion to other areas of one's life. Allport and Ross's original paper showed that extrinsic religiosity correlates positively with intergroup prejudice whereas intrinsic religiosity had no correlation with prejudice. The validity of the intrinsic-extrinsic divide has been challenged over time (Kirkpatrick & Hood, 1990), but the predictive difference between extrinsic and intrinsic religiosity shows how different aspects of religion can correlate with different outcomes.

Other theorists modeled the stage developments of various facets of religiosity. Walter Houston Clark distinguished three levels of religious devotion ranging from routine practice based on the authority of others to authentic divine experience (Clark, 1958). James Fowler conduced hundreds of interviews and posited that there are seven stages of faith development through which one may deepen their relationship with their faith (Fowler, 1991). Similarly, Fritz Oser identified five stages of belief in religious judgement (Oser, 1991, 1994; Oser & Gmunder, 1991). While these theorists worked to understand the individual development and variation of religious beliefs, others were concerned with finding their origins.

In the late 20th and early 21st centuries, an emerging field of the "Cognitive Science of Religion" (CSR) built on early theories of religion to develop fleshed out evolutionary models of religious belief. CSR is based on the premise that religious beliefs are not special, per se, but that they are extensions of domain-general abilities that humans developed for other purposes (Atran, 2002; Barrett, 2000; Boyer, 2007). For example, CSR claims that we perceive the minds of gods using the same basic mind perception tools that we use to perceive human and animal minds (Gray, Gray, & Wegner, 2007). One of the first theorists to apply CSR ideas to religion was Stewart Guthrie, an American who argued in his book *Faces in the Clouds* that religious beliefs are largely byproducts of a human tendency to overdetect agency (Guthrie, 1995). Many of us have mistaken a stick on a path for a snake, or a plastic bag for a jelly fish. Guthrie and his contemporary CSR thinkers viewed the human tendency for hyper-active agency detection as a byproduct of an adaptive system; mistaking a bag for a jelly-fish is a far less dangerous mistake than mistaking a jelly-fish for a bag, so our agency-sensitive ancestors may have outlived our agency-insensitive ancestors (Barrett, 2004; Guthrie, 1995). According to many CSR theorists,

these unperceived agents were probably the earliest prototypes of the gods that form the basis of many religions today.

Some research has extended these mind perception theories to suggest that some situations are more likely than others to elicit belief. For example, building off evidence that people search for culpable agents to explain harm (Gray, Schein, & Ward, 2014), Kurt Gray and Dan Wegner tested whether people were most likely to invoke their religious beliefs to explain harmful events that had no culpable agent. Confirming this prediction, they found that people were most likely to invoke God's will to explain a flood that (a) resulted in death vs. no injury and (b) had no clear human agent vs. a culpable human agent (Gray & Wegner, 2010). This suggests that people go searching for gods mind when tragedy strikes and there is no clear human agent responsible.

Around the same time as *Faces in the Clouds,* other cognitive scientists were beginning to study the way that religious ideas are transmitted and spread. Paschal Boyer (a French Anthropologist), Scott Atran (an American Anthropologist) and Justin Barrett (an American psychologist) each contributed well-known books to this idea (Atran, 2002; Barrett, 2004; Boyer, 2007), focusing particularly on how many religious concepts were "minimally counterintuitive"—conforming to some folk theories of physics and biology but not others. CSR theories suggest that minimally counterintuitive ideas are the most interesting and memorable (Banerjee, Haque, & Spelke, 2013), and that religious ideas often proliferate because they strike this balance between the ordinary and the extraordinary (Norenzayan et al., 2006).

CSR ideas grew in popularity and prevalence throughout the early 21st century, and they were complemented by CSR theories of ritual and cultural signaling from research programs in the United Kingdom (Whitehouse, 2004; Whitehouse & McCauley, 2005) and New Zealand

(Atkinson & Whitehouse, 2011; Bulbulia, 2004). In 2002, the philosophers Tom Lawson and Robert McCauley (1993) built on many of these efforts to publish a theory of universal religious grammar which constrained the bounds of religious variation, just as Chomsky had theorized about a universal human grammar that constrained the bounds of language.

Yet many scholars took issue with the idea that religion was solely a cognitive byproduct, and in the mid-2000s, a set of functionalist theories proposed that many religious beliefs and practices could have evolved because they were functional in and of themselves (Johnson, 2005; Norenzayan & Shariff, 2008). These theories took different flavors. According to the American evolutionary biologist David Sloan Wilson, religion may have biologically evolved because it helped humans adapt to the challenges of group living by enhancing trust, prosociality, and coordination (Wilson, 2010).

