

What is Beyond Believing, Bonding, Behaving, and Belonging? Examining the
Comprehensiveness of the 4Bs Model

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DISSERTATION ABSTRACT

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Title: What is Beyond Believing, Bonding, Behaving, and Belonging? Examining the Comprehensiveness of the 4Bs Model

Existing psychological models of religiousness are likely to be biased in two ways. First, they tend to overly emphasize Christian, Western perspectives and assumptions on religiousness and what it means to be religious. Second, drawing on that emphasis, they tend to narrow the meaning of religiousness more than is necessary, resulting in a limited, non-comprehensive representation of religiousness. By utilizing a culturally diverse set of samples, my research investigated whether a prominent mainstream model of religiousness (the 4Bs model) was too narrow in the type of content it includes. Study 1 identified six groups of content that may be missing from the 4Bs model: fundamentalism, mysticism, integration of religion in public domains, consideration of religion (versus indifference), tolerance of religion (versus rejection), and valuing of religious artifacts. Study 2 examined these content-groupings in greater detail with more diverse samples. The six groups of content were relatively independent of the 4Bs model, but only the mysticism and tolerance of religion content-groupings were fully, acceptably consistent across samples and helped predict relevant outcomes. Less consistent, but viable enough to deserve some future attention, were content-groupings involving fundamentalism and valuing of religious artifacts. Thus, mysticism (transcendent connection) and tolerance of religion are put forward as potential valuable additions to the 4Bs model.

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Chapter One: Introduction

What does it mean to be "religious"? What should be taken into account when judging how religious someone is? There are commonsense understandings of what "religious" means and which aspects that involves, but these understandings might not adequately encompass religious phenomena. Moreover, there are now scientific proposals about how to conceive and measure religiousness as a psychological variable, but these proposals may likewise not adequately encompass religious phenomena. The prospective research described for this dissertation addresses these topics, with a particular focus on a prominent mainstream model of religiousness within the psychology of religion. This chapter will provide an introduction to this research by first providing context for the study of religiousness within psychology, followed by a description of the problem addressed in this research, the research aims and objectives, the scope, and finally, the significance of the research.

Background

Religiousness is a widespread and consequential phenomenon worth research attention, yet there is little consensus on how it should be defined, particularly across scholarly disciplines. Some define religion using very specific parameters and others define it in broad, inclusive terms. Since the definition or type of religiousness used in research can affect the results (Hackney & Sanders, 2003), the lack of consistency in definitions presents an obstacle for research on religiousness.

In the psychological literature, constructs such as religiousness are often conceptualized in the form of models. One common method for developing models is factor analysis, which uses correlations to identify clusters of items or variables that go together. There are several decision-points in this process that can have a large effect on the results, such as the number of factors.

This determines how large the model is and how many aspects of religiousness it can account for. Another important decision is whether or not the factors are independent of each other. In some models, the factors are correlated with each other and in some models they are not. This decision is informed by theory-based expectations about the construct in question. In the case of religiousness, one would probably expect different aspects of religiousness to correlate with each other.

One of the challenges in creating models of religiousness is that cultural and religious groups differ as to which aspects of religiousness are relevant or emphasized in their context (Bielo, 2015, pp. 18–19; Durkheim, 1964, pp. 30–36). The concept of religion itself might be more applicable in some cultures than in others. In order to study religiousness across diverse populations or even to compare results from different populations, one would need a model of religiousness that generalizes across religious and cultural groups. To assess whether a model or measure generalizes to a new population, one needs to establish measurement invariance. There are three main forms of this, varying from looser to more stringent specifications for “fit.” Configural invariance establishes that the same items can be used to measure a variable in different groups (Fischer & Karl, 2019). Metric invariance, on the other hand, can establish that the item discriminates similarly between individuals with the same underlying trait (e.g., religiousness). In other words, a one-point increase in response to the item corresponds with the same increase in religiousness. Lastly, scalar invariance establishes that the items are equally related to the latent variable, in this case religiousness. This means that items are experienced as equally extreme in different samples. With all three forms of measurement invariance established, the measurement has the same properties in multiple populations, and researchers can compare the means and differences between those samples for the underlying construct.

There is sometimes a trade-off between generalizability and comprehensiveness, however. The most generalizable model of religiousness would likely be more reduced in form, limited to the few aspects of religiousness that are universal. A comprehensive model of religiousness, on the other hand, would include a higher number of dimensions and would likely be more informative and more predictive than a less comprehensive model, but it might not replicate across cultures as well. The ideal model would be generalizable and comprehensive. It would not leave out aspects of religiousness that are generalizable. The current study will assess whether there are any aspects of religiousness that could potentially be added to a current prominent model of the basic dimensions of religiousness to increase its comprehensiveness based on their demonstrated importance and generalizability (Saroglou et al., 2020). In other words, assuming this model is generalizable, is it as comprehensive as it could be?

Statement of Problem

The 4 Basic Dimensions of Religiousness model (i.e., the 4Bs model) might viably become a central model in psychology of religion, since research suggests that it is fairly consistent across cultures (Aditya et al., 2021; Dimitrova & del Carmen Domínguez Espinosa, 2016; Kumar et al., 2020). The 4Bs model was developed to capture the basic, universal differences of religiousness within cognitive, emotional, moral, and social domains (Saroglou et al., 2020). These four domains claim to translate into four basic dimensions of religiousness. (1) The **believing** dimension measures the cognitive part of religiousness, such as one's beliefs about transcendence and truth. (2) The **bonding** dimension measures the emotional part of religiousness, such as the experience of connecting with the transcendent and with other believers through ritual. (3) The **behaving** dimension measures the moral part of religiousness, such as values, norms, and virtues. (4) The **belonging** dimension measures the social aspect of

religion, such as community, identity, and tradition. Saroglou et al. (2020) argue that these four dimensions:

(a) are basic components delimitating religion from proximal constructs; (b) translate major distinct dimensions of individual religiosity; (c) can be conceived, across religious and cultural contexts, as religious universals, both in terms of presence and functional equivalence; and (d) are good candidates to study cultural variability in religion, since they differ across contexts in intensity, modes of expression, and ways in which they are inter-related. (p. 1322)

The basic claims made about the 4Bs model are that (a) one should take account of (exactly) four dimensions (factors) in measuring the basic nature of religiousness, and (b) given that there are four factors, these correspond to the four dimensions just described.

The term “dimension” is somewhat misleading in this context, since the 4Bs’ dimensions are not independent of each other and not intended to be independent. Instead, they are related to each other. Someone who scores high in believing is also likely to score high in behaving. Therefore, it would be more accurate to refer to them as subfacets of religiousness, which is how they will be referred to for the remainder of this dissertation.

The 4Bs’ measure has been used in religiously and culturally diverse samples. Two studies found configural and metric invariance: Aditya et al. (2021) between Muslims and Christians in Indonesia and Saroglou et al. (2020) among 14 different countries differing in religious heritage (Christian, Jewish, Muslim, and Buddhist/Taoist). The four-factor model was also an adequate fit in diverse samples consisting of Catholic, Christian, Hindu, Muslim, and nonreligious participants (Dimitrova & del Carmen Domínguez Espinosa, 2016; Ismail, 2018; Kumar et al., 2020). The four-item scales displayed adequate internal consistency in these

samples. Aditya et al. (2021), comparing the responses of Muslims and Christians in Indonesia, also found scalar invariance. However, Saroglou et al. (2020) did not find scalar invariance across the 14 countries with varying religious heritages. While there is only partial evidence for scalar invariance, the research so far suggests that the 4Bs model is relatively generalizable in some Christian, Hindu, and Muslim populations.

However, no studies have examined the possibility of a higher number of facets in addition to the four already established. Nevertheless, there is some evidence that there may be aspects of religiousness missing from the 4Bs, such as the kind of religious zealotry associated with fundamentalism. In the context of religion, fundamentalism involves a strict adherence to a set of religious teachings and rules believed to contain the basic truth about humanity and the supernatural (Altemeyer & Hunsberger, 2004; Brandt & Reyna, 2010; Saroglou et al., 2022). Fundamentalism is connected with the 4Bs across diverse religious groups, especially with Believing and Behaving, but the correlations between fundamentalism and the 4Bs are smaller than the intercorrelations of the 4Bs' subfacets, making it relatively independent from them (Saroglou et al., 2020, 2022).

Another aspect of religiousness that may be beyond the 4Bs is one's attitude toward supernatural beings. Taking comfort in God was positively related to the 4Bs among Christians and Muslims, and feeling anger toward God was negatively related to the 4Bs among the same groups (Aditya et al., 2022). The comfort attitude overlapped somewhat with the 4Bs among Muslims, with correlation sizes comparable to the correlations among the 4Bs subfacets. The anger attitude, on the other hand, shows relative independence from the 4Bs through its weaker correlation sizes among Muslims. The nature of the relationships between one's attitude toward supernatural beings and the 4Bs' subfacets may vary based on many contextual factors, such as

time and denomination. It should also be noted that both of these religious groups are Abrahamic, so this finding might not generalize to other religions. Additionally, personal relationships with deities or even concepts of deities are not universal among even all major religions, so this aspect of religiousness may not be a generalizable one.

Based on the content of the 4Bs' items, there are other aspects of religiousness that may be missing. Although the bonding subfacet touches on mystical experiences, the content of the items shows that it measures only a narrow type of mystical experience (Saroglou et al., 2020). More specifically, the items describe enjoying religious ceremonies/rituals, religious activities/practices, and the artistic expressions and symbols of religion. The items do not touch on mystical experiences of connection or the meaning that one can glean from mystical experiences.

The content of the 4Bs also do not seem to capture differences within the full spectrum of interest in and attention to religion, failing to define what the low scores represent. For example, it does not distinguish between those who are hostile to religion and those who are indifferent to religion. In addition, the content of the items indicates that the scale may not be able to measure differences among those with extremely high levels of religiousness. The relative independence of fundamentalism from the 4Bs provides some evidence for this, since fundamentalism often involves more intense/extreme religious motivations (Saroglou, 2016). These gaps imply that more than four constructs may be needed to measure the basic nature of religiousness.

Adding more facets to the 4Bs could be beneficial in a number of ways. More facets would increase the 4Bs' comprehensiveness, allowing the model to capture more nuanced aspects of religiousness and increasing its power to predict important outcomes (Saucier &

Iurino, 2020). Accordingly, adding more content to the 4Bs model could result in a more nuanced model of religiousness that is better at predicting important outcomes.

Rationale

The present study seeks to determine whether there are aspects of religiousness beyond those included in the 4Bs model (Saroglou et al., 2020), which posits only believing, bonding, behaving, and belonging. Assuming there are aspects of religiousness beyond the 4Bs, this research aims to examine whether the potential additions are generalizable across culturally and religiously diverse samples and whether they display similar correlations with important outcome variables.

In order to identify whether there are aspects of religiousness beyond the 4Bs, the first objective is to gather a pool of items from existing measures in the research literature (that appear to have content plausibly beyond the 4Bs model). Secondly, the pool will be reduced via linear regression to eliminate the items that overlap the most with the 4Bs' subfacets. Next, the pool of items will be differentiated into several factors and compared to the 4Bs' scales to determine their independence.

To examine whether the potential additions are generalizable, the second objective is to compare the factor structure, reliability, and the potential additions' correlations with the 4Bs' subfacets across culturally and religiously diverse samples. The samples selected for this study are a university sample from the U.S. (predominantly Christian and non-religious), a community sample from the U.S. (Christian), a community sample from India (Hindu and Muslim), and two samples from Iran (Muslim). Last, the power of the potential additions to predict important outcomes (need for closure, meaning in life, and life satisfaction) will be assessed via hierarchical regression. The purpose of this last step is to provide evidence that the potential

additions could improve the 4Bs model in its ability to predict outcomes, which is one of the main functions of psychological models.

Scope

There are a few ways in which the scope of this project is limited. First, this research (and researcher) is positioned within a Western context and certain associated conventional understandings of religion and religiousness which may emerge to be a limitation of some kind.

Secondly, this research is using the 4Bs model as a starting point and accepting the conventional view of religiousness from Saroglou et al. (2020). There are some important limitations to the conventional view of religion, including the assumption that it is a coherent cross-cultural category and that it can be effectively differentiated from constructs such as non-organized spirituality, astrology, and patriotism. These limitations will be discussed further in Chapter 2.

In the process of selecting items and identifying potential additions, this study uses a definition of religiousness that errs on the side of including spirituality and mysticism. Clearly separating religiousness from proximal constructs, such as spirituality and mysticism, is very difficult. This study errs on the side of inclusion, because it is easier to rectify that in later research. Thus, there is some content considered religious for the purposes of this research that may have a more complex relationship with religion. On the other hand, there may be religiousness-related phenomena not included in the construct of religiousness for this research that may be worthy of future consideration, such as patriotism or Marxism.

The study focuses on identifying whether there are aspects of religiousness beyond what is included in the 4Bs model, but it is not expanding the 4Bs by creating scales. Assuming there are aspects of religiousness beyond the 4Bs, this research aims to explore their value as potential

additions to the model. More rigorous research would be needed to create and refine subscales for any potential additions.

The sample size is limited to 809 university students for the first study and 100-200 for the samples in the second study. Secondly, this study includes a limited number of cultures and religions. Only populations in which religion is generally a relevant and applicable concept were studied. The populations were also selected to maximize both religious and cultural differences, although practical constraints (funding and time) also played a large role.

The religions represented in Study 2 are Christianity, Hinduism, and Islam. Each of these stretch across many countries and cultures, and are vast, complex, internally heterogeneous traditions. Because of this, some refer to them in plural (i.e., “Christianities”, “Hinduisms”, and “Islams”) to acknowledge the multiplicity of manifestations that exist. In this research, they will be referred to in simple, singular terms as a form of convenient shorthand.

Significance

Religiousness is associated with important outcomes, such as mental and physical health and well-being (Coelho-Júnior et al., 2022; Jim et al., 2015). However, much of the research on religiousness is heavily biased by Western, Christian-centric perspectives. This bias extends to most of the researchers of religiousness, most of the participants used in the studies, and even the scales used to measure religiousness. One consequence of this bias is that existing models of religiousness may not be comprehensive enough. They may fail to take account of non-Christian perspectives as to how religiousness should be defined or what should be included within a model of religiousness. This research assesses whether there are any aspects of religiousness that could potentially be added to the 4Bs model to increase its comprehensiveness (Saroglou et al., 2020).

Psychological research as a whole has a strong history of Western bias. One study found that 96% of the participants in studies published in the top six psychology journals were from Western industrialized countries (Henrich et al., 2010). This research endeavors to reduce this bias in two ways. First, the operational definition for religiousness was carefully chosen, because it influences what type of content is considered as a potential addition to the 4Bs and what is excluded. The operational definition was chosen based on a review of primarily anthropological literature, because that field studies a wider range of cultures and religions compared to the field of psychology. Second, this research used culturally and religiously diverse samples. Study 2 includes American Christian, Indian Hindu, Indian Muslim, and Persian Muslim samples.

Structure of Dissertation

The context of this research has been introduced in Chapter One, along with the research objectives. In Chapter Two, the existing literature will be reviewed and an operational definition will be laid out. The model of religiousness that this research examines, the 4Bs, will also be introduced, along with important outcomes often related to religiousness. The methodology for Study 1 will be explored in Chapter Three, and the results from Study 1 will be presented in Chapter Four. In Chapter Five, the methodological choices for Study 2 will be introduced; and, in Chapter Six, the Study 2 results will be presented. Finally, the general results of this research will be discussed in Chapter Seven.

Chapter Two: Literature Review

This chapter explores two primary questions in the literature: What is religiousness, and how does it impact other aspects of everyday life? To explore the first question, common definitions and measurements of religiousness will be reviewed from both the psychological and anthropological literature. Since religiousness is often difficult to separate from spirituality and mysticism, those two constructs will also be briefly reviewed. The second half of this chapter will focus on how different aspects of religiousness impact important psychological outcomes, and whether these findings generalize or not.

What is Religiousness?

It is necessary to operationalize religiousness for the purpose of this research, because it guides what content is considered as a potential addition to the 4Bs. The process for settling on an operational definition was also important. The default definition of religiousness from the literature would be based on a Christian understanding of religion since most research on religiousness is from predominantly Christian countries and, typically, the researcher and author of these studies is from a predominantly Christian country. Thus, the “default” definition of religion would very likely be overly narrow, excluding aspects of religiousness important in many other religious populations.

The current study builds on research done by Saroglou et al. (2020), so a starting point was a definition of religiousness that reflects their work: valuing, enjoying, or being attached to religion in some way. Saroglou (2011) defines religion primarily as made up of the four subfacets described earlier: bonding, behaving, believing, and belonging. Since this research is attempting to look beyond the 4Bs, I drew on theoretical and empirical research on religion to create a broader operational definition for this study. I sought a relatively wide and inclusive way

of defining religion that would not omit potentially relevant concepts/variables. To this end, it was particularly useful to consult sources from cultural anthropology since investigations of that field have tended to take account of very wide cultural variation and diverse religions. Since this study focused on a psychological model of religiousness, the various operationalizations of religion within psychological studies were also explored.