Another line of research from a variety of English, American, and Canadian scholars suggested that functional religious attributes weren't necessarily biologically evolved, but evolved culturally through a process known as "cultural group selection" (Henrich, 2011; Johnson, 2016; Norenzayan et al., 2016). According to these theories, the belief in moralizing high gods who watch and punish immoral behavior (such as the Abrahamic God) may represent a functional innovation, as belief in a wrathful (Johnson, 2016) and watchful (Norenzayan & Shariff, 2008) god prevents people from cheating, stealing, and lying. These theories suggest that moralizing high god belief may have emerged as a random cultural mutation, but because it made people more prosocial and cooperative, it spread throughout the world and is now a dominant part of many religious traditions (Norenzayan et al., 2016). Early large-scale societies did not have the institutional strength to enforce cooperation (see Jackson, Choi, & Gelfand,

2019), so fear of divine monitoring and punishment may have been the key ingredient to maintain cooperation (Norenzayan et al., 2016).

Much like belief in moralizing high gods, cultural group selection theories of religion have proliferated since their origins, and now dominate academic research on religion and evolution. The Canadian psychologist Ara Norenzayan popularized many of these ideas with his book *Big Gods* (Norenzayan, 2013), and his students Azim Shariff, Will Gervais, and Aiyana Willard have published many papers experimentally and theoretically exploring these ideas (Gervais & Norenzayan, 2012; Shariff & Norenzayan, 2007; Willard & Norenzayan, 2013). For example, a famous study by Shariff showed that brief religious primes (via unscrambling sentences with religious content) increased charitable behavior in a dictator game (Shariff & Norenzayan, 2007), whereas a study by Gervais showed that religious priming increased socially desirable responding in a questionnaire (Gervais & Norenzayan, 2012). The English political scientist Dominic Johnson published a more recent book titled *God is Watching You* that emphasizes the importance of supernatural punishment over and above supernatural monitoring (Johnson, 2016), and the American anthropologist Joseph Henrich has integrated theories of supernatural monitoring and punishment into large-scale models of the evolution of cooperation in large communities (Henrich, 2011).

However, each theory of the evolution of religion has had its detractors. CSR models, while popular, have faced a number of criticisms about measurement and specificity. One of these criticisms is the "mickey mouse" problem: why do Christians believe in some minimally counterintuitive ideas (e.g., Jesus walking on water) and not others (e.g. a talking mouse who we all know and love; Gervais & Henrich, 2010)? Other studies have failed to replicate the classic finding that people are especially likely to remember and transmit minimally counterintuitive

ideas (Easker & Keniston, 2019), and theoretical papers have raised problems with the very definition of "minimally counterintuitive" (Purzycki & Willard, 2016).

Cultural group selection theories have also faced criticisms. Some of these have been empirical. A large-scale preregistered replication failed to show evidence that religious priming increased dictator game contribution (Gomes & McCullough, 2015). In another series of studies, Jackson and Gray found that religious belief can actually increase *passive immorality*—sins of omission where people perpetuate harm by doing nothing at all—because they assume that unethical circumstances are gods will (Jackson & Gray, 2019). Multiple studies have also found that belief in moralizing high gods is not necessary for the evolution of complex cooperative societies (Watts et al., 2015), and that it does not explain why people cooperate following large-scale threats (Skoggard et al., 2020). Instead, it seems more likely that difficult conditions and societal threats simultaneously increase cooperation and the belief in punitive gods, without a necessary causal relationship between these variables (see Jackson et al., 2021; Caluori et al., 2020, Jackson, Caluori et al., 2021).

These ongoing debates foreshadow the major questions for future research on the origins of religion. Do people have religious beliefs because they are hardwired into our biology? Are some religious beliefs cultural artifacts that make us more prosocial? Is religion the product of something else entirely? Many fruitful research programs are currently pursuing these questions, and promise a clearer and more comprehensive understanding of religion's origins.

What is it like to believe? Regardless of how religion evolved, it is now a fixture of human culture for people around the world. According to an international survey by Pew Research Center, 84% of the world's population is affiliated with a religion, and surveys suggest that approximately 80% of Americans identify as religious, depending on the methodology

(https://www.pewforum.org/2012/10/09/nones-on-the-rise/). Given religion's ubiquity, it seems natural to wonder how religion changes the human experience. How does religion change our everyday lives? Our conflicts? How does it shape our relationships and our feelings of community? These are major questions in the science of religion and spirituality, and they have implications within and beyond the academy.