Definitions in Theoretical Literature

Many definitions focus on belief in the supernatural as a key component of religious involvement. An early contributor to anthropology from England, E. B. Tylor stated that “all human religion is united by ‘belief in spiritual beings’” (as cited in Bielo, 2015, p. 6). Many other theorists place a similar emphasis on belief in supernatural entities (Atran & Norenzayan, 2004; Bielo, 2015; Durkheim, 1964; Malinowski, 1954; Saroglou, 2011). According to Durkheim (1964), religious beliefs classify everything as either sacred (holy and pure) or profane (evil and impure). Some theorists describe the structure of beliefs by identifying their components that include the existence and nature of the divine, the purpose of the divine, and how humans can implement that purpose (Glock, 1962; Tarakeshwar et al., 2003). There are some belief-focused definitions, like those from Spencer and Max Muller (as cited in Durkheim, 2012), that describe belief in inscrutable, inconceivable beings.

Some scholars include a different mental component – knowledge of doctrine (Saroglou, 2011). Different types of knowledge are important depending on the religion: knowledge of the sacred text or official beliefs, knowledge of the law, or knowledge of the origin of the faith to name a few (Glock, 1962; Richards, 2015). The importance of this knowledge varies depending on both the religion and the individual. Last, the intellectual manner in which individuals

approach their beliefs differs (Tarakeshwar et al., 2003). They may take either a looser, more metaphorical approach, or a more orthodox, literal approach.

Other theorists, such as William James (1902), focus on individual experiences of religion. According to Geertz (1973), experience with religious beliefs and rituals can shape people's emotions and motivations. Awe is one of the most commonly recognized religious emotions (Saroglou, 2011), but Glock (1962) identifies four other important experiences or "religious feelings" (p. 104): a need for belief in the divine, an awareness of the divine, a trust in the divine, and a fear of the divine. These experiences can be self-transcendent, uniting the individual with something that is beyond the self, like a divine being, a supernatural force, or a moral community (Bielo, 2015; Durkheim, 1964; Saroglou, 2011). The subjective experiences and emotions just described then impact one's understanding of "the general order of existence" (Geertz, 1973, p. 13). Some theorists emphasize this aspect, defining religion as the process of making meaning in the face of transcendent experiences and existential dread, which they identify as the primary purpose of religion (Bielo, 2015; Paloutzian, 2017; Zinnbauer et al., 1999).

Religious practices, encompassing a wide range of communal and individual activities, are a common theme in definitions of religiousness. Anthony Wallace (as cited in Bielo, 2015) lists several behaviors associated with religion: prayer, music, physiological exercise, exhortation, reciting the code, simulation, mana, taboo, feasts, sacrifice, congregation, inspiration, and symbolism. Theorists often focus on the way these religious acts connect the religious to the supernatural entity/entities they believe in or accept the existence of (Zinnbauer et al., 1999). Some definitions mention the use of religious acts to harmonize with or conciliate supernatural entities (Frazer, 1922; Zinnbauer et al., 1999). In other definitions, the intent is to

appeal to a supernatural entity, in order to achieve one's desires or prevent something undesirable (Bielo, 2015; James, 1902).

Durkheim (1964) differentiates religious behavior from nonreligious behavior by its connection to sacred things. In connecting religious behavior to the notions of sacred and profane, Durkheim expands "religious practice" to include the religious rules and taboos that often stem from the sacred/profane distinction. The profane must be kept separate from the sacred, and, in the case of monasticism, the profane must be avoided, to keep oneself pure. Often individuals must follow certain rules when in contact with the sacred, out of respect and reverence. While not the focus of many definitions, laws and rules are also included in other definitions as well (Glock, 1962; Tarakeshwar et al., 2003).

Many theorists contextualize their definition of religion by describing it as community based. Instead of focusing on belief and religious practice on an individual level, these definitions describe beliefs and practices that are shared by a community (Atran & Norenzayan, 2004; Durkheim, 1964). As Richards (2015) describes, this shared perspective can result in shared meaning, which can bind a community together. Malinowski (1954) uses community to differentiate between "magic" and "religion," describing religion as personal and communal and magic as impersonal. Religion can also provide a guide for interaction among members of a society (Bielo, 2015). Robertson Smith argued that religion is not mythology but the ethics of community living (as cited in Douglas, 2013). In fact, several theorists argue that the main function of religion is that it provides social unity and establishes order in society (Durkheim, 1964; Frazer, 1922). There are other aspects of society and institutions that may have this same function, so the community component cannot be used to define religion by itself. Instead, it is combined with the other aspects of religiousness highlighted above.

To summarize, definitions of religion have often included aspects of belief, individual experience, religious practice, and community. Although belief in the supernatural was a common theme, it requires a broad understanding of the term “supernatural beings” and “belief.” Many scholars argue that a definition focusing heavily on beliefs is Christian-centric, since beliefs are not central components of all religions (Bielo, 2015). Durkheim (1964) argues that even referencing supernatural beings or gods limits the definition, but this argument rests on a narrow understanding of “supernatural beings.” Many religions that don’t have gods have ancestral spirits that could also be considered “supernatural” or involve humans that have reached an “elevated state,” and while “belief” may not be the best term to apply in all cases, there is at least an acceptance of the fact that these beings exist.

Although the definitions reviewed so far have been carefully crafted with an intent to be inclusive of diverse religions, they are still limited. Our modern understanding of religion has been heavily shaped by Christianity (Asad, 1993). Asad traces the term back to the first attempts to define a “universal religion” in Europe in the seventeenth century. This attempt was led by Christians and presented religion as a separate construct from science, politics, and common sense. Asad argued that “there cannot be a universal definition of religion” because religion cannot be separated from its historical and political context (1993, p. 29). As discussed earlier, this research is not seeking to overhaul the conventional framework of religiousness, but to build on an existing psychological model of religiousness. However, it is important to note that there are many questionable assumptions embedded within this framework.

Operationalizing Religiousness Through Measurement

Although definitions of religion and religiousness impact measurement in psychology, it is the operationalization of the construct that impacts the field most directly. Thus, examining

how popular measurements operationalize religiousness will result in a clearer, more nuanced understanding of what religiousness means in psychological literature. The following section will describe the components of religiousness included in measures as they relate to the main themes identified earlier: belief, subjective experience, ritual, and community.

Belief. Although focusing too much on beliefs can result in a Christian-centric measure, it is also difficult to exclude them entirely. Most definitions described in the first section focused on belief in something supernatural or transcendent as one of the core components of religion. This is reflected in many measurements of religiousness (Abu Raiya et al., 2008; Bond et al., 2004; Delaney, 2005; Lace & Handal, 2019; MacDonald, 2000).

Belief in the supernatural is the focus of many measurements and definitions because it is one of the few beliefs that overlaps across diverse religions. However, it is not the only belief that is included in measures of religiousness. In many religions, there are beliefs and practices surrounding death – what death means and what happens after death. Belief in an afterlife, as measured in the Personal Religious Inventory, is fairly common among religions (Lace & Handal, 2019). The Expressions of Spirituality Index delves into beliefs that are not overtly religious, but that are often held by religious people (MacDonald, 2000). It also measures belief in the paranormal, which, in some cases, is completely unrelated to religion or religiousness. In the Western cultures, for example, superstitiousness and occult beliefs are often unrelated to religious affiliation (MacDonald, 2000). In other cases, however, belief in the paranormal may play a small or even a large role in someone's religious beliefs.

In addition to measuring the content of beliefs, psychologists also measure the manner in which the beliefs are held. One of the important pieces here is certainty – how confident a person

is that their beliefs are absolutely true, even without justifiable reasons for that certainty. This is the focus of Altemeyer's DOG scale (2002), which measures dogmatism.

Other measures focus on the power that religious institutions have over personal belief. Religious institutions (especially Christian ones) frequently have "official beliefs" or doctrine. Those who score high in the Revised Religious Fundamentalism Scale firmly agree with the official teachings of their institution (Altemeyer & Hunsberger, 2004). Not only do those who score high in fundamentalism believe the official teachings, but they also feel a desire to protect these truths and live strictly by the set of rules promulgated by their religious institution or organization. This fundamentalist devotion can also be focused upon the sacred text of a religion (Williamson et al., 2010).

Religious Experiences. Another way to measure religiousness is to focus on the subjective experiences associated with it. This can be challenging, since there is a lot of overlap between the subjective experiences of nonreligious people and the subjective experiences of religious people. The challenge is to make measures that are accessible and relevant to both groups. The more general measures that simply assess having or being open to having sacred experiences are the easiest to adapt to both groups (G. L. Hall & Hall, 2019; MacDonald, 2000; Tatała & Walesa, 2020; Unterrainer et al., 2012; Williamson et al., 2019). Seidlitz et al. (2002) approached this challenge by splitting their measure of sacred (or mystical) experiences into a subscale of god-related items and one that described these experiences in general spiritual terms.

Building on conceptual work from W. T. Stace, Ralph Hood (1975) developed an influential measurement of religious experiences, named the Mysticism Scale. In this measure, he identified certain qualities of sacred (or mystical) experiences that he captured in subscales. One such quality is the experience of everything (even physical material) as having an "inner

subjectivity” (Hood, 1975, p. 32). These experiences can also alter one’s perception of space and time, rendering the experience “timeless” and “spaceless” (Hood, 1975; Yaden et al., 2018). A person may also express a sense of religious awe and reverence (Hood, 1975). According to Hood (1975), a person may experience mystical experiences as sources of knowledge. And yet, these experiences are often hard to describe. Yaden et al. (2018) add a few more descriptions in their Awe Experience Scale. A person’s sense of self is often reduced as they feel small, not only mentally, but also physically. They also experience distinct physical sensations, like the freeze response or goosebumps. Yaden et al. also describe a perception of vastness, whether a visible vastness or the vastness of an idea or concept.

These nuanced religious experiences can be very impactful for an individual’s cognition. The Spiritual Transcendence Index measures how these experiences affect one’s self-perceptions, feelings, goals, and abilities to cope with difficult situations (Abernethy & Kim, 2018; Seidlitz et al., 2002). Most other scales focus on narrower impacts such as how these experiences result in transformation and healing (Delaney, 2005). As mentioned in the previous paragraph, these experiences are often perceived as sources of knowledge (Hood, 1975). Several scales reflect this theme, measuring how insights and beliefs about the universe are developed through these experiences (Albursan et al., 2016; Saucier, 2013; Unterrainer et al., 2012). To accommodate this newly-gained knowledge, a person may need to shift their pre-existing mental schemas (Yaden et al., 2018).

Relational Transcendence. Emphasis on “relation” informs a subclass of measures related to religious experiences. Several religious scales measure the act of connecting with a supernatural entity through sacred experiences (Ghorbani et al., 2013; Tatala & Walesa, 2020; Williamson et al., 2019). The Muslim Experiential Religiousness Scale more specifically

measures “submission to, closeness to, and love of God” (Ghorbani et al., 2013, p. 235).

However, one’s relationship with the supernatural, though critical for some religions, is not explicitly centered in many measures.

Themes of transcendent connection are much more common in measures of spirituality and mysticism. Some scales focus on connection with other humans (Delaney, 2005; Piedmont, 1999; Wheeler & Hyland, 2008; Yaden et al., 2018). A few scales also measure connection with nature (Delaney, 2005; Wheeler & Hyland, 2008). Most measures of mysticism and spirituality have a subscale, or at least some items that focus on feeling connected to the universe (Hood, 1975; Ng et al., 2017; Piedmont, 1999; Underwood & Teresi, 2002; Wheeler & Hyland, 2008). This is often described as transcendent and feeling as though everything is one. Piedmont’s Spiritual Transcendence scale (1999) measures a feeling of shared responsibility stemming from both the connection to others and connection to the universe. If a supernatural being needs to be involved for an experience to be religious, then the experience of connecting with other humans, nature, or the universe may not be religious. However, even in those cases, the experience is often described as a type of connection that transcends everyday experiences and falls outside the regular course of natural events, so one could argue that the connection itself is supernatural.

Meaning. Since meaning-making is an individual process that can impact physical and mental well-being, it makes sense that meaning is a common theme in measures of religiousness. There are several scales that measure the meaning pulled from beliefs, rituals, and prayers (Piedmont, 1999; Saroglou et al., 2020; Unterrainer et al., 2012). A spirituality scale from Delaney (2005) takes a more direct approach, measuring the search for meaning and the transformation that can result from finding that meaning. The meaning a person gleans from religion may also impact their social and political attitudes. One of the Personal Religious

Inventory subscales measures this by assessing how much religious beliefs fuse with other realms of thought: social, political, and moral (Lace & Handal, 2019).

Religion can offer hope and meaning when one is faced with death and existential fear. There are several scales that measure the use of beliefs in wrestling with this fear (Abu Raiya et al., 2008; Albursan et al., 2016; MacDonald, 2000; Unterrainer et al., 2012; Vandecreek & Nye, 1993). The Style of Religious Experience Scale (SRES) examines the way in which people interact with religion when experiencing difficulties in life (Tatala & Walesa, 2020). A person may find peace in these circumstances by clinging to their religion and deepening their relationship with a supernatural entity. Religion is not always a source of comfort, however; a person may perceive the supernatural entity as the source of their problems. Garey et al. (2016) measure a person's tendency to attribute both positive and negative things in their life to a supernatural entity in the Religious Attribution Scale. There are similar scales that capture the experience of one whose relationship with a supernatural entity and religion as a whole breaks down and destabilizes when difficult things happen (Abu Raiya et al., 2008; Tatala & Walesa, 2020).

Religious Practice. Because it involves actual behavior, religious practice is one of the most concrete ways of measuring religiousness. These practices can include praying, meditating, studying a sacred text, engaging with media related to one's religion, and attending religious services. Scales differ in how questions about these activities are framed. Some, like the Duke Religion Index (DRI), include concrete items that focus on how much time an individual spends on these activities or how often they engage in them (Abu Raiya et al., 2008; Koenig & Buessing, 2010). One can also measure the internal aspect by asking about people's enjoyment in these acts (Francis et al., 2017; Saroglou et al., 2020).

Although there are many types of individual religious practices, numerous scales focus specifically on prayer. Many of these measures are used to examine the impact of prayer on the individual. A subscale from Piedmont's Spiritual Transcendence scale (1999) does precisely that – with content centering the feeling of fulfillment and strength resulting from prayer. Similarly, extrinsic perspectives on prayer can be seen in other scales (Francis et al., 2017; Gorsuch & McPherson, 1989). One can also examine prayer from a holistic, nuanced perspective, as demonstrated in the Inward Outward Upward Prayer Scale (Ladd & Spilka, 2006). This scale measures the different ways that people use prayer: to address internal concerns of oneself and others, to experience peace by connecting with the divine, to share in another's pain, and to boldly center one's own desires and need.

Motivation for Religious Practice. Psychologists continue to emphasize the motivations behind religious practice, differentiating between extrinsic and intrinsic motivations. Some scales emphasize the personal benefits of religious activities, centering extrinsic motivation (Bond et al., 2004; Khodayarifard et al., 2018). Emotional well-being is the most frequently mentioned extrinsic benefit of religion with specific reference to happiness and peace (Bond et al., 2004; Gorsuch & McPherson, 1989; Khodayarifard et al., 2018). Prosperity is also mentioned as a benefit of religion in the Abrahamic Religiosity Scale (Khodayarifard et al., 2018). Another extrinsic source of motivation for religious behavior is community. According to the Self-Determination Theory, one of a human's core needs is to feel love and care in connection with others (Van den Broeck et al., 2016). Religion can be an effective source of community, meeting this core need. The Religious Orientation Scale assesses whether an individual is motivated by social benefits, such as making friends and gaining a social network (Gorsuch & McPherson, 1989).

Other scales center intrinsic motivation, emphasizing how beliefs impact behavior in daily life (Abu Raiya et al., 2008; Gorsuch & McPherson, 1989; Lace & Handal, 2019). This aspect of religion is demonstrated in the behaving scale from the 4Bs measure developed by Saroglou et al. (2020). The behaving scale measures how religion, through its endorsement of values and ethics, becomes a guide to behavior. By integrating fully with people's thoughts, behavior, and feelings, religion often becomes centered in a person's life. There are several measures that capture this phenomena, i.e. the degree to which someone's central purpose in life is rooted in their religious beliefs and practices (Koenig & Buessing, 2010; Lace & Handal, 2019; Tatala & Walesa, 2020). Such intrinsic motivation suggests that individuals perform these behaviors not because it improves their life or because someone told them to, but because they believe in the ideas behind them.

Community. The presence or absence of community is one of the ways that academics and non-academics alike separate religion from spirituality. One can measure engagement in religious community by examining a person's participation in communal religious practice, as described earlier. Some scales, however, focus on communal identity, rather than looking at the behavior itself. In their belonging subscale, Saroglou et al. (2020) measure how important the community and identity aspects of religion are to people. A person's religious community can extend far beyond their local religious connections, creating global communities. Illustrating this, one measure of Islamic religiousness assesses the degree to which the participant identifies with all other Muslims across the world (Abu Raiya et al., 2008).

Given the emphasis on community, it is not surprising that many religious precepts and teachings focus on guidance for good, healthy relationships. This focus is reflected in the Psychological Measure of Islamic Religiousness (PMIR), which has a subscale on ethical

principles for interacting with others (Abu Raiya et al., 2008). A similar focus can be found in other scales which measure forgiveness, gratefulness, and compassion (Underwood & Teresi, 2002; Unterrainer et al., 2012).

Summary of Operationalizing Religiousness Through Measurement. To recap, there is a wide variety of ways to measure religiousness. Some measures focus on different types of beliefs and the ways in which beliefs are held, such as fundamentalism or dogmatism. Other measures focus on religious experiences, which can be difficult to separate from non-religious spiritual experiences. Many religious experiences feature themes of connection and meaning. A more concrete way of measuring religiousness is by focusing on religious activities, such as prayer or worship. There are also several measures that focus on the motivation behind engaging in these activities. Lastly, some measures focus on the community aspect of religion, such as identity or engagement.

As the 4Bs model demonstrates, one needs to take into account multiple kinds of content in order to capture religiousness. However, the 4Bs may not cover all the possibilities. Some important ways of measuring religiousness may be left out, such as the more extreme fundamentalist/dogmatic ways of holding religious beliefs or mystical experiences of connection. The 4Bs model also does not include items related to religious activities, instead focusing on moral rules and religious motivation.

There are many measures of religiousness, and not all of them were included in the foregoing review. The review focused first on commonly used measures of religiousness or religiousness-related constructs, such as the Duke Religion Index and the Intrinsic/Extrinsic measurement (Gorsuch & McPherson, 1989; Koenig & Buessing, 2010). Secondly, the review also prioritized newer measures, such as the Style of Religious Experience Scale and the

Personal Religious Inventory (Lace & Handal, 2019; Tatala & Walesa, 2020). Because the majority of these measures were Christian-centric in their development, measures developed in other religions and cultures were included when possible, such as the Psychological Measure of Islamic Religiousness and the Abrahamic Religiosity Scale (Abu Raiya et al., 2008; Khodayarifard et al., 2018). Scales that were adaptations of existing scales or older, less commonly used scales were not included in the foregoing review. Scales were also avoided if they were intentionally measuring an element of religiousness specific to Christians.

A pool of items was collected from existing measures of religiousness for Study 1, but most of the reviewed measures were not directly included in this pool. However, the foregoing review was vital in the process of understanding the scope of what is considered religious in the psychological literature. The measures and items utilized in Study 1 were specifically sought in order to collect a pool of items that might have content potentially beyond what is included in the 4Bs model. Scales of religiousness that overlap too much with the 4Bs model or with items already collected were not included.

Generalizability of Religiousness Measures. Most of the scales described in the foregoing review were not developed with diverse samples. Upwards of 60% of the samples used were predominately Christian (majority Protestant). Around 17% of the samples were taken from Muslim communities. The remaining samples were made up mostly of non-religious participants and participants whose religion was lumped into an “other” category. These proportions are not representative of the world at large, indicating that there is bias in the religious diversity of the samples. Globally, Christians make up less than a third of the population and Muslims make up about a quarter (Hackett, 2025).

The cultural diversity of the samples is also concerning. Over 65% of the samples were taken from either North America or Europe and over half of the samples were specifically U.S.-based. Only a minority of the studies shared information about ethnicity, but out of those studies, most of the participants were White (average of 80%). College students were the main participants of around half of the studies, limiting the generalizability even further. Again, these proportions are not representative of the world at large, and there are important differences between these groups (Henrich et al., 2010). This highlights the need for more research on religiousness on religiously and culturally diverse populations. Based on the limitations of the existing research, extra care must be taken when interpreting the themes resulting from this review.

Religiousness and Related Concepts

Another challenge in defining religion is distinguishing between religion and similar concepts. There are many terms that are associated with religion that can overlap but are also used separately from religion, such as mysticism, spirituality, and the sacred. The following sections will address both spirituality and mysticism, defining each term and exploring how they can intersect with religion or be independent from religion.

Spirituality. Spirituality is often defined in relation to transcendence, something beyond everyday experiences. Often this transcendence is referred to as a being or entity: God, the Sacred, Higher Powers (Harris et al., 2018; MacDonald et al., 2015; Zinnbauer et al., 1997). Many scholars consider spirituality to concern a relationship or connection with a transcendent being. Others focus more on a transcendent dimension or a transcendent experience (Lau et al., 2016; MacDonald, 2000; Zinnbauer et al., 1999).

Many scholars consider spirituality to involve unique relationships or connections (Abernethy & Kim, 2018; Lau et al., 2016). It may be the nature of the relationship that makes it unique, rather than whom the relationship is with. Hyland et al. (2010, p. 298) describe spirituality as a sense of connection that is “experienced as transcending the kind of connection that normally characterises a person's life.” Hyland et al.’s Spiritual Connection Questionnaire includes items that describe the sense that everything is bound together and items that describe a deeper connection with others (i.e., connecting with a person’s soul or sensing an “inner light” in each person). To this point, some definitions of spirituality refer to transcendent connections with nature, oneself, or other people (MacDonald et al., 2015; Zinnbauer et al., 1997).

There are certain qualities associated with spiritual experiences that help distinguish them from other types of experiences. Among psychologists, especially those studying monotheistic traditions, spiritual experiences are often thought of as personal and individual, as opposed to communal (Lau et al., 2016; Zinnbauer et al., 1999). Some scholars describe a shift in one’s awareness during spiritual experiences (MacDonald et al., 2015). More specifically, one’s experience of self and identity shifts due to an awareness of transcendence, which can lead to lasting changes in one’s understanding of oneself and the world. A desire to integrate these shifts into everyday life may lead one to engage in spiritual practices (MacDonald, 2000; Zinnbauer et al., 1997).

Similar to religion, spirituality can be motivated by a search for meaning. Some scholars define spirituality as a result of a person’s attempts to answer life’s big questions (Harris et al., 2018; Lau et al., 2016; MacDonald et al., 2015). However, a search for meaning is not inherently spiritual. Definitions that reference meaning often place it in the context of transcendence. It’s likely that a person’s beliefs guide them toward a spiritual search for meaning, but it is also true

that spiritual experiences can impact beliefs (Abernethy & Kim, 2018; Zinnbauer et al., 1997). Spirituality is sometimes associated with dualistic beliefs: spiritual versus material, sacred versus profane, soul versus body (MacDonald et al., 2015). The frequent mention of transcendence in definitions of spirituality implies some degree of duality between the material, normal, everyday life and transcendent, spiritual experiences. There is a very similar duality in religiousness where there is some entity beyond nature and the human social world. In describing ancestral consciousness in Zulu culture, Edwards et al. (2011) represent ancestors as part of the spiritual realm. However, they also describe feeling integrated with their ancestors, which challenges the duality between the spiritual and non-spiritual realms. Thus, spirituality, as defined in the primarily Western- and Christian-centric psychological literature, concerns connections and experiences with transcendence that can have a profound impact on one's understanding.

Spirituality and Religiousness. There are two popular views among laypeople on how religiousness and spirituality are related (Zinnbauer et al., 1997): 1) They overlap but they are not the same concept and 2) Spirituality is a broad concept and includes religiousness. Both of these views assume that there is overlap between the two constructs, but that spirituality can exist outside of religion. In the field of psychology, there is debate over the extent to which spirituality and religiousness overlap or are distinct from each other.

There are several different ways people distinguish spirituality from religion. Some argue that religion represents a substantive extrinsic approach to the supernatural while spirituality uses a functional, intrinsic approach (Chatters et al., 2008; Zinnbauer et al., 1999). This argument defines religion by its substance and extrinsic elements, instead of its intrinsic function. But this ignores how religion actually works in individuals' lives – it often operates dynamically and

functionally in day-to-day life. And ignoring the substantive core of spirituality (belief in some type of transcendence) conflates it with philosophy.

Another argument is that religion is organized and collective while spirituality is personal and individual. It is true that individuals who identify as spiritual but not religious (SBNR) often engage with their spirituality on a more individual basis, but spirituality is also often a core aspect of religious life (Zinnbauer et al., 1999). Many individuals who are members of religious institutions still find spirituality to be an important part of their experience, both in their personal religious experiences and in their collective experiences. Among American Christians who identify as both spiritual and religious, the aspect of spirituality that is distinct from religiousness is the connection or relationship with supernatural entity/entities (God, Christ, Higher Power, transcendent reality, nature; Zinnbauer et al., 1997). Some have argued that spirituality and religion can both be defined (at least partially) by a process of searching for the sacred (Seidlitz et al., 2002).

It is important to note that some people are quite religious without being very spiritual (Marshall & Olson, 2018), but this tends to be a smaller group, and there is less research focusing on this population. Saucier and Skrzypińska (2006) found that people who are religious but not spiritual tend to be more authoritarian, more traditional, higher in collectivism, and less open to new experiences. Where there is an emphasis on conformity (high collectivism), there can be a sense of distrust about individual's subjective experiences of spirituality. Individual, subjective experiences could breed dissension or even "heresy."

Individual, nonreligious spirituality can still be impacted by its religious roots (Cho, 2019). In Christian-centric populations, religion is the context in which spirituality most frequently emerges, and even when people declare themselves SBNR, they are still influenced by

the religious context their spirituality emerged in (Houtman & Aupers, 2007; Zinnbauer et al., 1999). Some Americans who identify as SBNR are still affiliated with religious institutions (Johnson et al., 2018; Tong & Yang, 2018). While some religious institutions cater more to those who are SBNR, there are other ways in which those who are SBNR can seem conventionally religious, such as their religious activities (e.g., attending religious meetings and praying frequently) and their religious attitudes (e.g., seeing faith as important and being interested in learning about religion; Tong & Yang, 2018). In other populations, spirituality seems to be less related to religiousness. Among Native Americans on a rural Southwestern reservation, the majority (65.1%) identified as spiritual and only 12% identified as religious (Greenfield et al., 2015). This finding is not surprising, since traditional native American religion/spirituality has been less institutional/organized compared to many of the major religions.

Despite the overlap between religiousness and spirituality, there is evidence that they can be measured independently of each other (Krauss, 2006; Saucier, 2000, 2013). The main distinction many researchers and scholars make between religiousness and spirituality relates to community. Religiousness is often associated with community, whereas spirituality is often seen as an individual experience. Many aspects of spirituality derive from experiences, such as dreams, visions, or states of mind, that characteristically arise in individuals, not in groups. This pattern holds true in predominantly Christian populations, where those who are SBNR are less involved in public religious activities than those who are both spiritual and religious (Zinnbauer et al., 1997).

However, it is possible that the separation of the two is based on a Western, individualistic perspective on spirituality, one that is divorced from community (Wixwat & Saucier, 2021; Wong & Vinsky, 2009). Wong and Vinsky argue that community and history still

play a large part in many people's experiences of spirituality. Indeed, a religious meeting is not the only way in which community or sharedness can be expressed. It can also be expressed as identifying as part of a religious/spiritual community (Abu Raiya et al., 2008). If the separation of religion from spirituality is a complete separation of spirituality from any type of community, then it would be much harder to separate those two concepts in more communal societies, as is the case in a study done in China (Chen et al., 2018). Political policies, such as restrictions on the development of religious communities in a specific nation, could also make it more challenging to use community to separate spirituality and religiousness.

The relationship between religiousness and spirituality is complex. Completely separating them would require one to ignore the experiential aspects of religion, but some forms of spirituality seem to lack the other aspects of religion. The core difference seems to be community. While there may be limitations to identifying non-religious spirituality as individual and religious spirituality as community-based, it seems to be the best way of understanding how religiousness and spirituality relate to each other. To better understand how they are intertwined, more research is needed on spirituality in religiously and culturally diverse populations.

Mysticism. There is a lot of overlap between mysticism and spirituality, but spirituality is often defined more broadly, whereas mysticism refers more specifically to a particular type of spiritual experience. In fact, spirituality without religion can be conceptualized as mysticism without any religion or group organization (Saucier & Skrzypińska, 2006). Mysticism can also overlap with religiousness in that some religious experiences are mystical.

One of the most influential models of mysticism within psychology comes from Hood's Mysticism Scale (1975), described briefly earlier in the paper. Two factors were initially found in the Mysticism Scale: general mystical experience and religious interpretation. Building on

conceptual work from Stace (1960), Hood further distinguishes between introvertive and extrovertive forms of mystical experience.

The introvertive aspects of mystical experience are described as losing one's sense of self within a "Unitary Consciousness" that is made of an empty void (Hood et al., 2001). Other scholars also describe a loss or "death" of self as one is absorbed into something greater (James, 1902; Richards, 2015). This sensation is also associated with a sense of timelessness and spacelessness (G. L. Hall & Hall, 2019; Hood, 1975; Richards, 2015) and a difficulty putting the experience into words (Hood, 1975; James, 1902; Richards, 2015).

The extrovertive form of mysticism involves a unification of the self with all the objects in the universe (Hood et al., 2001). Hood describes these experiences as involving a perception of an inner subjectivity to everything, even purely material objects. The main focus, however, is the merging and interconnection of all things into one (G. L. Hall & Hall, 2019; Hood, 1975; Richards, 2015).

Lastly, it is important to consider how an individual interprets mystical experiences. Many people interpret the experience as being sacred or religious (G. L. Hall & Hall, 2019; Hood, 1975; Richards, 2015). They are also associated with positive affect, with emotions such as joy, bliss, and love resulting from them (Hood, 1975; Richards, 2015). In addition to positive affect and a sense of sacredness, one may also feel that they have gained intuitive knowledge as a result of a mystical experience (Hood, 1975; James, 1902; Richards, 2015). Although this knowledge is felt to be nonrational and insightful, it is also held to be a valid source of knowledge (Hood, 1975).

Mysticism and Religion. There are both religious and non-religious forms of mysticism. Some consider mysticism to be a core aspect of religiousness. Richards (2015) describes it as one

of the pillars of mature Christian life. For Richards, mysticism includes both “the experiential sense of entrusting one's life to and perhaps communing with, a sacred dimension greater than one's everyday personality” as well as less intense forms of personal devotion (Richards, 2015, p. 53). Mysticism is also associated with the acceptance of a transcendental being and the symbolic interpretation of religious contents (Nagy et al., 2018). There are some types of religious experiences that are difficult to describe without touching on mysticism, as James notes, “personal religious experience has its root and centre in mystical states of consciousness” (1902, p. 370). Religion certainly can play a large role in how one interprets a mystical experience (Sears & Hood, 2016). Subscribing to a set of religious beliefs or doctrine may motivate an individual to frame experiences in a way that is consistent with their religion (Chen et al., 2012).

Outside of religious contexts, mysticism may be tied to the “spiritual but not religious” (SBNR) identity (Streib & Chen, 2021; Streib & Hood, 2013). Evidence shows that mysticism is actually more associated with spirituality than with religiousness (Saucier, 2013; Streib & Chen, 2021; Willard & Norenzayan, 2017; Zinnbauer et al., 1997). Compared to religious participants, those who identified as SBNR reported more mystical experiences (Willard & Norenzayan, 2017). James (1902) includes *déjà vu* and feeling deeply moved as two examples of nonreligious mysticism.

Scholars debate whether mysticism is a consistent construct across diverse religious and nonreligious samples. Stace argued that mystical experiences can be identified independently of their interpretation and what triggered them (Hood et al., 2001). More specifically, the introvertive aspects of mysticism are viewed as independent of religious and cultural context. There is also some evidence that the extrovertive aspects may transcend context. By this argument, the mystical experiences of self-loss and unity with the universe should be consistent

across populations, while the interpretation and trigger would likely vary. Another scholar, Katz, argues that the interpretation cannot be separated from the experience, since all experience is socially constructed (Hood et al., 2001). He also argues that the trigger of the experience cannot be separated from the experience itself. There is some support for Stace's arguments, especially for the consistency of the introvertive factor (Chen et al., 2011; Hood et al., 2001). However, there do seem to be differences in interpretation across populations.

Similar to spirituality, mysticism can be a core component of the experiential aspect of religiousness, but it can't be entirely subsumed under the category of "religion", since there are also mystical experiences that are more detached from religion. For example, one can feel deeply moved and unified with nature outside the context of religion. The differences in interpretation across religious and cultural populations may also present a challenge when measuring mysticism or mystical aspects of religiousness across cultures.

Operational Definition for This Dissertation

The forgoing review of theoretical and empirical research on religiousness resulted in many themes, among which were a few consistent themes. Definitions of religion often included: belief in one or more supernatural entity/entities (Bielo, 2015, pp. 1–13; Durkheim, 1964, pp. 29–35; Saroglou, 2011); subjective experiences involving emotion, transcendence, and meaning (Geertz, 1973, p. 90; Glock, 1962; Paloutzian, 2017); practices associated with what is conventionally called religion and the motivations for engaging in them (Frazer, 1922, Chapter 4; James, 1902, p. 47; Zinnbauer et al., 1999); and community, with the shared belief and practice (Atran & Norenzayan, 2004; Harris et al., 2018; Zinnbauer et al., 1997). There were other themes (such as knowledge of doctrine and avoidance of taboos) that might also merit consideration, but these were the most consistent themes.

Drawing on these themes, influenced in particular by Wallace (1966) and Malinowski (1954), religion is herein operationalized as *community in belief, practice, and subjective experience, engaged in with respect to one or more supernatural entities*. The term “community” can be interpreted in several ways, but in this research, it was used to indicate the act of communing with something or some person(s) transcending one’s narrow self. An unconventionally broad definition of the term “community” is used here that includes all senses of “communing” in order to keep the definition as inclusive as possible. Religious communities may differ in how they emphasize the three aspects of religiousness mentioned in the definition, but all three should be present to some degree. Overall, this definition of religiousness tended to capture the convergences of the definitions in the literature while being relatively inclusive. It is not advanced as a perfect final definition of religiousness, but as a definition that is inclusive enough for this research.