Throughout the 20th century, many studies on the religious experience were divided into two camps. On one side, some studies suggest that religion builds well-being, enhances community cohesion, and even increases health and longevity. Other studies focused on the darker side of religion and ritual, emphasizing religion's tendency to foster tribalism, out-group prejudice, and conflict.

Of these two camps, the vast majority of studies have documented religion's positive psychological effects. Religious people typically report more well-being and happiness in surveys. And while there are differences across cultures and across survey methodologies, a highly cited 2012 review found that 79% of surveys identified a positive association between self-reported religiosity and happiness, whereas < 1% of surveys identified a negative association (Koenig, 2012). Religious people also tend to report higher levels of hope for the future and optimism (Sethi & Seligman, 1994), higher self-esteem (Ellison, 1993), lower levels of depression (Idler & Kasl, 1992), lower levels of anxiety (Williams et al., 1991), and less risk of suicide (Paykel et al, 1974), substance abuse (Cisin & Cahalan, 1968), and marital instability (Shrum, 1980). Religiosity is even associated with reduced risk of physiological problems, such as coronary heart disease (Comstock, 1971), hypertension (Scotch, 1963), cancer (Schnall et al., 2010), and is even associated with longer life-expectancy (House, Landis, & Umbersom, 1988). A recent study led by Laura Wallace replicated the association with religiosity and longevity

with a creative approach: the researchers read through 1601 obituaries and noted whether the deceased was religious or not, and their age of death (Wallace et al., 2019). People who lived longer, on average, had more mentions of religious belief in their obituary.

Many scholars have proposed wide-ranging explanations for why religion can enhance health and well-being. Of these, the most popular may be that religious people have richer and more supportive networks of social support, and that social support acts as a powerful buffer for health and happiness (House, Landis, & Umbersom, 1988; Uchino, 2009). Indeed, survey studies have found that religious people self-report greater social support than non-religious people, and report moderately higher social capital (the level of community participation, volunteerism, trust, and membership in civic, political, and social justice organizations) than non-religious people (House, Landis, & Umbersom, 1988; Uchino, 2009). Studies show that this social support does not arise from religious belief itself, but from attending religious services with others in one's community. For example, one large study of elderly Americans found that service attendance was the only facet of religion that robustly correlated with higher social support and lower levels of depression, and that self-reported social support explained the relationship between service attendance and reduced risk of depression (Koenig et al., 1997). Another large study of Southeastern Americans found that church-goers reported larger social networks and more diverse forms of social support than non-church-goers, even though all participants were predominantly religious (Ellison, George, 1994).

Why does service attendance correlate with social support? A superficial answer would be that religious services bring members of a community together. Yet some studies have gone beyond this surface explanation to study the specific characteristics of religious services and rituals that make groups more cohesive. Inspired by Durkheim's idea of "collective

effervescence," in which a large and diverse group feel emotional and cognitive unity, many studies have shown that physical synchrony is related to perceptions of cohesion in a group. Whether through marching, chanting, or rocking in chairs at the same pace, synchronous action appears to bond strangers together, even when they come from different social groups (Reddish, Bulbulia, & Fischer, 2014; Wiltermuth & Heath, 2008; Valdesolo, Ouyand, & DeSteno, 2010). Other studies have emphasized shared pain or physiological arousal. For example, groups of people who immersed their hands in freezing water reported more cohesion than groups who immersed their hands in tepid water (Bastian, Jetten, & Ferris, 2014), and Mauritian Hindus who underwent the grueling Kavadi Attam ritual—which involves piercing one's skin and walking several miles along burning asphalt—contributed more to a community collection plate than Hindus who were praying during the ritual (Xygalatas et al., 2013). A recent field study recently combined these streams of research by manipulating both synchrony and arousal in a collective ritual, and found that people formed the largest and most tightly knit social groups after rituals that featured by synchrony and arousal (Jackson et al., 2018).

Other accounts of religion and well-being have emphasized components of religious belief itself. Compensatory control theory, for example, suggest that religious belief provides people a means of control over events in their life in which they have little power, such as the economy of their country or the progression of a medical emergency (Kay et al., 2010). The American psychologists Aaron Kay and Kristin Laurin have advanced this theory with several influential papers showing that belief in a controlling and intervening god can be a powerful source of agency and hope for people who otherwise might feel powerless (Kay et al., 2008; Laurin et al., 2008). Consistent with this theory, multiple studies have found that religious people express more hope and optimism in the face of terminal illness than non-religious people

(Mickley, Soeken, & Belcher, 1992). A more recent review showed that these effects were particularly strong for people who were already religious before their diagnosis, presenting the caveat that turning to religion may not necessarily foster well-being during an illness (Schreiber & Brockopp, 2012).

Religion may also boost well-being because of specific acts of religious expression, such as prayer. Building on past work in the psychology of religion, the American psychologist Kevin Ladd has identified multiple functions of prayer. For example, "inward" prayer can serve as a means of self-reflection and self-examination, whereas "outward" prayer focuses on accomplishing goals or helping others, and "upward" prayer provides the opportunity to contemplate and admire the divine (Ladd & Spilka, 2002; Ladd & Spilka, 2006). While this work focuses on the cognitive components of religious belief, another line of work has studied the emotional experience of awe. Patty Van Cappellan, a Belgian psychologist who is now based in the United States, has found that religious feelings of awe mediate multiple forms of attitudes and behavior, such as intentions to travel to a religious pilgrimage site, and feelings of solidarity with other religious people (Van Cappellen & Saroglou, 2012; Van Cappellan et al., 2013). Van Cappellen's work also explores gratitude, love, and peace as other emotional components of religious well-being (Van Cappellen et al., 2016).

However, a more recent line of research has begun to explore the darker side of religion, and the way that religious belief can play into intergroup strife and personal struggle. European philosophers such as Friedrich Nietzsche (1886/2002) and Sigmund Freud (1927/2012) posed some of the most famous early challenges to the virtue of religion, but perhaps the most famous recent challenge came from the "New Atheists," four popular science writers who famously argued that religious belief was responsible for much of the suffering, conflict, and deceit in the

world (Dawkins & Ward, 2006; Dennett, 2006; Harris, 2005; Hitchens, 2008). The New Atheists were grandiose in their claims, but seldom cited empirical research. More nuanced programs of research have since emerged in North America and around the world that have examined the dark side of religion with more nuance and rigor.

Perhaps the most common criticism of religion is its role in intergroup prejudice. Drawing from Allport's famous work on prejudice in the mid-20th century, the American psychologists Bob Altemeyer and Bruce Hunsberger demonstrated robust relationships between religious fundamentalism, authoritarianism and prejudice in the 1990s (Altemeyer & Hunsberger, 1992). This research has been reproduced and extended by other studies. For example, Wade Rowatt, Megan Johnson, and Jordan LaBouff have replicated this early research (Rowatt et al., 2009), but also found that experimentally priming religious concepts both increased favoritism towards the religious ingroup and derogation of the religious outgroup, and that religious priming can even promote racism (Johnson, Rowatt, & LaBouff, 2011; Johnson, Rowatt, & LaBouff, 2010). Their work suggests that the association between religiosity and prejudice is fully mediated by right-wing authoritarianism and religious fundamentalism (Johnson et al., 2011). The social psychologists Jonathan Haidt and Jesse Graham have proposed a slightly different explanation of the religion-prejudice link. Their work suggests that religion binds people into communities by emphasizing shared moral values (Graham & Haidt, 2010). These "moral communities" are important for building social cohesion and cooperation, but they have the side-effect of fostering tribalism and sometimes leading to conflict. Consistent with this idea, studies have shown that participation in religious communal events—rather than strength of religious beliefs—predicts the likelihood of religious extremism (Ginges, Hansen, & Norenzayan, 2009).

Religion's dark sides go beyond just intergroup conflict. Other research has explored the potential for religion to perpetuate social inequalities (Watts et al., 2016), and engage in "passive immorality"—sins of omission such as keeping a lost wallet (Jackson & Gray, 2019). In both lines of research, religion serves as a license to justify unethical behavior. For example, it is easy to attribute social inequalities to God's will, just as it is easy to mistake a lost wallet as a gift from the heavens. There have been calls to view religion's impact as less of a net negative or positive, and using a more context-specific lens (Abrams, Jackson, & Gray, 2021). Nevertheless, there is ample evidence that religious beliefs can be agents of harm in many scenarios.

Perhaps for these reasons, many people doubt their faith, and deconversion is rising in many world countries (Streib et al., 2009). This process of deconversion is now emerging as an active area of research, with papers exploring each of the reasons why people choose to convert—and sometimes choose not to (see Streib, 2014). For example, the American psychologist Julie Exline suggests that interpersonal strains, inner struggles to believe, and negative attitudes towards God can all drive people towards deconversion (Exline, 2002). Nicholas Epley and Jesse Preston suggest that science is another major force behind deconversion (Preston & Epley, 2009). According to their model, humanity is becoming increasingly reliant on science, but it is difficult to hold both scientific and religious beliefs since they make diametrically opposite predictions about many phenomena. In contrast to these perspectives, other research has suggested that death anxiety (Jackson et al., 2018), loneliness (Kirkpatrick, 1998), and perceived control (Kay et al., 2008) are all important reasons for why people retain their religious beliefs. A new line of research from Daryl Van Tongeren challenges the very idea of deconversion, showing that recent religious deconverts act and think more like

religious people than non-religious people, a phenomenon that he calls “religious residue” (Van Tongeren et al., 2020).