Important Outcomes Associated with Religiousness

For some people, religion has a big influence on their life – from how they see the world to the structure of their daily routine. Indeed, religiousness is related to a lot of important psychological characteristics and outcomes, such as cognition, well-being, meaning in life, and physical health. It is less clear how religiousness is related to these outcomes. Saroglou et al. (2020) assessed the relationship between the 4Bs’ subfacets and a variety of psychological characteristics, including need for closure and life satisfaction, to show how the subfacets are similar and yet distinct. They are similar in that they are all aspects of religiousness, but they tap into distinct psychological motivations and functions of religiousness. If a proposed addition to the 4Bs model helps deepen the understanding of how religiousness is related to important outcomes, such as need for closure, life satisfaction, and meaning in life, it will strengthen the

case for adding it to the 4Bs model. Understanding the pathway of these relationships may also improve understanding of why these findings do not always generalize to other populations.

Need for Closure

Religiousness often involves a search for answers, which may be motivated by a need for closure (NfC), the desire for an answer on a topic as opposed to confusion and ambiguity (Webster & Kruglanski, 1994). The most prominent model of the need for closure contains five facets: need for order and structure, need for predictability, decisiveness, discomfort with ambiguity, and closed-mindedness. There is overlap between NfC and another construct related to religiousness – dogmatism, which refers to the extent to which one's belief systems are open/closed. NfC can also promote closed belief systems, because openness to contradictory information can threaten cognitive closure. Those with a high NfC have a slightly higher likelihood of being dogmatic (Webster & Kruglanski, 1994).

Research on the relationship between NfC and religiousness have produced mixed results. Several studies have found a weak positive relationship specifically between religiousness and the need for order and structure (Duriez, 2003; Saroglou, 2002; Saroglou et al., 2020). Discomfort with ambiguity has also been linked to religiousness (Budner, 1962; Feather, 1964). The connection between religiousness and NfC may not extend to religious behavior, however. In several studies, discomfort with ambiguity and closed-mindedness did not show significant correlations with church attendance or personal prayer (Budner, 1962; Eckhardt & Newcombe, 1969; Francis, 1997).

One explanation for the mixed findings is that the relationship depends on the type of religiousness used. Spirituality and mysticism seem to be tied to lower needs for closure. Specifically, spiritual-emotional religiousness has small negative correlations with decisiveness

and closed-mindedness, so those who are high in spiritual-emotional religiousness are likely to be less decisive and more open-minded (Saroglou, 2002). Similarly, those higher in mysticism tend to be more open-minded and have less need for order and structure (Nagy et al., 2018).

On the other hand, NfC is higher among those with a conservative, moralistic view of religion. Those who score higher in religious fundamentalism tend to be more closed-minded and have a greater need for order, structure, and predictability (Brandt & Reyna, 2010; Saroglou, 2002). There is even evidence that NfC may mediate the relationship between religious fundamentalism and prejudice, particularly driven by the closed-mindedness facet (Brandt & Reyna, 2010). Among the 4Bs, NfC has the strongest relationship with behaving (Saroglou et al., 2020), indicating that those who appreciate the moral aspect of religion are more likely to have a strong need for closure.

Although the findings on the relationship between NFC and religiousness are mixed, there are indications that NfC could motivate certain forms of religiousness. Specifically, those who are low in NfC may be drawn to more spiritual and mystical forms of religion, while those who do have a high NfC may be drawn to more fundamentalist forms. The vast majority of these studies used Western, predominantly Christian samples, so it is not clear whether these findings would generalize to more diverse populations.

Meaning in Life

Religion can play a significant role in world-building: that is, religion is often used to help make sense of the universe and understand its significance (Berger, 1967, p. 28). Religion can also provide a sense of purpose and belonging (Pedersen et al., 2018). Finding meaning in one's life has been linked with identifying as religious (Garey et al., 2016; Pedersen et al., 2018), scoring higher in intrinsic religiousness (Schnell, 2009a), and engaging in some religious or

spiritual activities (Coelho-Júnior et al., 2022; Pedersen et al., 2018; Soósová & Mauer, 2021). It is even possible that engaging with religion may increase meaningfulness over time. Park et al. (2008) assessed the impact various coping strategies had on meaning in life through a longitudinal study on patients with congestive heart failure. Among the fifteen coping strategies examined, two were associated with increased meaning in life over time: religious coping and acceptance/positive reinterpretation.

Meaning in life is associated with how individuals use religion to explain the things that happen to them and their surrounding environment (Garey et al., 2016). People who attribute positive things to God's involvement in their life are more likely to have meaning in their life (Garey et al., 2016, 2018), whereas those who question God and think about God's punishment are more likely to be searching for meaning in their life (Garey et al., 2016, 2018). In fact, the presence of meaning in one's life partially mediates the relationship between positive religious attribution and life satisfaction (Garey et al., 2018). When a person makes a positive attribution, it creates meaning and affects their judgement of their well-being. Similarly, the search for meaning partially mediates the relationship between negative religious attribution and life satisfaction (Garey et al., 2018). When a person experiences adversity in their life and attributes it to God, it can decrease their life satisfaction. However, engaging in a search for meaning may buffer this effect, reducing the impact on their well-being.

One of the prominent measures of meaning in life is the Sources of Meaning and Meaning in Life Questionnaire (SoMe; Schnell, 2009b). Along with measuring meaningfulness, it assesses twenty-six sources of meaning, which are divided into four categories: self-transcendence, self-actualization, order, and well-being and relatedness. Self-transcendence is further differentiated into vertical self-transcendence (including spirituality and explicit

religiosity) and horizontal self-transcendence (being responsible for worldly affairs beyond one's immediate concerns). Explicit religiosity and spirituality are among the five sources most strongly associated with meaningfulness (Pedersen et al., 2018).

This measure has been used to identify the sources different groups use to find meaning in their life. Those who identify as religious tend to rely heavily on vertical self-transcendence as a source for meaning (Pedersen et al., 2018; Schnell, 2009b). Specifically, identifying as religious is associated most strongly with using explicit religiosity as a source of meaning, finding meaning in faith, prayer, and the role of religion in life (Schnell, 2012). Both the religious and the spiritual find meaning in spirituality and horizontal self-transcendence. This means that they find meaning in subjective concepts like “reality beyond the known,” sacredness, fate, and in being responsible for worldly affairs beyond their immediate concerns. Compared to atheists, Christians also find more meaning in tradition and less in self-actualization (Pedersen et al., 2018).

Overall, religious beliefs and religious activities can help people make sense of their experiences and increase their sense of meaning. Although this claim is supported mostly by studies based on Western, predominantly Christian samples, there is some support for this relationship in more diverse populations. A significant relationship between meaning in life and religiousness was found in Indonesia, with a predominantly Muslim sample, and in both Brazil and Turkey (Coelho-Júnior et al., 2022; Garey et al., 2016). There are a few sociodemographic factors that may impact the likelihood of finding meaning in religion. Both older people and people with less education are slightly more likely to find meaning in religion, suggesting that the relationship between the constructs may be stronger in some populations than others (Schnell, 2009b).

Life Satisfaction/Well-Being

In addition to a sense of meaning, religion may improve one's happiness through religious experiences, practices, and community. Several meta-analyses found a positive relationship between religiousness/spirituality and life satisfaction (Coelho-Júnior et al., 2022; de Bernardin Goncalves et al., 2017; Hackney & Sanders, 2003; Sholihin et al., 2022; Yaden et al., 2022). There is some evidence that the relationship between religiousness and well-being may be causal: patients reported improved well-being after experiencing a religious and spiritual intervention (de Bernardin Goncalves et al., 2017; Rodrigues-Sobral et al., 2022), and religiousness had a small, positive effect on mental health over time in a meta-analysis of longitudinal studies (Garssen et al., 2021).

Some types of religiousness are more predictive than others. Religiousness that is personal and/or spiritual has a stronger relationship with well-being (Coelho-Júnior et al., 2022; Hackney & Sanders, 2003; Yaden et al., 2022). Among the 4Bs, the bonding subfacet was the most related to life satisfaction, which focuses on positive emotions that arise from religious rituals and ceremonies (Saroglou et al., 2020). Since “positive emotion” and “satisfaction” are somewhat synonymous, this finding might reflect a confound between the two variables. Examining how well-being relates to a variety of aspects of religiousness could result in more precise results and more specific health recommendations.

The relationship between religiousness and well-being may not be consistent across diverse populations, however. While some of the meta-analyses included fairly diverse samples, Western/European samples still predominated in nearly all of them (Coelho-Júnior et al., 2022; Garssen et al., 2021; Sholihin et al., 2022), and there are differences in the strength of the relationship across populations. Life satisfaction correlated more strongly with religiousness in

older samples, samples collected from more religious countries, and samples collected from countries lower on the human development index (i.e., poorer countries; Yaden et al., 2022). This finding may suggest that people in situations of want, poverty, or impending death use religiousness to cope with life, especially if others around them are doing the same. The connection between religiousness and well-being was non-significant in a meta-analysis of Chinese samples, which may be due to the prevalence of extrinsic religiousness compared to intrinsic religiousness in this population (Li & Wang, 2022). Out of the two, intrinsic religiousness is more strongly associated with purpose and meaning (Schnell, 2009b). Therefore, the findings discussed in the first paragraph may not generalize to all populations and may depend on the type of religiousness.

Other Important Outcomes

There is evidence that religiousness may also contribute to better health, including physical, mental and social. The next few sections will review the evidence that religiousness increases health, focusing on what types of religiousness are at play, and whether these findings are consistent across populations.

Physical Health. Research suggests that there may be a link between religiousness and physical health. Numerous studies have found that religious people tend to be more physically healthy (Bailly & Roussiau, 2010; Jim et al., 2015; Park et al., 2015; Shattuck & Muehlenbein, 2020). This finding doesn't generalize to all populations, however. A study of Chinese older adults found no difference in physical health between the religious and the non-religious (Li & Wang, 2022). Similarly, a meta-analysis on the relationship between health and religiousness among sexual minorities found no connection (Lefevor et al., 2021). The relationship may also vary in strength depending on the type of religiousness.

Studies have examined the relationship between physical health and various types of religiousness, including religious practice, religious beliefs, and affective components of religiousness. Among these, the evidence for a connection with religious practice is the most mixed. Attending religious services is associated with better health outcomes across many studies (Masters & Hooker, 2013); and, among Muslims, those who enjoy religious practices and follow Islamic ethical guidelines are also slightly more likely to have better health (Abu Raiya et al., 2008). However, in a study on cancer patients, religious practices were not significantly related to health (Jim et al., 2015). While religious beliefs are associated with better health (Abu Raiya et al., 2008; Jim et al., 2015), the affective aspects of religiousness may have the strongest relationship with health (Jim et al., 2015; Park et al., 2015).

There is also mixed evidence for a relationship between spirituality and physical health. In an older Jewish sample and a diverse internet sample, those who had more positive experiences with spirituality in their daily life were likely to have better physical health (Kalkstein & Tower, 2008). There was also a relationship between spirituality and health among Christian seminary students, but this relationship was not replicated in a community sample (Seidlitz et al., 2002). There was also no relationship between the two in a diverse American sample and a White British sample (Underwood & Teresi, 2002; Wheeler & Hyland, 2008).

The overall relationship between physical health and religiousness may be weak, but affective components of religiousness and religious beliefs may be good predictors of physical health.

Mental Health. Religious people may also experience better mental health (Park et al., 2015); however, the evidence for this is mixed (Bonelli & Koenig, 2013). It's possible that the relationship is simply a very small one, since several studies found small, negligible correlations

between mental health and religiousness (Garssen et al., 2021; Hackney & Sanders, 2003; Hodapp & Zwingmann, 2019). It could also be that it varies based on the population tested. The correlation was non-significant in a Chinese sample and a meta-analysis on sexual minorities (Lefevor et al., 2021; Li & Wang, 2022). In some cases, the association between religiousness and mental health are different based on gender/sex. Among Midwestern college students, women low in religiousness (but not men) were more likely to experience psychological distress, even to the point of needing treatment (Lace & Handal, 2019).

There is also evidence that the relationship varies based on the type of religiousness (Coelho-Júnior et al., 2022). Mental health is most strongly associated with personal religious activities and with the affective component of religiousness (Hackney & Sanders, 2003; Park et al., 2015). On the other hand, one meta-analysis found that mental health was not significantly correlated with private religious practice or intrinsic religiosity, but only with frequency of prayer, importance of faith, and public religious practices (Coelho-Júnior et al., 2022). However, the relationship of mental health and prayer may depend on the type of prayer and the type of religious sample (Winkeljohn Black et al., 2017). Christians who engage in more frequent colloquial and meditative prayers experience better mental health, but this does not extend to ritual prayer, where one recites a memorized prayer. This finding also does not generalize to Muslims and Orthodox Jews. Among these two populations, mental health is not significantly associated with frequency of praying for any type of prayer, which may be related to the different expectations of God present between those populations.

The association between spirituality and mental health may also depend on the population. In a White British sample, those who experience and believe in spiritual connection were more likely to report better mental health (Wheeler & Hyland, 2008); and in a meta-

analysis, using spiritual coping was associated with better mental health among older adults (Coelho-Júnior et al., 2022). However, among samples of Chinese and Native American participants, psychological distress/symptoms were not related to spirituality (Coelho-Júnior et al., 2022; Li & Wang, 2022). In summary, the relationship between mental health and religiousness does not generalize across all populations or all types of religiousness, but in some populations, specific types of religiousness – personal religiousness, religious activities, or spirituality – may contribute to better mental health.

Social Health. One's social health (i.e., amount of social support, number of close relationships, or frequency of social interactions) can also be very important for overall quality of life. Although there is some evidence for a correlation between social health and religiousness, the effect may vary in different populations. Religiousness shows small correlations with social health among American cancer patients (Park et al., 2015), but the two variables were unrelated in a sample of Chinese older adults from the general population (Li & Wang, 2022).

The mixed results could also be explained by the type of religiousness measured. Americans who attend religious services regularly engage in more frequent social interaction and have more close ties compared to those who do not attend (Hastings, 2016). Religious practice is also associated with better social health for Muslims (Abu Raiya et al., 2008). Muslims who follow Islamic ethical guidelines and enjoy Islamic practices tend to have more positive relations with others.

Spirituality can also play a role in improving one's social health. Americans who are more spiritual tend to engage in social interaction more frequently (Hastings, 2016). Those who have more positive experiences with spirituality in their day to day life are likely to have more

close relationships and better social support (Kalkstein & Tower, 2008; Underwood & Teresi, 2002).

Overall, the relationship between social health and religiousness seems to be dependent on both the sample and the type of religiousness. The strongest evidence suggests that religious practices and spirituality may be the most important aspects of religiousness for social health.

Outcomes Summary

To summarize, the evidence reviewed suggests that religion may be related to a specific type of cognition (need for closure) and may have a meaningful effect on numerous indicators of well-being – meaning in life, life satisfaction, physical health, mental health, and social health. Although the evidence is mixed, clear patterns emerged as to what types of religiousness are most related to each outcome. A more comprehensive form of the 4Bs model may be helpful in exploring the nuances of how religiousness is related to these outcomes. This could also enable researchers to identify exactly why a finding does not generalize to all populations.

Chapter Three: Study 1 Methodology

Study 1 was completed in two stages. Both stages were preregistered at <https://osf.io/m4qfw/registrations>. All research gathered for this study was done with University of Oregon IRB approval (protocol number 9262017.025). The first step of Study 1 was to create a pool of religiousness-related items that might contain content beyond the 4Bs model. The search for items began with the existing literature, because if there are aspects of religiousness beyond the 4Bs model, one would expect them to be already present in the research literature. Accordingly, existing scales measuring religiousness and related concepts, such as spirituality and mysticism, were examined for items that fit the operational definition of religiousness. To supplement the items adapted from existing measures, some original items were written to cover aspects of religiousness not already represented in the pool. The next step was to remove the items whose contents overlapped the most with the contents of the 4Bs model through correlational analysis. The resulting set of religiousness-related items should be independent of the 4Bs. Using this reduced set of items, potential additions to the 4Bs model were then explored through factor analysis.

Method

Participants

All participants were recruited from the Psychology/Linguistics subject pool at University of Oregon and received partial credit for fulfilling a research assignment in exchange for participating. Participants ($n = 396$) were recruited in the first stage of data collection. After a preliminary analysis in which 33 items were removed, 538 more participants were recruited to increase statistical precision, resulting in a total of 934 participants. Participants were excluded if a) the standard deviation (SD) of their responses was less than .5 ($n = 59$), (b) their mean

response to items was at extreme ends of the scale (under 2.5 or over 5.5 on a 7-point scale; $n = 56$), (c) their response time was less than one third of the median response time (467 seconds; $n = 88$), or (d) 20% of their data was missing ($n = 29$). In the final sample, data from 809 participants were analyzed. The sample was made up of 69.1% women, 28.7% men, and 2.2% participants who responded “other or prefer not to say” for gender, with a mean age of 19.5 ($SD = 2.56$). Participants could select multiple racial/ethnic categories, resulting a sample that was 74.8% White, 14.2% Latinx/Hispanic, 12.9% Asian, 3.6% Black, 1.5% Native Hawaiian/Pacific Islander, and less than 1% American Indian/Alaska Native. The religious affiliations of the sample were 33.5% Christian, 4.4% Jewish, 1.9% Buddhist, 4.8% spiritual but not religious, 24.4% unaffiliated/none, 21.3% atheist/agnostic, 3.4% other (Muslim, Hindu, multiple affiliations), and 6.4% did not answer.