Other research on the experience of religion does not fall neatly into the “religion is good vs. bad” debate, but explores how people view religious figures such as God. Much of this work can be traced back to foundational research by Richard Gorsuch, who used new methods of factor analysis to document different “god concepts” (Gorsuch, 1968). The American psychologist Kathy Johnson is now at the forefront of this research, and has used dimension reduction methods to identify loving vs. punitive God concepts (Johnson, Okun, & Cohen, 2015), and explore other God concepts that do not fall into either of these categories (e.g. mystical, limitless; Johnson et al., 2018). The psychologist Nava Caluori has recently built on this work by exploring the cultural conditions that give rise to these God concepts. Her work suggests that punitive and authoritarian views of God arise during times of conflict, because people value law and order during these times, and view a punitive God as best able to restore order to society (Caluori et al., 2020). In another set of studies, Jackson, Hester, & Gray (2018) used reverse correlation to investigate how people visualize God’s face differently based on political orientation and other factors.

Practitioners and orientations. The psychology of religion spans virtually all major sub-domains within the field. Social psychologists study the origins, nature, and consequences of religious belief and practices through a social lens (Batson et al., 1993). Developmental psychology pursues questions on the development of religious beliefs and cognitions, often studying the formation of religious thinking in children (e.g. Bloom, 2007). Positive psychologists study the impacts of religiosity on well-being (Joseph et al., 2006). Religion is an important theme in psychodynamic psychology, with early central figures like Freud and Yung

dedicating a great deal of theorizing to religion (Palmer, 2003). Training in religion and spirituality has grown more common among clinical psychology programs (Schafer et al., 2011). Cognitive psychologists examine the mental processes of religiosity, and neuroscientists map religiosity in the brain (Ozorak, 2005). While it is difficult to approximate the proportion of psychologists who study religion in each field, it is clear that there are opportunities to investigate the psychology of religion within every major discipline.

Methodologies. The psychology of religion has gone through a methodological revolution over the last several decades, and many North American scientists are responsible for these methodological advances. Here we summarize some of the classic methods in the psychology of religion and spirituality, while also foregrounding exciting new methods that could expand the cultural focus and the scale of this science.

Quantitative methods make up the majority of North American research on the psychology of religion (Coyle, 2008), but several qualitative methods have also yielded important insights (e.g. Clark, 1958; Fowler, 1991; Spilka, Shaver, & Kirkpatrick, 1985; Oser, 1991). Interviewing is a fairly common qualitative means of collecting data on religious beliefs (Fowler, 1991). “Narrative analysis” is a tactic in which researchers examine the language used to describe religious phenomena, often using archival data (Hood & Belzen, 2005; Crossley, 2000). Some researchers use grounded theory, examining data and looking for patterns prior to theorizing (Henwood & Pidgeon, 2006). Interpretative phenomenological analysis is a small-scale research approach used in the qualitative study of religion that carefully examines one or a few people who usually have particular traits relevant to the research (Coyle, 2008). Qualitative methods can be advantageous for capturing the complexity of religion and allowing participants to fully express their views (Coyle, 2008). Today, many modern methods in the psychology of

religion bridge qualitative with quantitative approaches, as we shall detail at the end of this section.

Many of the earliest quantitative methods in the psychology of religion were survey-based. For example, Edwin Starbuck used survey measures to explore the processes of conversion and deconversion (Starbuck, 1899). Starbuck's insights were so influential that his name was mentioned twenty-six times throughout William James's *Varieties of Religious Experience.* Hundreds of books and papers on the psychology of religion used similar survey methods, which allowed researchers to trace levels of religious commitment and frequency of different religious experiences (e.g. service attendance, prayer, trances, doubt) by people's demographic characteristics and social attitudes.

Some papers define religion through its behavioral aspects, such as service attendance, whereas others define it through people's self-reported belief in God, or their response to the one-item question "how important is religion in your life?" Diverse measures of religion are not inherently problematic, but papers seldom specify that they are dealing with a very specific element of religion, instead claiming that they have discovered some truth about "religion" writ large. Different definitions of "religion" are especially problematic because they often show divergent predictions.

A challenge of measuring religion is that it is inherently different for Christians, Muslims, Jews, Buddhists, Hindus, and people of other faiths, yet many measures of religiosity have been developed in the United States. Indeed, perusing through Peter Hill and Ralph Hood's influential *Measures of religiosity* reveals items that explicitly mention Jesus and the Christian God (Hill & Hood, 1999). Some scholars have tried to develop more culturally generalizable measures of religious belief. For example, the "Supernatural beliefs scale" (SBS) developed by

Jamin Halberstadt and Jonathan Jong contains 10 items designed to capture "universal" religious beliefs (Jong, Bluemke, & Halberstadt, 2013), and the research team has more recently published a cross-cultural test of the scale (Bluemke et al., 2016). The SBS is certainly a step in the right direction, but still contains items asking about belief in "Hell," "Miracles," and other highly Abrahamic concepts. The challenges of measuring religion cross-culturally raise the provocative question of whether religion *can* be measured cross-culturally, and whether "religion" is really a cross-culturally generalizable construct. Since many American studies have focused on religion in America, these broad questions about religion and culture have not received much treatment. Notwithstanding, they are important to resolve in future research.

In the mid-20th century, many studies moved away from measuring religion as a unidimensional construct, and began using new techniques of dimension reduction to identify different clusters of religious beliefs. The foremost of these techniques has been factor analysis, which uses maximum likelihood estimation to detect covariances between measurement items and identify latent "factors" based on these covariances (Thurstone, 1931). Factor analysis has a dark origin story; its early developers tried to use the method to argue for racial differences in temperament and intelligence (see Gould & Gold, 1996). However, factor analysis has evolved into a useful and generative tool across the social sciences. For instance, factor analysis has shed light on alternative forms of religion, and has identified adjectives to describe God that have high rates of co-endorsement (e.g. loving and merciful) relative to other adjectives (e.g. mystical, wrathful) (Gorsuch, 1968).

Many classic studies in the psychology of religion have used experimental methods. Experimentally studying religion can be difficult because it is nearly impossible to manipulate religion, and even more difficult to reproduce studies that have claimed to manipulate religion.

However, it *is* possible to briefly "prime" different religious beliefs and observe how these primed beliefs can influence human behavior (Willard, Shariff, & Norenzayan, 2016). For example, a contextual religious prime may ask people in the field to complete a questionnaire as the call to prayer rings in the background (Aveyard, 2014), whereas a subliminal religious prime may present the word "God" during a lexical decision task or ask participants to unscramble sentences containing religious content (Pichon, Boccato, & Saroglou, 2007).

There is currently a debate in the psychology of religion about the reliability of religious priming. On the one hand, many of the field's most famous studies have used brief religious primes to impact behavior in important ways (Shariff et al., 2016). Preston and Epley (2008) found that asking participants to list phenomena that God could explain also decreased their trust in scientific explanations, Mazar, Amir, and Ariely (2008) found that asking people to read the ten commandments reduced their tendency to cheat in a subsequent game, whereas Shariff and Norenzayan (2007) found that unscrambling sentences increased people's donations to fellow participants in a dictator game. On the other hand, many of these findings have failed to replicate in large-scale preregistered studies (Gomes & McCullough, 2015; Verschuere et al., 2018). This debate has led to a greater shift away from subtle religious primes and towards more contextual or direct religious primes (e.g. White et al., 2019). A recent meta-analysis supports this approach, finding that explicit and contextual primes show larger effects than implicit or subliminal primes (Shariff et al., 2016).

Most of the classic methods in the North American science of religion focus on how to properly measure religion in individuals. However, new methods in psychology are gradually expanding this focus to measure religion across large-scale groups, and even across history. Some of these methods are not new per se, but they are just beginning to infiltrate psychological

studies. Cross-cultural coding is a good example of such a method. Cross-cultural coding involves reading ethnographic text and developing numerical codes to indicate the presence of absence of some feature in the society according the ethnography (Jackson, Gelfand, & Ember, 2020; Slingerland et al., 2020). For example, researches might code whether societies have premarital sex taboos, or whether they believe in Evil Eye based on an ethnographer's descriptions. The American cultural anthropologist Carol Ember is at the forefront of this expansion, and has recently collaborated with psychologists in coding projects that have examined religious belief across dozens of small-scale societies, broadening the scope and external validity of the studies' findings (e.g. Skoggard et al., 2020; Jackson, Gelfand, & Ember, 2020).