Measures

A pool of religiousness-related items, all conceived as containing content potentially falling outside the 4Bs model and thus relevant to its content-comprehensiveness, were presented to the participants in a randomized order. There were 224 items in total. Participants rated their agreement with all items using a 7-point Likert scale (1 = totally disagree and 7 = totally agree).

Sixty-two items were used verbatim from the measures listed below, but others (100 items) had to be adapted to fit the operationalization of religiousness used in this study. The most frequent changes involved reframing belief- and behavior-based items around the enjoyment or valuing of religion using certain sentence stems, such as “religion helps me...” and “I like religion because...”. Some items were changed slightly to make them generalizable to other religious groups (i.e., changing “religious scripture” to “religion” or “religious authoritative sources”). A word or phrase was added to two items to make it clear that the sentiment or

experience described in the item was due to a religious source (i.e., specifying “*religious* faith”). Some items were reworded to be reverse-keyed. Several items were changed to increase clarity, either by slightly changing the wording (i.e., changing “religious dogma” to “religious teachings”) or simplifying the statement to avoid compound items.

- **The Four Basic Dimensions of Religiousness Scale** (4Bs; Saroglou et al., 2020) operationalizes religiousness in four dimensions (i.e., subfacets): believing, bonding, behaving, and belonging. All 12 items were included in this study.
- **The Awe Experience Scale** (AWE-S; Yaden et al., 2018) is a 30-item scale that operationalizes awe in six factors: altered time perception, self-diminishment, connectedness, perceived vastness, physical sensations, and need for accommodations. I wrote six items based on these factors, but no original items from the scale were used.
- **The DOG Scale** (Altemeyer, 2002) is a 20-item measure of dogmatism. I adapted six items from the DOG Scale, changing the phrasing to more effectively measure religiousness as operationalized in this study.
- **The Duke Religion Index** (DUREL; Koenig & Buessing, 2010) is a five-item measure that operationalizes religiousness in three dimensions: organizational religious activity, non-organizational religious activity, and intrinsic religiosity. I used three items verbatim from the DUREL and wrote a reverse-key version of one of them.
- **The Expressions of Spirituality Inventory** (ESI; MacDonald, 2000) measures five dimensions of spirituality: Cognitive Orientation Towards Spirituality, Experiential/Phenomenological Dimension, Existential Well-Being, Paranormal Beliefs, and Religiousness. Seven items were adapted from this 32-item scale and another four were used verbatim.

- **The Religious Orientation Scale (ROS;** Gorsuch & McPherson, 1989) measures one's motivations for engaging with religion, with a scale assessing intrinsic religiosity (motivated by the integration of belief into specific practices), a scale assessing extrinsic-personal religiosity (motivated by the personal benefits of religion), and a scale assessing extrinsic-social religiosity (motivated by the social benefits of religion). Out of the original 14 items of the ROS, seven items were adapted and two were used verbatim.
- **The Religious Fundamentalism Scale (RFS;** Altemeyer & Hunsberger, 2004) measures the belief that there is one set of religious teachings superior to all others. Twelve items were adapted from the original 20-item scale and five items were adapted from the 12-item revised scale.
- **The Intratextual Fundamentalism Scale (IFS;** Williamson et al., 2010) is a 12-item measure of the attitudes that fundamentalists have towards their sacred text. Six items were written based on the items in the IFS, but none of the original items were used.
- **The Survey of Dictionary-Based Isms (SDI;** Saucier, 2013) uses 196 items to measure belief-system components. Several subscales were used in this study: Fundamentalism, Animalism, Puritanicalism, Religionism, Sacramentalism, Theocratism, Triumphalism, and the Secularization of Society. Fifteen items were adapted from these subscales and 16 were used verbatim. Another 16 items were written based on factors from a high-dimensionality model of the isms concepts (Saucier & Siritzky, 2021).
- **The Mysticism Scale (M Scale;** Hood, 1975) measures eight qualities of mystical experiences (each with four items): ego quality, unifying quality, inner subjective quality, temporal/spatial quality, noetic quality, ineffability, positive affect, and religious quality. I used seven of the 32 items on this scale.

- **The Social Axioms Survey** (Bond et al., 2004) is a 60-item measure that operationalizes social axioms in five dimensions: cynicism, social complexity, reward for application, fate control, and religiosity. Six items were used from the Spirituality subscale and a reverse-coded version was written for one of the items.
- **The Spiritual Transcendence Scale** (Piedmont, 1999) is a 24-item measure that operationalizes spiritual transcendence in three dimensions: prayer fulfillment, universality, and connectedness. Four items were adapted from this scale.
- **The Temperament and Character Inventory** (Cloninger, 1994) is a 240-item measure that assesses temperament and character through multiple subscales. Thirteen items were adapted from the Self-Transcendence Scale and 10 items were used verbatim.
- **The Values in Action Inventory of Strengths** (Peterson, 2004) is a 240-item measure that assesses individual strengths through 24 subscales. One item was adapted from the Spirituality subscale and two were used verbatim.

In addition to the items described above, 62 original items were written (see supplementary material for the text of all original items). Of these, 22 were based on the definitions of religiousness-related adjectives: heretical, irreligious, oldfashioned, pious, prayerful, preachy, puritanical, religious, reverent, and spiritual. Nine were based on an essay by Sapir (1964) about the meaning of religion; the two big themes of these items were making sacrifices for religion and learning from religion what to respect and what to avoid. The remaining 31 were original items developed for this study. Many of these items focused on the practical utility of religion, expanding on the idea of extrinsic religiousness from the ROS, which focuses only on a narrow form of social and personal utility. These items included statements about religion improving one's social experience, emotional well-being, health, material wealth,

and ability to raise children. There were also items that focused on the ability of religion to increase one's chances of success in the afterlife and the appreciation that religion helps solve problems and mete out justice. Additionally, there were a few completely original items (only about 2% of the total pool) that expressed enjoyment of religious culture, such as music and art, or enjoyment of religion more generally.

Analysis

First, the data were transformed to control for yea-saying/nay-saying tendencies. One method frequently used for reducing the data-distortion caused by respondents indiscriminately agreeing or disagreeing with items is to ipsatize, i.e., standardize each individual's responses so all individuals have the same mean (0) and variance (1). However, this blunt-force technique easily creates its own side-effect distortions. Therefore, instead of ipsatizing, an alternative method was used that accounts for each participant's yea-saying/nay-saying tendency, as contrasted with centering the data around their general mean. The first step was creating an index of yea-saying/nay-saying tendency (acquiescent-centered index) by averaging the responses of each participant to items contained within 15 pairs of opposite content items. In absence of any yea-saying or nay-saying tendency, a respondent should obtain an average response to the 30 items that is perfectly at the midpoint of the response scale, whereas tending to agree with opposite sentiments (semantic inconsistency) would yield an above the midpoint average response. The data were transformed to control for these tendencies by subtracting each participant's acquiescent-centered (AC) index score from each of their item scores to create an acquiescence-centered dataset. I ran the analyses on both the transformed and the untransformed data. Although the untransformed data were examined, I relied primarily on the transformed (AC) dataset and will report on that in the results.

Next, the pool of religiousness-related items was analyzed in two stages to identify those that overlapped the most with the inventory currently understood to represent the 4Bs model (i.e., the 4Bs' measure). Items that overlapped too much would not be worthy of further consideration in this project, since the focus was on religiousness-related content that diverged from the 4Bs model. To do this, I used the 4Bs' scales to predict each religiousness-related item in a multiple regression. Then I ranked each item based on the resulting coefficient of determination (r^2) and removed the items with the highest coefficients. The r^2 threshold was selected based on the convergence of a few considerations. The primary factor was the content of the items: where in the ranking did the content of the items become less unique? Another consideration was the agreement of the transformed (AC) and untransformed data, even though the final decision was based on the transformed data. The level of precision also influenced the decision. In the first reduction, the sample size was smaller, resulting in less precision. Because of this, the threshold was set fairly high, and a smaller number of items were eliminated. Finally, there were practical considerations influencing the number of items it was desirable to eliminate in the first reduction. This study's recruitment method (UO subject pool) had a length requirement, meaning that there couldn't be more than roughly 230 items in the survey. The initial pool of items plus the demographics already reached that limit and more scales needed to be added to the survey to be used in Study 2. After the reductions, the remaining pool of items represented religiousness-related content that displayed low to no correlation with the 4Bs' scales.

Although there is evidence that single items can reliably represent homogenous constructs (John & Soto, 2007; Loo, 2002; Wood et al., 2010), they can be more vulnerable to some types of measurement error. The individual items in this set may have contained

idiosyncrasies that reduced their generalizability when examined alone instead of aggregated with similar items. For example, words often have multiple meanings, so single items can be interpreted differently among participants. Wording effects like these are especially concerning when using linguistically and culturally diverse samples, where methodological equivalence can already be difficult. In Study 2, the items had to be translated before administration in some samples, which potentially introduced a number of wording effects. While the other samples used in Study 2 spoke English, it was likely not the first language of many in the Indian samples. Using groups of items with similar content instead of single-items helped to guarantee that findings were due to consistent content themes rather than wording effects (Hofstee, 1994; John & Soto, 2007). The use of groups of items had the additional benefit of controlling for AC bias through the inclusion of reverse-keyed items. The groups of items are not scales, however, since the creation of scales is beyond the scope of this research, so they will be referred to as content-groupings instead.

Therefore, means for systematic item-reduction were needed. To reduce the various contents in the items down to a more parsimonious set of promising contents, an exploratory factor analysis was performed on the reduced pool of items to identify an optimal number of content-groupings among remaining items. A parallel analysis and a scree plot were used to identify the best number of factors. I aimed to select the factor solution with the greatest number of factors in which all factors were clearly defined – that is, had at least four items with their highest loading on that factor and a loading greater than .3 in magnitude.

The factor analyses were conducted using Maximum Likelihood and Principal Factor Solution, but there were only minor differences between these, so only the results from the Maximum Likelihood analysis are reported here. The prime factor-rotation method I employed

was Oblimin (with the delta term set at the most commonly used value of zero). Oblimin produced suitable solutions for four and five factors, but not for six as indicated by parallel analysis. However, when I changed the delta term to negative one (making factors less correlated), or employed instead Equamax rotation with Kaiser normalization, there was a suitable solution (with sufficient numbers of high-loading terms on each factor). The solutions produced by Oblimin with the delta term set to negative one and Equamax with Kaiser normalization strongly converge, but Equamax gave a clearer separation, so I will report the Equamax solution in the results.

In deciding which reduced set of items should be included to represent these additional groupings, I analyzed their loadings, their item-total correlation with the other items loading highly on the same factor, and how the content of each item related to the additional grouping. A reverse-content item was also retained for each grouping in case it would be useful for creating future AC data. Another important consideration was each item's relative contribution to creating an equidiscriminating factor, capturing not just the high-versus-low-score contrast but also the contrast between extreme and more typical-range scores in either direction (Nunnally & Bernstein, 1994, pp. 329–332). Ideally, a measure would be able to reliably capture different levels of religiousness, from extremely low to extremely high. To assess each item's relative contribution to creating an equidiscriminating item-aggregate, the full pool of candidate items for each additional grouping was aggregated and dichotomous variables around the 20th and 80th percentiles were created. Point-biserial correlations with both of these dichotomies were then generated for each item and the maximum (in absolute value) correlations with the dichotomies were used as an equidiscriminating index.

Chapter Four: Study 1 Results and Discussion

Content Reduction Phase One

The initial content reduction was completed in two stages. In both stages the analysis began by predicting each religiousness-related item using the 4Bs' subscales and ranking each item based on the resulting r^2 value. In the first stage ($n = 336$), the r^2 values ranged from .03 to .78 (*mean* = .45). All items whose r^2 value was above .66 were removed, resulting in the retention of 179 items. After collecting more data to increase precision ($n = 809$), all items whose r^2 value was above .33 (108 items) were removed. There were 72 items remaining with r^2 values ranging from .04 to .31 and an average r^2 value of .20. These were religiousness-related items whose contents appeared to fall well outside of 4Bs' contents; the vast majority of their variance was unrelated to 4Bs' scales.

Factor Analysis

To set a ceiling on the number of factors to consider, I consulted parallel analysis and a scree plot. Parallel analysis indicated six factors, while the scree plot suggested between four and six. Based on these recommendations, an EFA using Maximum Likelihood was conducted with four, five, and six factors, which were all interpretable. Since this study aims to test the comprehensiveness of the 4Bs model, the six-factor model was focused on (see Table 1 for the loadings). Equamax with Kaiser Normalization was used for the six-factor model, which accounted for 39% of the variance. Preliminary descriptive labels were developed for each factor based on the content of their high-loading items: Fundamentalism, Transcendent Connection, Tolerance (vs. Rejection), Consideration of Religion (vs. Indifference), Religious Artifacts, and Public Integration (labels explained below).

Table 1*Factor Loadings from a Six-Factor Model of Religiousness*

Item	Factor loading					
	F	TC	TR	A	I	C
One must always dress and behave in the proper way that is defined by true religion	.54	.03	-.08	.10	.36	-.25
Religion provides a complete, unfailing guide to preserving oneself from harm	.53	.15	-.25	.12	.25	-.24
In true religion one finds a set of divine laws that should replace all man-made laws	.48	.18	-.19	.10	.26	-.23
We should do things exactly the way the founders of our religion did them many years ago.	.48	.01	-.06	.07	.40	-.27
Religion has given humanity a complete, unfailing guide to happiness	.48	.15	-.31	.08	.31	-.15
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.48	.08	-.13	.11	.22	-.14
One either believes in the true religion or one has rejected it; there is nothing in between	.47	.00	.05	-.08	.23	-.11
I like religion because it tells me what a supernatural being says.	.47	.23	-.18	.19	.31	-.20
I find that religion provides believers with prosperity and rich financial rewards.	.45	.20	-.12	.21	.21	-.13
I like religion because it shows me how justice will be done on my enemies	.45	.11	-.11	.15	.35	-.20
Religion gives access to supernatural powers that can be brought under human control	.44	.35	-.11	.18	.17	-.17
I think it is important for people to show religious devotion publicly.	.42	.13	-.28	.19	.36	-.17
There's little value in strict adherence to religious authoritative sources. (R)	-.40	-.16	.28	-.03	-.24	.07
I enjoy doing public speaking to teach religion.	.37	.13	-.09	.14	.32	-.32
Belief in a religion makes people good citizens.	.36	.12	-.34	.21	.27	-.13
Because I am attached to my religion, I don't want to be seen as holding to a doctrine or opinion contrary to that which is generally accepted.	.35	.17	-.18	.20	.33	-.21
I have had an experience in which I realized the oneness of myself with all things.	.11	.70	-.05	.20	-.09	-.05
I have had an experience in which something greater than myself seemed to absorb me.	.13	.68	-.06	.16	.03	-.12

Table 1 *(Continued)*

Item	Factor loading					
	F	TC	TR	A	I	C
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.02	.68	-.06	.20	.24	.11
I have never felt any force or connection that I would call spiritual. (R)	.06	-.64	.14	-.09	-.19	.14
I have had an experience in which I felt everything in the world to be part of the same whole.	.08	.61	-.01	.22	-.06	-.08
I often feel a strong spiritual connection with all the people around me.	.09	.61	-.04	.20	.26	.04
I often feel like I am a part of the spiritual force on which all life depends.	.18	.60	-.10	.20	.21	-.09
I have never had an experience in which I felt myself to be absorbed as one with all things. (R)	-.06	-.55	-.03	-.02	.09	.18
I have never had an experience which seemed holy to me. (R)	-.06	-.51	.18	-.14	-.09	.31
I have had an experience which I knew to be sacred.	.07	.50	-.10	.24	.16	-.16
I have had an experience in which ultimate reality was revealed to me.	.31	.46	-.06	.10	.12	-.04
I have deep respect for spiritual beings.	.04	.46	-.21	.37	.24	.12
I don't see any benefit on health coming from religion. (R)	-.10	-.33	.32	-.24	-.21	.27
Religion has a bad effect on kids growing up. (R)	-.29	-.04	.56	-.21	-.14	.19
Religion increases the amount of evil in the world. (R)	-.17	-.03	.55	-.13	-.10	.14
I am hostile to religion. (R)	.03	-.02	.50	-.31	-.11	.12
Religion lacks value because it is antiquated and outdated. (R)	-.07	-.17	.50	-.23	-.19	.29
Reason, science, and technology have now made our religious traditions useless. (R)	.10	-.22	.48	-.31	-.19	.21
Religious teachings are full of errors. (R)	-.40	-.07	.46	-.10	-.20	.34
Religion contributes to many of the problems in the world. (R)	-.32	.00	.45	-.03	-.09	.18
Religious faith contributes to bad mental health. (R)	-.17	-.13	.45	-.13	-.18	.07
Religious people are more likely to maintain moral standards.	.39	.10	-.42	.15	.22	-.02
Religious practices should be discouraged in our society. (R)	.05	-.06	.42	-.33	-.10	-.12
I find that religious communities are not a good place to find friends. (R)	-.09	-.13	.41	-.19	-.17	.08
I reject all religious values. (R)	.07	-.20	.40	-.37	-.23	.12