It has never been a better time to pursue cross-cultural coding projects, since large-scale databases are now emerging that contain extensive meta-data on ethnographically documented societies. For instance, D-Place contains information on the ecological, linguistic, and geographical characteristics of small-scale societies from around the world (Kirby et al., 2016), whereas the Database of Religious History contains pre-coded information about many of these societies that have been vetted by religious experts (Slingerland & Sullivan, 2017). The Human Relations Area Files (HRAF) contains a vast store of ethnographic text that has been annotated and tagged by subject so that researchers do not need to read entire ethnographies in order to find information relevant to their particular project (Ember, 1997). Watts and colleagues (2021) provide in-depth best practices for conducting these coding studies.

But despite the ease of cross-cultural coding projects, these studies are inherently correlational, and not suited for causal inference. Another limitation of these methods is that they wrongly assume that each society represents an independent unit of analysis (Bromham et al.,

2018), whereas societies may share many features due to their recent common ancestry and ongoing interactions (Campbell, 2013). A group of researchers has recently been leveraging insights about the history of language development to address both of these limitations. Comparative linguists use patterns of linguistic relatedness to reconstruct cultural phylogenies (i.e. family trees of cultural ancestry). These phylogenies make it possible to model the interdependence between cultural groups. A team of New Zealand researchers recently used these methods to show that beliefs in supernatural punishment (e.g. spiritual retribution for violating taboos) may have contributed to higher social complexity across-cultures, but belief in moralizing high gods (e.g. the Christian God) likely *followed* social complexity (Watts et al., 2015). Phylogenetic methods have not yet grown popular among American and Canadian researchers, but they represent a promising new direction for cross-cultural studies on the psychology of religion.

Methods of natural language processing (NLP) also use linguistic insights to scale up the psychology of religion (Manning, Manning, & Schutze, 1999; Jackson, Watts, et al., 2021). NLP models can capture the natural ways that humans use language to estimate sentiment and meaning in large stores of linguistic text. For example, NLP models based on word embeddings will map words to a multidimensional numerical space in which more proximal words have more semantic similarity than more distant words (Mikolov et al., 2013). NLP methods are advantageous both because they overcome social desirability biases in traditional survey scales, and because they allow researchers to study the beliefs and behaviors of thousands (and sometimes) millions of people without leaving their offices. NLP methods are already yielding insights into the association between religion and psychological processes (e.g. Ritter and Preston, 2014; Wallace et al., 2018; Watts et al., 2020).

Some studies have paired NLP methods with new forms of time series analysis such as cross-correlation, vectoral autoregression, and granger causality, which use intensive longitudinal data to make inferences about how variables are affecting each other over time. These studies have found that secularization is linked with rising individualism and declining cultural tightness—the strictness of social norms—in America (Grossmann & Varnum, 2015; Jackson et al., 2019). A recent analysis used these methods to capture people's views of God, finding that periods of conflict had the highest prevalence of Bible chapter references wherein God acts punitively but no change in Bible chapter references in which God behaves in a benevolent way (Caluori et al., 2020). These methods shed light on large-scale patterns of religious cognition and religious change, but they are still very rare in the American and Canadian psychology of religion.

Time series analysis, phylogenies, cross-cultural coding, and NLP all require empirical data to make insights about the psychology of religion. Agent-based modeling (ABM), however, allows researchers to simulate data to build theoretical models of large-scale religious phenomena (Jackson et al., 2016). ABM is best suited for findings related to emergence, where one phenomenon will give rise to a surprising and unrelated outcome. For example, a classic model of residential segregation showed that a moderate desire to live around 30% of similar neighbors could result in strikingly homogenous communities (Schelling, 2006), and a more recent study found that the motivation to reciprocate cooperation and share one's friends' social preferences could result in tightly clustered social groups, even without any social identity information (Gray et al., 2014). ABM is beginning to infiltrate studies of religion. For example, Justin Lane has used simulations to test hypotheses about the evolution of ritual, and the effects of supernatural monitoring and punishment on cooperation (Lane, Shults, & McCauley, 2019).

However, ABM still lies at the fringes of the psychology of religion, even though it is a valuable theory building tool.

These do not capture all the cutting-edge methods that are emerging in the psychology of religion. Other studies, for example, have used real-time tracking to simulate large-scale rituals and psychophysiological readings to test how ritual participants become bonded over shared experiences. These new methods promise a bright and interdisciplinary future in the psychology of religion where we can appropriately measure different facets of religious belief and behavior in single individuals and across the world's cultures.

Professional organizations. Division 36 of the American Psychological Association may be the largest organizational group focused on the psychology of religion and spirituality. Division 36 does not just host annual meetings for psychology of religion scholars, but also provides grants for the scientific study of religion and spirituality, and offers opportunity to meet collaborators and learn more about the internal workings of the field. In addition to APA's division 36, JTF also hosts a number of conferences related to the psychology of religion that offer these kinds of presentation and networking opportunities, and many conferences (such as the Society for Personality and Social Psychology) provide satellite "preconferences" that allow psychologists of religion to meet and present their work.

Educational context. There are also many centers for the psychological study of religion within the United States and Canada. The Centre for Human Evolution, Cognition, and Culture at the University of British Columbia hosts the Database of Religious History, and allows students to learn from a range of different mentors who use different methods to scientifically study religion. The Center for Moral Understanding at the University of North Carolina at Chapel Hill focuses specifically about religions role in politics and partisanship, whereas the

Center for Mind, Brain, and Culture at Emory University focuses on the evolution of religion and the universal vs. culturally specific attributes of religion. Arizona State University, University of Connecticut, University of Indiana at South Bend, University of Ohio, Grand Valley State University, and Duke University all have active researchers involved in the scientific study of religion, and would be good environments for students seeking further training in the psychology of religion and spirituality.

Future Development

Western theoretical relevance. Many American and Canadian scientists have helped us understand the origins of religion, the impact of religion on well-being, and the nature of religious conflict. Over the last 120 years, the science of religion in North America has bloomed into an interdisciplinary and productive area of research with dozens of journals and multiple supportive organizations and funding mechanisms. The North American science of religion faces challenges, most prominently relating to studying religious diversity and properly measuring religiosity. But our region's scholars have the ingenuity and resources to address these challenges, and we look forward to a more inclusive and expansive science of religion. We recommend that American and Canadian scientists conduct cross-cultural representative research, collaborate with non-Western scientists, take advantage of new methods in the science of religion, write articles for a broad audience, and take care in their measurement of "religion." Broadening the focus of our science may be the largest challenge that North American scholars currently face.

Contextual nuances.

Potential indigenous theoretical concerns. American and Canadian researchers and journals have probably published more papers about the psychology of religion than any other

world region. However, these papers have overwhelmingly focused on contemporary Abrahamic faiths, neglecting the tremendous religious diversity around the world and throughout time. Indeed, evidence of religion dates back tens of thousands of years, yet Christianity has only emerged in the last 2000, and only 29% of the world's population are Christians. A major goal for the North American scientific study of religion is to broaden its scope and generalizability, and to speak to the human psychology of religion, rather than just the 20th century Christian psychology of religion.

Some individuals and institutions are already making steps to diversify their research, especially in Canada. University of British Columbia's research program focuses specifically on cross-cultural and historical variation in beliefs, and the database for religious history represents a rich resource for studying religious differences. However, the overwhelming majority of American papers on religion focus on White and educated Christians, while claiming to identify broad insights about "religion." The authors of this chapter are not immune from this mistake, but we urge fellow psychologists of religion to study religion more broadly if they wish to make broad claims about religion.

Collaborative research opportunities. For those who wish to conduct cross-cultural research, we offer three tips for how to ethically study other religions and cultures. First, we recommend citing sources that are from the culture you are studying. This handbook is indeed a good place to start, since it features writers from many of the world regions. Second, we recommend transparent methods, such as publishing the measures you use in cross-cultural research and your justifications for these measures. There are many guides for cross-cultural research methods, but many of them do not mention open science practices, which will help people scrutinize whether measurement techniques and scales are really pancultural. Finally, we

recommend collaborating with more non-Western scientists, especially from world regions that you are studying. Many countries do not have the same funding infrastructure as the United States and Canada, and non-English speaking countries face language barriers to publication since most journals are English. Collaborations between Western and Non-Western scholars is therefore mutually beneficial.

Common faux pas. The psychology of religion in North America is a relatively small subfield, but nonetheless has some common misperceptions. One misconception is that North American psychologists who study religion prefer insularity. While North American psychology has historically lacked non-Western representation, many modern scholars in America and Canada are very motivated to collaborate with scholars from different religious backgrounds, and there is a push in the field to diversify religious research. Another thing many people may not know about the field is that studying religion from a psychological lens does not presuppose religiosity or lack thereof. Psychological theories of religion generally make no claims about the *truth* of religious beliefs, and instead study the nature of religiosity. Some psychologists who study religion are themselves religious, and some are not. A plurality of perspectives is important to deepening our understanding of the extraordinary and complex feature of human culture that is religion.

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