Table 1 *(Continued)*

Item	Factor loading					
	F	TC	TR	A	I	C
There is no infallible source of truth to be found in religion. (R)	-.19	-.16	.39	-.06	-.31	.21
I am bored by the prospect of performing religious obligations. (R)	-.26	-.17	.33	-.17	-.24	.28
I take pride in being heretical (holding opinions contrary to religious doctrine). (R)	-.03	.01	.31	.00	-.06	.19
I enjoy religion because of the religious art.	.08	.12	.06	.77	-.13	-.08
I enjoy religion because of the religious architecture.	.06	.04	.08	.73	-.11	-.09
There are sacred ritual actions that are important	.11	.22	-.18	.51	.18	.15
There are sacred objects that are important	.10	.17	-.13	.50	.13	.26
I don't enjoy reading about religion. (R)	.02	-.21	.11	-.43	-.20	.32
Rituals concerning sacred objects have little value. (R)	.00	-.14	.20	-.36	-.07	-.05
One feels safer in the world through a belief in a supreme being.	.03	.31	-.19	.34	.26	.07
Religious teachings should be a central part of education	.20	.10	-.23	.20	.52	-.29
Religion should play the most important role in civil affairs	.35	.06	-.25	.07	.52	-.37
A particular set of beliefs is superior to all others	.30	.08	-.08	.05	.43	-.34
Religion is the main thing I do in my life.	.35	.14	-.18	.08	.43	-.37
Religious considerations should be excluded from civil affairs. (R)	-.31	-.05	.15	.01	-.42	.19
I make sizeable financial sacrifices for my religion.	.42	.11	-.12	.09	.42	-.31
We should encourage our nation's citizens to practice religion	.27	.07	-.37	.17	.41	-.22
Religious considerations should be excluded from education. (R)	-.17	-.04	.20	-.16	-.39	.17
I don't follow a strict code based on religion. (R)	-.26	-.13	.06	-.10	-.35	.43
Religion may contain general truths, but they should NOT be considered completely, literally true. (R)	-.32	-.04	.17	.11	-.24	.42
I like to do practical things more than praying. (R)	-.23	-.12	.16	-.01	-.24	.39
Religious people have different values than I do. (R)	-.12	-.07	.23	-.12	-.11	.38
I am indifferent to religion. (R)	.04	-.22	.07	-.09	-.22	.37

Table 1 (Continued)						
Item	Factor loading					
	F	TC	TR	A	I	C
There are many views of how to understand religious scriptures and no view is better than the others. (R)	-.05	.08	-.09	.30	-.05	.33
I have never gotten any economic benefit from religion. (R)	-.24	-.18	.03	-.09	-.12	.32
I have so much to do most days that I don't usually have time for prayer. (R)	-.03	-.02	.05	.03	-.07	.31
Religion makes people escape from reality. (R)	-.07	.01	.18	.12	-.06	.30
I put little emphasis on official religious teachings. (R)	-.21	-.11	.22	-.02	-.25	.23
Religion cannot give access to any supernatural powers. (R)	-.23	-.15	.14	-.01	-.15	.25
The desires of my body do not keep me from my prayers	.18	.21	-.23	.20	.16	-.09
<i>Note.</i> F = Fundamentalism; TC = Transcendent Connection; TR = Tolerance (vs. Rejection); A = Religious Artifacts; I = Public Integration; C = Consideration of Religion (vs. Indifference).						

The content of the four-factor model was noted and held in reserve as an alternative in case the best four content-groupings happened to be those four in the four-factor model (see Table 2 for the loadings). All four factors from this model overlapped considerably with the six-factor model. The two extra factors in the six-factor model are Public Integration and Consideration of Religion (vs. Indifference).

The Fundamentalism factor includes items that express appreciation for strict and literal application of religious laws/rules and a lack of ambiguity in religious thought and opinions. Transcendent Connection captures mystical experiences of oneness and connection, with several high loading items from the Mysticism Scale. Tolerance (vs. Rejection) has many high-loading items that are reverse-keyed that

Table 2*Factor Loadings from a Four-Factor Model of Religiousness*

Item	Factor loading			
	F	TC	TR	A
One must always dress and behave in the proper way that is defined by true religion	.78	-.07	.11	.05
We should do things exactly the way the founders of our religion did them many years ago.	.75	-.08	.10	.00
I make sizeable financial sacrifices for my religion.	.68	.03	.01	-.03
Religion should play the most important role in civil affairs	.66	-.01	-.18	-.12
Religion provides a complete, unfailing guide to preserving oneself from harm	.66	.04	-.04	.05
I like religion because it shows me how justice will be done on my enemies	.65	.01	.05	.09
One either believes in the true religion or one has rejected it; there is nothing in between	.62	-.07	.26	-.04
I like religion because it tells me what a supernatural being says.	.61	.14	.01	.12
Religion is the main thing I do in my life.	.61	.09	-.10	-.10
In true religion one finds a set of divine laws that should replace all man-made laws	.61	.08	.00	.02
Religion has given humanity a complete, unfailing guide to happiness	.60	.03	-.11	.05
I think it is important for people to show religious devotion publicly.	.59	.00	-.13	.12
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.59	-.03	.70	.10
A particular set of beliefs is superior to all others	.58	.05	-.02	-.12
I enjoy doing public speaking to teach religion.	.57	.08	.00	-.01
Religious considerations should be excluded from civil affairs. (R)	-.54	.01	.05	.09
I find that religion provides believers with prosperity and rich financial rewards.	.54	.10	.06	.17
Because I am attached to my religion, I don't want to be seen as holding to a doctrine or opinion contrary to that which is generally accepted.	.52	.09	-.07	.08
Religion may contain general truths, but they should NOT be considered completely, literally true. (R)	-.51	-.02	.09	.28
I don't follow a strict code based on religion. (R)	-.51	-.13	.05	.14

Table 2 *(Continued)*

Item	Factor loading			
	F	TC	TR	A
Religious teachings are full of errors. (R)	-.49	.03	.35	.07
Religion gives access to supernatural powers that can be brought under human control	.49	.28	.09	.11
Religious teachings should be a central part of education	.49	.05	-.23	.00
We should encourage our nation's citizens to practice religion	.46	-.03	-.32	.03
There's little value in strict adherence to religious authoritative sources. (R)	-.46	-.05	.08	-.03
Belief in a religion makes people good citizens.	.46	.00	-.21	.14
Religious people are more likely to maintain moral standards.	.42	-.05	-.24	.15
I like to do practical things more than praying. (R)	-.41	-.12	.13	.20
I am bored by the prospect of performing religious obligations. (R)	-.38	-.11	.27	-.01
Religious considerations should be excluded from education. (R)	-.37	.01	.19	-.04
I put little emphasis on official religious teachings. (R)	-.34	-.06	.17	.10
Religion contributes to many of the problems in the world. (R)	-.34	.11	.33	.04
I have never gotten any economic benefit from religion. (R)	-.33	-.19	-.01	.09
Religion cannot give access to any supernatural powers. (R)	-.32	-.13	.08	.12
I have had an experience in which I realized the oneness of myself with all things.	-.06	.72	.05	.07
I have had an experience in which something greater than myself seemed to absorb me.	.04	.71	.03	.01
I have never felt any force or connection that I would call spiritual. (R)	.07	-.69	.14	.12
I sometimes feel a spiritual connection to other people that I cannot explain in words.	-.01	.67	.02	.14
I have had an experience in which I felt everything in the world to be part of the same whole.	-.04	.65	.05	.07
I have never had an experience in which I felt myself to be absorbed as one with all things. (R)	.05	-.62	-.07	.15
I often feel a strong spiritual connection with all the people around me.	.10	.60	.05	.13
I often feel like I am a part of the spiritual force on which all life depends.	.18	.59	.00	.06
I have never had an experience which seemed holy to me. (R)	-.06	-.56	.18	.13
I have had an experience which I knew to be sacred.	.09	.51	-.08	.07

Table 2 *(Continued)*

Item	Factor loading			
	F	TC	TR	A
I have had an experience in which ultimate reality was revealed to me.	.29	.41	.13	.07
I have deep respect for spiritual beings.	.03	.40	-.16	.32
Reason, science, and technology have now made our religious traditions useless. (R)	.06	-.19	.60	-.06
I am hostile to religion. (R)	.02	.06	.59	-.15
Religion lacks value because it is antiquated and outdated. (R)	-.14	-.12	.55	.01
I reject all religious values. (R)	-.16	.07	.50	-.03
Religion increases the amount of evil in the world. (R)	.00	-.15	.50	-.17
Religion has a bad effect on kids growing up. (R)	-.31	.08	.48	-.08
Religious practices should be discouraged in our society. (R)	.11	.03	.45	-.30
I find that religious communities are not a good place to find friends. (R)	-.11	-.06	.40	-.08
Religious faith contributes to bad mental health. (R)	-.19	-.03	.38	-.06
I take pride in being heretical (holding opinions contrary to religious doctrine). (R)	-.05	.03	.35	.15
There is no infallible source of truth to be found in religion. (R)	-.31	-.09	.34	.08
I don't see any benefit on health coming from religion. (R)	-.16	-.31	.34	.00
There are sacred objects that are important	.07	.05	-.06	.59
There are sacred ritual actions that are important	.12	.11	-.13	.54
I enjoy religion because of the religious art.	.01	.13	-.06	.51
I enjoy religion because of the religious architecture.	.03	.05	-.05	.49
There are many views of how to understand religious scriptures and no view is better than the others. (R)	-.17	.01	-.06	.44
Rituals concerning sacred objects have little value. (R)	.02	-.08	.22	-.33
One feels safer in the world through a belief in a supreme being.	.07	.25	-.17	.28
I am indifferent to religion. (R)	-.13	-.28	.17	.17
Religious people have different values than I do. (R)	-.22	-.07	.28	.12

Table 2 (Continued)

Item	Factor loading			
	F	TC	TR	A
Religion makes people escape from reality. (R)	-.15	-.01	.21	.28
I don't enjoy reading about religion. (R)	-.12	-.23	.24	-.13
The desires of my body do not keep me from my prayers	.22	.15	-.16	.12
I have so much to do most days that I don't usually have time for prayer. (R)	-.13	-.06	.12	.21

Note. F = Fundamentalism; T = Transcendent Connection; TR = Tolerance (vs. Rejection); A = Religious Artifacts.

contain the opinion that religion is actively harmful. Tolerance is essentially the baseline acceptance of religion as something that is unharmed, which might be a prerequisite for other forms of adherence or endorsement of religion. Consideration of Religion (vs. Indifference) includes a mixture of normal and reverse-keyed items that indicate whether religion is a top priority or whether other activities are in general ranked as more important. Religious Artifacts captures the valuing of religious artifacts and customary expression of religiousness, such as art, architecture, ritual, and religious objects. Public Integration contains items stating that religion should be placed in the center of public domains, such as education or civil affairs.

Since low scores in Tolerance (vs. Rejection) represent a more extreme negative view of religion, one might expect scores on this content-grouping to be negatively skewed, since only a small fraction of the participants are likely to be actively rejecting religion. The Consideration content-grouping, on the other hand, should yield a positive skew, because many people (not just the nonreligious, but also the relatively unengaged religious) will score on the indifferent end. However, this is not supported by the data. A Shapiro-Wilke test did not show a

significant departure from normality for Tolerance, $W(809) = .99$, $p = .193$, or for Consideration, $W(809) = .99$, $p = .780$.

Content Reduction Phase Two

Because inclusion of all items in subsequent studies would not be practical, a reduced set of items was selected for the factors in both models by comparing the item-total correlations (ITC) and the equidiscriminating indices (see supplementary material for the equidiscriminating indices), in addition to the item loadings and item content. Substantive content beyond the 4Bs model would presumably be representable by more than just an item or two, so I aimed to have at least five items for each factor. Table 3 displays the selected items for each content-grouping produced by the six-factor model, along with their ITC's, factor loadings, and equidiscriminating indices. The factors in this model had some overlap, so the item cross-loadings played a key role in selecting the final items. To ensure that the six factors were relatively independent, items with high cross-loadings (i.e., those clearly associated with more than one factor) were avoided when possible. Because of the number of cross-loading items in the Public Integration and Consideration of Religion factors, a few extra items from the bigger pool of items (those rejected for high r^2 values) were added at a later stage to both factors to reach the five-item standard. The items selected from the bigger pool correlated more highly with the relevant factor compared to the other factors.

Table 4 displays the selected items for each content-grouping produced by the four-factor model. Because many of the items loading onto the Religious Artifacts factor cross-loaded onto other factors, the bigger pool of items was examined for items that correlated more highly with the Artifacts factor than the other three factors. As a result, an extra item was added to factor four at a later stage.

Table 3*Selected Items for the Six-Factor Model*

Item	Loading	ITC	EQI (20th)	EQI (80th)
Fundamentalism				
One must always dress and behave in the proper way that is defined by true religion	.54	.65	.40	.54
Religion provides a complete, unfailing guide to preserving oneself from harm	.53	.68	.46	.52
In true religion one finds a set of divine laws that should replace all man-made laws	.48	.63	.42	.52
Religion has given humanity a complete, unfailing guide to happiness	.48	.65	.45	.49
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.48	.54	.41	.43
One either believes in the true religion or one has rejected it; there is nothing in between	.47	.43	.26	.39
I like religion because it tells me what a supernatural being says.	.47	.64	.44	.53
I find that religion provides believers with prosperity and rich financial rewards.	.45	.55	.44	.40
Transcendent Connection				
I have had an experience in which I realized the oneness of myself with all things.	.70	.65	.51	.50
I have had an experience in which something greater than myself seemed to absorb me.	.68	.68	.49	.52
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.68	.67	.53	.48
I have never felt any force or connection that I would call spiritual.	-.64	.62	.52	.48
I often feel a strong spiritual connection with all the people around me.	.61	.63	.50	.45
I have had an experience in which I felt everything in the world to be part of the same whole.	.61	.59	.47	.47
I often feel like I am a part of the spiritual force on which all life depends.	.60	.66	.47	.52
I have had an experience which I knew to be sacred.	.50	.57	.45	.46

Table 3 *(Continued)*

Item	Loading	ITC	EQI (20th)	EQI (80th)
Tolerance (vs. Rejection)				
Religion has a bad effect on kids growing up.	.56	.64	.50	.51
Religion increases the amount of evil in the world.	.55	.55	.41	.41
I am hostile to religion.	.50	.51	.44	.37
Religion lacks value because it is antiquated and outdated.	.50	.62	.51	.45
Reason, science, and technology have now made our religious traditions useless	.48	.55	.47	.43
Religious faith contributes to bad mental health.	.45	.51	.39	.40
I find that religious communities are not a good place to find friends.	.41	.48	.43	.37
I take pride in being heretical (holding opinions contrary to religious doctrine).	.31	.30	.23	.27
Religious Artifacts				
I enjoy religion because of the religious art.	.77	.52	.46	.39
I enjoy religion because of the religious architecture.	.73	.47	.43	.38
There are sacred ritual actions that are important	.51	.57	.52	.41
There are sacred objects that are important	.50	.51	.49	.38
Rituals concerning sacred objects have little value	-.36	.41	.39	.35
Public Integration				
Religious teachings should be a central part of education	.52	.65	.44	.53
Religion should play the most important role in civil affairs	.52	.73	.43	.61
A particular set of beliefs is superior to all others	.43	.57	.31	.56
Religious considerations should be excluded from civil affairs	-.42	.56	.46	.42
Religious considerations should be excluded from education	-.39	.49	.45	.36
I place no value on religious traditions. ^a	--	--	--	--
Consideration of Religion (vs. Indifference)				
I have never gotten any economic benefit from religion.	.32	.42	.34	.38
I like to do practical things more than praying	.39	.55	.37	.43

Table 3 (Continued)

Item	Loading	ITC	EQI (20th)	EQI (80th)
I have so much to do most days that I don't usually have time for prayer.	.31	.28	.24	.26
Religion makes people escape from reality.	.30	.29	.31	.24
My personal and social activities are more important than prayer or religious activities. ^a	--	--	--	--
I devote a lot of my time to my religion. ^a	--	--	--	--
It is important to me that I pray on a regular basis. ^a	--	--	--	--

^aItems added at a later date.

Independence of Content-Groupings

To assess the uniqueness of the proposed content-groupings, the correlations were examined for the six-factor model, the four-factor model, and the 4Bs' subfacets (see Tables 5 and 6). To compute these correlations, the score for each content-grouping was calculated by averaging the responses to the final items selected earlier in the analysis. Since the content-groupings are intended to be relatively independent of the 4Bs, the correlations between these groupings and the 4Bs' subfacets should not exceed the correlations of the 4Bs subfacets, which range from .66 to .79. The correlations between the content-groupings from the six-factor model were within this threshold, ranging from .02 to .66 in absolute value. The four-factor model displayed similar correlations, ranging from .27 to .69. The correlations between the content-groupings of each model were even lower, ranging from .02 to .49 in absolute magnitude for the six-factor model and from .23 to .54 in absolute magnitude for the four-factor model.

Table 4*Selected Items for the Four-Factor Model*

Item	Loading	ITC	EQI (20th)	EQI (80th)
Fundamentalism				
Religion should play the most important role in civil affairs	.66	.74	.40	.61
Religion provides a complete, unfailing guide to preserving oneself from harm	.66	.69	.45	.52
I like religion because it tells me what a supernatural being says.	.61	.67	.43	.51
In true religion one finds a set of divine laws that should replace all man-made laws	.61	.69	.41	.49
Religion is the main thing I do in my life.	.61	.68	.35	.59
Religion has given humanity a complete, unfailing guide to happiness	.60	.67	.45	.48
I think it is important for people to show religious devotion publicly.	.59	.67	.46	.47
I don't follow a strict code based on religion.	-.51	.57	.27	.54
Transcendent Connection				
I have had an experience in which I realized the oneness of myself with all things.	.72	.65	.51	.56
I have had an experience in which something greater than myself seemed to absorb me.	.71	.68	.49	.62
I have never felt any force or connection that I would call spiritual.	-.69	.63	.55	.55
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.67	.65	.53	.57
I have had an experience in which I felt everything in the world to be part of the same whole.	.65	.59	.46	.54
I often feel a strong spiritual connection with all the people around me.	.60	.63	.52	.56
I often feel like I am a part of the spiritual force on which all life depends.	.59	.65	.48	.57
I have never had an experience which seemed holy to me.	-.56	.56	.45	.51

Table 4 *(Continued)*

Item	Loading	ITC	EQI (20th)	EQI (80th)
Tolerance (vs. Rejection)				
Reason, science, and technology have now made our religious traditions useless	.60	.57	.48	.45
I am hostile to religion.	.59	.53	.48	.39
Religion lacks value because it is antiquated and outdated.	.55	.61	.51	.45
Religion increases the amount of evil in the world.	.50	.55	.43	.43
I reject all religious values.	.50	.53	.41	.41
I find that religious communities are not a good place to find friends.	.40	.47	.42	.38
Religious faith contributes to bad mental health.	.38	.51	.41	.41
I take pride in being heretical (holding opinions contrary to religious doctrine).	.35	.30	.26	.28
Religious Artifacts				
There are sacred objects that are important	.59	.53	.53	.44
There are sacred ritual actions that are important	.54	.55	.52	.48
I enjoy religion because of the religious art.	.51	.53	.49	.50
I enjoy religion because of the religious architecture.	.49	.47	.47	.46
I value religion because it connects me to history. ^a	--	--	--	--

^aItem added at a later date.

Table 5

Correlations between the 4Bs' Subfacets and the Content-Groupings

		4Bs' Subfacets							
		BH		BLG		BLV		BO	
		4Bs' Subfacets							
BH	—								
BLG	.77	***	—						
BLV	.79	***	.70	***	—				
BO	.68	***	.73	***	.66	***	—		
Six-Factor Model									
F	.49	***	.42	***	.59	***	.50	***	
TC	.61	***	.59	***	.56	***	.43	***	
TR	-.66	***	-.63	***	-.61	***	-.59	***	
A	-.26	***	-.28	***	-.21	***	-.31	***	
I	.33	***	.37	***	.40	***	.59	***	
C	-.17	***	-.12	***	-.14	***	.02		
Four-Factor Model									
F	.63	***	.60	***	.60	***	.45	***	
TC	.34	***	.27	***	.46	***	.39	***	
TR	-.66	***	-.63	***	-.62	***	-.62	***	
A	.44	***	.48	***	.52	***	.69	***	

Note. BH = Behaving; BLG = Belonging; BLV = Believing; BO = Bonding; F =

Fundamentalism; TC = Transcendent Connection; TR = Tolerance (vs. Rejection); A = Religious

Artifacts; I = Public Integration; C = Consideration of Religion (vs. Indifference).

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 6

Correlations for the Four-Factor Model and the Six-Factor Model

Six-Factor Model						Four-Factor Model					
	F	TC	TR	A	I	C	F	TC	TR	A	
Six-Factor Model											
F	—										
TC	.38 ***	—									
TR	-.32 ***	-.49 ***	—								
A	-.14 ***	-.08 *	.21 ***	—							
I	.37 ***	.22 ***	-.26 ***	-.17 ***	—						
C	-.05	-.21 ***	.18 ***	-.02	.09 *	—					
Four-Factor Model											
F	.38 ***	.89 ***	-.57 ***	-.13 ***	.22 ***	-.20 ***	—				
TC	.92 ***	.29 ***	-.21 ***	-.08 *	.34 ***	.03	.29 ***	—			
TR	-.34 ***	-.45 ***	.98 ***	.24 ***	-.28 ***	.16 ***	-.54 ***	-.23 ***	—		
A	.44 ***	.30 ***	-.36 ***	-.24 ***	.93 ***	.05	.31 ***	.39 ***	-.39 ***	—	

Note. F = Fundamentalism; TC = Transcendent Connection; TR = Tolerance (vs. Rejection); A = Religious Artifacts; I = Public Integration; C = Consideration of Religion (vs. Indifference).

* $p < .05$, ** $p < .01$, *** $p < .001$

Additionally, the correlations between the content-groupings of the six-factor and four-factor models demonstrate that the models overlap significantly. The content-groupings from the four-factor model correlate strongly with the corresponding groupings in the six-factor model, ranging from .89 to .98. Meanwhile, the two extra content-groupings in the six-factor model seem to be relatively independent from the content-groupings of the four-factor model, with maximum correlations of .24 in absolute value.

Discussion

Study 1 identified as many as six content-groupings that may contain aspects of religiousness beyond what is represented in the 4Bs model: Fundamentalism, Transcendent Connection, Tolerance (versus Rejection), Religious Artifacts, Public Integration, and Consideration (versus Indifference). Based on the content of these groupings, the 4Bs model could be omitting content related to mysticism, valuing of religious artifacts, and fundamentalism. Adding these aspects of religiousness to the 4Bs could result in a more detailed and nuanced model, enabling it to distinguish between more qualities of religiousness. One notable trend among the factors was the wide spectrum of attitudes toward religion captured. Extending beyond the moderate religiousness of the 4Bs' subfacets, the factors included attitudes ranging from tolerance to non-indifference to aesthetic appreciation to highly zealous religiousness. It is possible that capturing a wider spectrum of religious sentiment could increase predictive power for important outcomes such as life satisfaction, but Study 1 did not examine this possibility. This study also did not test specific hypotheses, so the findings are tentative and need to be examined further. Another limitation is the sample, a convenience sample made up predominantly of Christian and non-religious college students. It's unclear whether the findings

would generalize to more diverse populations. Nevertheless, Study 1 did identify several potential additions to the 4Bs model that would benefit from further examination.

Chapter Five: Study 2 Methodology

Study 2 examined the potential additions produced by Study 1 in greater detail. It was preregistered at <https://osf.io/m4qfw/registrations>. All research gathered for this study was done with University of Oregon IRB approval (protocol number 9262017.025). For the content-groupings to be potential additions to the 4Bs model, they must be relatively independent of the 4Bs' subfacets, containing unique religiousness-related content. If the additions are not independent, the results would support the existing 4Bs model and indicate that there is little case for expanding it. Therefore, I hypothesize that the content-groupings will be independent, showing correlations with the 4Bs' subfacets that are lower than or similar to the intercorrelations of the 4Bs' subfacets.

Since the subfacets of the 4Bs model are posited to be universally present across religions and cultural contexts (Saroglou, 2011), potential additions must perform adequately in culturally and religiously diverse samples. The analyses will be compared across a Christian community sample (United States), a predominantly Christian student sample (United States), a Hindu sample (India), and three smaller Muslim samples (India and Iran). The original plan was to obtain a single Muslim sample from India, but despite best efforts, the recruitment of this sample proceeded extremely slowly. Fortunately, a researcher in Iran (Dr. Naser Aghababaei) who has previously collaborated in research associated with our lab (Aghababaei et al., 2025) and is active in psychology of religion research, learned of this project. On his own, he gathered two samples from participants in Iran, which were graciously offered for supplementary analyses in the current project. Thus, I was able to supplement the painstakingly-gathered but overly small Muslim sample from India with two other relevant small samples. I will examine the factorial

structure, reliability, and unidimensionality to identify which content-groupings are consistent across samples.

To be *useful* additions to the 4Bs model, proposed content-groupings should help predict relevant outcomes – life satisfaction, meaning in life, and need for closure. If the content-groupings significantly increase the predictive power of the 4Bs' scales for these outcomes, there will be a stronger case for adding them to the 4Bs model. However, there are other relevant outcomes beyond what is included here, so content-groupings that do not increase predictive power will not be treated as useless. It is possible that they would help predict other important outcomes that are not included in this study. The results of this analysis on the Study 1 data will also be reported, since this analysis was not performed in Study 1.

Finally, I will explore how the potential additions and the 4Bs' subfacets correlate with religiousness-related constructs. Since the 4Bs is a model of religiousness, potential additions should fall within the category of religiousness. One way of exploring this is by examining how the content-groupings correlate with standard measures of religiousness. In this case, two measures will be used: one that captures self-reported religiousness and one that captures religious behavior. Content-groupings would best show a substantial positive correlation with religiousness. There are limitations to this, especially with the self-reported religiousness. What people consider to be religiousness does not always line up with what should be considered religiousness from a scientific standpoint. Thus, content-groupings that do not show substantial correlations with religiousness will not be automatically dismissed, but priority will be given to those that do. Similarly, correlations with self-reported spirituality will be examined. Although spirituality is not central to the 4Bs model, it is closely tied with religiousness. As noted earlier, the two constructs have a complex relationship (Zinnbauer et al., 1997), so it would be useful to

know how the content-groupings relate to spirituality, especially if they do not significantly correlate with religiousness. The strength of this correlation is expected to vary depending on the content-grouping. Lastly, because one of the potential additions contains mysticism-related content, I will examine how the 4Bs' subfacets and the potential additions relate to mysticism, as measured with the Brief Mysticism Scale (Streib & Chen, 2021).

Method

Participants

U.S. Undergraduates (Study 1). The sample of undergraduates described in Study 1 will be used again in Study 2, but for separate analyses and different questions. When analyses overlap with Study 1 (correlations with 4Bs, factor analysis), the results from Study 1 will be referenced and the sample will not be re-analyzed. Only the second half of the Study 1 sample completed all the measures used in Study 2, so the undergraduate sample analyzed in Study 2 consists of 472 participants. The average age of Study 2's sample is 19.4 ($SD = 2.68$). The sample was made up of 67.2% women ($n = 317$), 29.9% men ($n = 141$), and 3% participants who responded "other or prefer not to say" for gender ($n = 14$). The religious affiliations of the sample were 32.4% Christian, 4.4% Jewish, 5.5% spiritual but not religious, 26.1% unaffiliated/none, 19.1% atheist/agnostic, 4.2% other (Buddhist, Muslim, Hindu, multiple affiliations), and 8.3% did not answer. Participants could select multiple racial/ethnic categories, resulting in a sample that was 75% White, 13.3% Latinx/Hispanic, 12.9% Asian, 3.4% Black, 1.9% Native Hawaiian/Pacific Islander, and 1.1% American Indian/Alaska Native.

Hindu. New for Study 2, to create a Hindu sample, 407 participants in India were recruited through Mechanical Turk (MTurk) and completed the survey on Qualtrics. All participants who did not meet the exclusion criteria were compensated \$2. Respondents were

excluded if the standard deviation (SD) of their responses was less than 0.4 ($n = 1$), their mean response to items was at extreme ends of the scale (under 2 or over 6 on a 7-point scale; $n = 74$), 20% of their data was missing ($n = 11$), or they did not correctly enter their information on MTurk ($n = 8$). In addition, they were excluded if their survey response time was less than 1/3 of the median response time for this (India) sample. An initial guess estimate was that this would exclude responses under 225 seconds, based on previous undergraduate sample(s), but MTurk respondents tended to be faster and so the actual cutoff applied was 197 seconds of response time ($n = 67$). These exclusion criteria are reflected in pre-registrations entered on OSF before data collection. The resulting sample consists of 266 participants with a mean age of 33.3 ($SD = 7.09$). The sample is made up of 72.6% men ($n = 193$) and 27.4% women ($n = 73$). The religious affiliations of the sample were 74.4% Hindu, 15.8% Christian, 7.1% Muslim, and 2.6% Other (Sikh, Jain, Buddhist, and “Other”). Non-Hindu participants were excluded from the Hindu sample, resulting in 198 participants.

Muslim-India. To collect a sample of Muslim participants from India, a screening survey was used on MTurk, and the Muslim participants were approved to complete the full survey on Qualtrics. Initially, all participants who completed the brief screening survey received 10¢, and all participants who completed the full survey were compensated with \$2. In order to bring data collection (i.e., recruitment) with the Muslim sample up to an acceptable speed from a practical standpoint, the compensation amount was adjusted slightly upward. As a result, those who completed the screening survey were compensated 56¢ and those who completed the full survey were compensated \$2.30¹. The Muslim participants from the general Indian sample

¹ Because data collection was very slow, the total compensation (for both the screening survey and the full survey) was raised above this amount (up to a total of \$3.50) for a few weeks. Since the highest compensation listed in the protocol was only \$3.00, the compensation was lowered again.

(without screening) were combined with the participants collected after screening was utilized, resulting in a sample of 118. Based on the high factor loadings reported in Study 1, a sample size of 200 is recommended for a reliable factor analysis (MacCallum et al., 1999); however, the process of data collection was too slow for the practical time constraints for this research. The exclusion criteria used with the Indian sample was also applied in this sample: 1 participant was excluded for a low SD, 9 participants were excluded for extremely high or low acquiescence bias, 1 participant was excluded for a response time under 197 seconds, 3 participants were excluded for missing data, 1 was excluded for not correctly entering their information on MTurk, and 3 were excluded because they were not Muslim. The resulting sample consists of 100 participants with a mean age of 36.4 ($SD = 7.54$). The sample is made up of 73% men and 27% women. All participants in this sample identified as Muslim.

Christian. To create a Christian sample, 275 participants in the U.S. were recruited through Mechanical Turk (MTurk) and completed the survey on Qualtrics. All participants who did not meet the exclusion criteria were compensated \$3. The exclusion criteria used with the Indian sample was also applied in this sample: 7 participants were excluded for a low SD, 27 participants were excluded for high acquiescence bias, 29 participants were excluded for a response time under 197 seconds, and 6 participants were excluded for missing data. After exclusions, the sample was 218 participants with a mean age of 32.6 ($SD = 8.55$). The sample was made up of 57.3% men ($n = 125$) and 42.7% women ($n = 93$). The religious affiliations of the sample were 94% Christian, 3.2% Muslim, 2.3% Hindu, and 0.9% other/none. Participants could select multiple racial/ethnic categories, resulting in a sample that was 89% White, 8.3% Asian, 1.4% Black, and 1.8% other (American Indian/Alaska Native, Latinx/Hispanic, and

Native Hawaiian/Pacific Islander). The non-Christian participants were excluded from the analyses, resulting in a sample of 205.

Muslim – Persian (1). Increasing the number of Muslim participants, 110 participants were provided through the independent efforts of another psychology-of-religion investigator in Iran, who had learned of this research project through communications with my dissertation advisor, with whom he has collaborated in a separate larger-scale project (Aghababaei et al., 2025). This additional small sample served to supplement the Indian Muslim sample. The investigator in Iran (Dr. Naser Aghababaei) shared the survey with some of his colleagues, former students, and current students. Additionally, students in one of his classes were compensated with extra credit for sharing a link to the survey with their social networks. The same exclusion criteria described earlier were used in this sample, but no participants met the exclusion criteria. One non-Muslim participant was excluded, resulting in a sample of 109 with a mean age of 33.4 ($SD = 12.25$). The sample was made up of 70.6% women ($n = 77$) and 27.5% men ($n = 30$). Two participants did not list their sex/gender.

Muslim – Persian (2). Dr. Aghababaei also recruited participants from his classes ($n = 95$) and from their social networks ($n = 6$). The students were compensated with extra credit. The same exclusion criteria were used, but no participants met the exclusion criteria. Three participants were excluded based on religious affiliation. Two of them did not list their religious affiliation, and the other participant was Jewish. The resulting sample was 98 participants with a mean age of 26.5 ($SD = 9.15$). The sample was made up of 95.9% women ($n = 94$) and 4.1% men ($n = 4$). Because the two Persian samples had different recruitment methods and demographics, they will be analyzed separately. However, the Muslim samples will also be

aggregated in order to obtain an appropriate sample size to compare findings with the Hindu and Christian samples.

The investigator (Dr. Aghababaei) affirms explicitly that participation in his study was voluntary, anonymous, and in compliance with national and institutional ethical guidelines at the University of Quran and Hadith in Iran.

Measures

The Four Basic Dimensions of Religiousness Scale (4Bs; Saroglou et al., 2020).

Participants received the 4Bs' measure, consisting of 12 items in a randomized order.

Participants rated their agreement using a 7-point Likert scale (1 = totally disagree and 7 = totally agree).

Proposed Content-Groupings. Participants received the items making up the proposed content-groupings: Fundamentalism, Transcendent Connection, Tolerance (vs. Rejection), Religious Artifacts, Public Integration, and Consideration (vs. Indifference). As a whole, the proposed content-groupings consisted of 72 items in a randomized order. Participants rated their agreement using a 7-point Likert scale (1 = totally disagree and 7 = totally agree).

Life Satisfaction. Life satisfaction was measured using the 5-item Satisfaction with Life Scale (Diener et al., 1985). Participants used the same 7-point Likert scale to respond. This scale had acceptable internal consistency in all samples; the Cronbach's alpha was above .7 in every sample.

Need for Closure. Participants responded to nine items from the preference for order and preference for predictability subscales of the Need for Closure Scale (Webster & Kruglanski, 1994). Participants rated their agreement using a 6-point Likert scale (1 = strongly disagree and 6 = strongly agree). This scale had acceptable internal consistency in the Persian samples and in

the aggregated Muslim data. In the Indian Muslim sample, the Cronbach's alpha was slightly low ($\alpha = .635$), but the internal consistency was poor in the Hindu and Christian samples ($\alpha = .443$ and $.188$ respectively). Three of the items correlated negatively with the total scale, even though they were coded so that high scores indicated more need for closure. Because reliability (internal consistency) is not required for a measurement index to have predictive validity and some kind of meaningfulness (as is the case with linear composites of two or more poorly correlated indicators), the scale scores were retained, but with the caution that, in these samples, the underlying content of Need for Closure was unexpectedly heterogeneous (i.e., did not reflect a strong degree of convergence among the item indicators).

Meaning in Life. Participants responded to eight items from the Meaningfulness and Crisis of Meaning scales, both part of the Sources of Meaning and Meaning in Life Questionnaire (Schnell, 2009b). The scale used in this study was an earlier, unpublished version, so there are some differences: two items were not included and two of the items were worded slightly differently than the original items due to translation differences. This scale had acceptable reliability in nearly all the samples. The only sample that had a Cronbach's alpha below $.7$ was the Hindu sample ($\alpha = .653$). There were also three items in this scale that correlated negatively with the total scale in the Hindu sample, even though they were coded so that high scores indicated more meaning in life.

Mysticism. Mysticism was measured using the eight-item Brief Mysticism Scale (Streib & Chen, 2021). Participants used a 5-point Likert scale to respond (1 = very inaccurate/definitely not true and 5 = very accurate/definitely true). Some of the items in the Brief Mysticism Scale (BMS) overlapped with items making up the proposed content-groupings. When performing analyses that involved both the Brief Mysticism Scale and the proposed content-groupings, the

overlapping items were excluded from one of the measures. The BMS had good internal consistency in all samples, and marginal internal consistency in the Christian sample ($\alpha = .636$). No items correlated negatively with the scale total.

Duke Religion Index. Participants responded to two items about religious practice from the Duke Religion Index (Koenig & Buessing, 2010). They used 6-point Likert scales based on frequency (e.g., 1 = more than once a week and 6 = never). One item asked about the frequency of public religious activities (i.e., attending church, mosque, temple, or other religious meetings), and the other item asked about the frequency of private religious activities (i.e., prayer, meditation, or study of religious scriptures).

Religiousness and Spirituality. Participants rated themselves on a scale from 1 (not religious) to 5 (religious). Participants also rated themselves on a scale from 1 (not spiritual) to 5 (spiritual).

Analysis

First, I created an index of yea-saying/nay-saying tendency (AC index) for all samples (Hindu, Christian, Muslim-India, and Persian) by averaging the responses of each participant to items contained within 5 or 6 pairs of opposite content items. (This index was already created and utilized in the Study 1 sample.) Only 5 pairs could be used in the Muslim samples (Indian and Persian); because of a clerical error, one item from the 6 pairs was not included in the survey. Then the data was transformed to control for these tendencies by subtracting each participant's AC index score from each of their item scores to create an AC dataset. I ran the analyses on both the transformed and the untransformed data, but I will report on the transformed data in the results section, because I regard it as the more trustworthy. The results from the untransformed data can be found in the supplemental materials.

The correlations of the 4Bs' subfacets and the additional content-groupings will be examined separately in each sample to assess whether the additional content-groupings are "beyond" the 4Bs model. The correlations between the 4Bs' subfacets will be used as an upper limit for acceptable correlation sizes. Additionally, reliability will be assessed via Cronbach's alpha (internal consistency) and item-total correlations. An item-total correlation communicates the correlation between a scored item and the total test score and thus provides an index of how much that individual item converges with the central content reflected in the scale or content-grouping.

The six-factor model from Study 1 was examined to assess whether all of the content-groupings displayed good fit across samples. Because a limited pool of items was collected in Study 2, another factor analysis was completed on the full sample from Study 1 with a limited item pool to match the Study 2 samples. As in Study 1, Maximum Likelihood and Equamax with Kaiser Normalization were used. To help assess whether cultural and religious variation (via the exporting of the model to a different cultural/religious context) significantly impacts the structural fit of the content-groupings, an exploratory factor analysis was also completed on each sample. The factor analyses were done with Maximum Likelihood to match Study 1. Procrustean rotation was used to compare the results of the factor analysis with the new Study 1 results. With Procrustes rotation, the factor analysis matrix from the new Study 1 results was set as the target matrix and the factor analysis matrix from the Study 2 sample was rotated to match the target matrix as much as possible. Then the factors were directly compared to determine how similar they are. The most common statistic for comparing factor similarity is Tucker's phi (ϕ), a congruence coefficient that indicates the similarity between the best-matching pairs of factor (Fischer & Karl, 2019). Absolute cut-off thresholds are, of course, arbitrary, but generally values

larger than 0.85 indicate fair factor similarity, and values larger than 0.95 indicate factor equality. Only content-groupings with values above 0.85 were considered as potential additions. Although the six-factor model was the focus since it is more comprehensive, the four-factor model from Study 1 was also examined because Public Integration and Consideration of Religion were among the weakest groupings on other criteria, and thus in this case, the four-factor model might be a viable alternative.

Although confirmatory factor analysis using structural equation modeling is a more stringent method of model comparison, the purpose of the Procrustes-oriented factor analysis here is to see if the constructs (represented by the content-groupings) are too impacted by cultural variation to be good additions, a task more suited for Procrustes rotation (Fischer & Karl, 2019). CFA would be more helpful at a later stage of research, when it is more certain how many additional variables (beyond the 4Bs) are worth consideration, and when there is a more definitive set of proposed indicators for these.

To determine whether additions to the 4Bs model could increase prediction of relevant outcomes, I ran hierarchical regression analyses predicting need for closure, meaning in life, and life satisfaction for each potential addition. After examining the zero-order correlations, I added demographic variables (gender/sex, age, and religion). In the second step, I added the 4Bs' subfacets, followed by one of the content-groupings (i.e., Fundamentalism, Transcendent Connection, Tolerance, Religious Artifacts, Public Integration, or Consideration). In the fourth step, the rest of the potential additions were added. A nonsignificant change in the R^2 value at the third step indicated that the addition did not increase prediction of relevant outcomes. In case extremely low or extremely high levels have a unique effect, the analyses were also done using a quadratic term of the potential addition at step three.

Content-groupings would best display substantial positive correlations with religiousness in order to be considered a high-priority addition to the 4Bs model. To this end, I will examine how the potential additions correlate with self-reported religiousness and religious behavior. In addition, correlations with spirituality and mysticism will be computed to assess how the content-groupings relate to constructs that are proximal to religiousness. Because the mysticism measure has overlapping items with Transcendent Connection, all correlational computations between the two variables will be done with the overlapping items removed.

Lastly, the content-groupings will be prioritized by their value as additions. Pulling from earlier analyses, higher priority will be given to content-groupings that correlate less with the 4Bs' subfacets, have higher congruence (consistency) across samples, and predict relevant outcomes better than alternative content-groupings (meaning in life, life satisfaction, and need for closure). Prioritizing the content-groupings helps identify the groupings with the best evidence of being a valuable addition. However, lower priority content-groupings will not be automatically disqualified as potential additions since there may be valid explanations for the lack of evidence. For example, as mentioned earlier, they could be predictive of a relevant outcome not included in this study. It is possible that none of the content-groupings will turn out to be good candidates, in which case this investigation would provide support for the 4Bs model as is.

Chapter Six: Study 2 Results

The descriptive statistics for the six-factor model, the 4Bs' subfacets, the outcome variables, and the religious variables are displayed in Table 7. Because it is more comprehensive, the results of the analyses with the six-factor model are focused on first below. However, the results from the four-factor model will also be discussed, and the differences in findings between the two models will be highlighted.

Independence of Content-Groupings (Six-Factor Model)

As potential additions to the 4Bs, the content-groupings should be somewhat independent, although some amount of association is expected. Similar to Study 1, the correlations between the 4Bs' subfacets will be used as an upper limit of acceptable correlation size. The correlations between the content-groupings and the 4Bs should not exceed the highest correlations between the 4Bs' subfacets. In Study 1, the largest correlation between the 4Bs' subfacets was .79, but the highest correlations among the 4Bs from the current sample will also be considered as an upper limit.

The correlations among the 4Bs in most samples were consistently high across samples, except for the Christian sample (see Table 8). In the Christian sample, the correlations were more moderate. Except for the first Persian sample and the aggregated Muslim data, the correlations between the 4Bs' subfacets were similar or slightly smaller than those in Study 1. The correlations in the first Persian sample were stronger, ranging from .827 to .902, and the correlations in the aggregated Muslim data ranged from .802 to .832.

One of the stark patterns in the correlational data was the difference between the two Persian samples (see Tables 9 and 10). The correlations in the first Persian sample were consistently higher than the correlations in the second Persian sample. The difference is even

Table 7*Means and Standard Deviations (in Parentheses) for Study Variables*

	Muslim-Ind. (n = 100)	Persian 1 (n = 109)	Persian 2 (n = 98)	Agg. Muslim (n = 307)	Hindu (n = 198*)	Christian (n = 205)	US-Student (n = 472)
4Bs							
Behaving	1.17 (1.29)	1.46 (1.76)	2.25 (1.02)	1.62 (1.47)	0.46 (0.91)	0.38 (0.80)	-0.54 (1.58)
Belonging	0.86 (1.24)	1.14 (1.71)	2.01 (0.92)	1.33 (1.49)	0.43 (0.98)	0.39 (0.80)	-0.54 (1.48)
Believing	1.04 (1.10)	1.69 (1.62)	2.47 (0.88)	1.73 (1.38)	0.42 (0.83)	0.48 (0.77)	-0.39 (1.35)
Bonding	1.10 (1.09)	1.48 (1.69)	2.29 (1.02)	1.61 (1.40)	0.54 (0.97)	0.48 (0.85)	0.06 (1.40)
Six-Factor Model							
Fundamentalism	0.57 (0.88)	0.81 (1.42)	1.34 (0.94)	0.90 (1.15)	.07 (0.58)	0.23 (0.58)	-1.25 (0.93)
Transcendent Connection	0.46 (0.96)	0.55 (1.37)	0.99 (0.91)	0.66 (1.13)	0.27 (0.69)	0.33 (0.61)	-0.26 (1.30)
Tolerance	1.11 (1.09)	1.77 (1.46)	2.34 (0.70)	1.73 (1.24)	0.30 (0.88)	0.22 (0.75)	-0.04 (0.99)
Religious Artifacts	0.44 (1.02)	1.01 (1.33)	1.62 (0.85)	1.02 (1.19)	0.24 (0.67)	0.38 (0.65)	0.29 (1.20)
Public Integration	0.69 (1.15)	0.98 (1.64)	1.82 (0.93)	1.16 (1.37)	0.10 (0.72)	0.14 (0.52)	-1.17 (1.10)
Consideration	0.71 (1.02)	0.93 (1.6)	1.49 (0.86)	1.03 (1.26)	-0.04 (0.70)	0.04 (0.45)	-1.28 (1.03)
Outcome Variables							
Need for Closure	4.11 (0.61)	4.51 (0.85)	4.44 (0.74)	4.36 (0.76)	3.93 (0.49)	3.85 (0.43)	3.79 (0.69)
Meaning in Life	4.55 (0.80)	4.88 (0.85)	4.94 (0.77)	4.80 (0.825)	4.17 (0.73)	4.35 (0.79)	4.52 (0.92)
Life Satisfaction	4.77 (1.27)	4.33 (1.23)	4.32 (1.31)	4.47 (1.28)	5.16 (1.00)	5.50 (0.77)	4.75 (1.19)

Table 7 (Continued)

	Muslim-Ind. (n = 100)	Persian 1 (n = 109)	Persian 2 (n = 98)	Agg. Muslim (n = 307)	Hindu (n = 198*)	Christian (n = 205)	US-Student (n = 472)
Religious Variables							
Brief Mysticism Scale	3.37 (0.85)	3.00 (1.17)	3.18 (1.07)	3.18 (1.05)	3.59 (0.64)	3.78 (0.44)	2.71 (1.12)
Religiousness	4.01 (1.03)	3.50 (1.20)	3.83 (0.87)	3.77 (1.07)	3.71 (0.93)	4.05 (0.76)	1.93 (1.13)
Spirituality	3.93 (0.95)	3.66 (1.07)	3.71 (0.95)	3.77 (1.00)	3.71 (0.89)	4.03 (0.80)	2.78 (1.26)
PB Religious Activity	4.58 (1.58)	3.58 (1.44)	4.33 (1.23)	4.14 (1.49)	3.66 (1.30)	4.05 (1.39)	2.03 (1.26)
PV Religious Activity	4.31 (1.64)	4.32 (1.89)	5.13 (1.37)	4.58 (1.69)	3.00 (1.35)	3.66 (1.32)	1.65 (1.20)

Note. For the 4Bs scales and all of the content-groupings (six- and four-factor models), the scores can range from -6 to 6. For

mysticism, religiousness, and spirituality, scores can range from 1 to 5. For need for closure, meaning in life, and religious activities

(public and private), scores can range from 1 to 6, and for life satisfaction, the scores range from 1 to 7.

*One participant did not respond to the item about public religious activities, so the sample size is only 197 for that item in the Hindu sample.

Table 8*Correlations for the 4Bs' Subfacets*

		<i>n</i>	BH	BLG	BLV	BO
BH			—			
BLG	Muslim-India	100	.74 ***	—		
	Persian 1	109	.87 ***	—		
	Persian 2	98	.75 ***	—		
	Agg. Muslim	307	.83 ***	—		
	Hindu	198	.70 ***	—		
	Christian	205	.63 ***	—		
BLV	Muslim-India	100	.78 ***	.68 ***	—	
	Persian 1	109	.84 ***	.86 ***	—	
	Persian 2	98	.74 ***	.71 ***	—	
	Agg. Muslim	307	.82 ***	.80 ***	—	
	Hindu	198	.68 ***	.67 ***	—	
	Christian	205	.58 ***	.57 ***	—	
BO	Muslim-India	100	.76 ***	.70 ***	.76 ***	—
	Persian 1	109	.87 ***	.90 ***	.83 ***	—
	Persian 2	98	.70 ***	.69 ***	.75 ***	—
	Agg. Muslim	307	.83 ***	.83 ***	.82 ***	—
	Hindu	198	.71 ***	.70 ***	.75 ***	—
	Christian	205	.62 ***	.65 ***	.64 ***	—

Note. BH = behaving; BLG = belonging; BLV = believing; BO = bonding

* $p < .05$, ** $p < .01$, *** $p < .001$

more pronounced in the correlations between the content-groupings and the 4Bs subfacets (see Table 10). Even though the samples are from the same country, different sampling methods were used, resulting in considerably different correlation sizes.

There were more differences across samples in correlation size for the content-groupings but, for the most part, the associations between the content-groupings and the 4Bs were below the upper limits from both Study 1 and from their own sample. Fundamentalism had strong

Table 9*Correlations for the Content-Groupings*

		<i>n</i>	F		TC	TR	A	I	C
TC	Muslim-India	100	.56 ***	—					
	Persian 1	109	.54 ***	—					
	Persian 2	98	.39 ***	—					
	Agg. Muslim	307	.53 ***	—					
	Hindu	198	.45 ***	—					
	Christian	205	.57 ***	—					
TR	Muslim-India	100	.44 ***	.35 ***	—				
	Persian 1	109	.72 ***	.34 ***	—				
	Persian 2	98	.24 *	.07	—				
	Agg. Muslim	307	.60 ***	.34 ***	—				
	Hindu	198	.22 **	.46 ***	—				
	Christian	205	.26 ***	.41 ***	—				
A	Muslim-India	100	.56 ***	.55 ***	.27 **	—			
	Persian 1	109	.76 ***	.42 ***	.73 ***	—			
	Persian 2	98	.46 ***	.41 ***	.17	—			
	Agg. Muslim	307	.68 ***	.48 ***	.59 ***	—			
	Hindu	198	.41 ***	.49 ***	.45 ***	—			
	Christian	205	.60 ***	.58 ***	.44 ***	—			
I	Muslim-India	100	.67 ***	.55 ***	.60 ***	.48 ***	—		
	Persian 1	109	.86 ***	.38 ***	.80 ***	.78 ***	—		
	Persian 2	98	.55 ***	.15	.67 ***	.37 ***	—		
	Agg. Muslim	307	.77 ***	.42 ***	.75 ***	.67 ***	—		
	Hindu	198	.47 ***	.47 ***	.46 ***	.35 ***	—		
	Christian	205	.41 ***	.39 ***	.42 ***	.39 ***	—		
C	Muslim-India	100	.54 ***	.59 ***	.65 ***	.45 ***	.68 ***	—	
	Persian 1	109	.84 ***	.42 ***	.84 ***	.71 ***	.84 ***	—	
	Persian 2	98	.48 ***	.32 **	.59 ***	.29 **	.57 ***	—	
	Agg. Muslim	307	.72 ***	.47 ***	.77 ***	.60 ***	.77 ***	—	
	Hindu	198	.42 ***	.49 ***	.43 ***	.28 ***	.65 ***	—	
	Christian	205	-.02	.09	.21 **	.07	.26 ***	—	

Note. F = fundamentalism; TC = transcendent connection; TR = tolerance (versus rejection); A = religious artifacts; I = public integration; C = consideration (versus indifference)

* $p < .05$, ** $p < .01$, *** $p < .001$

correlations with the 4Bs among the Muslim samples, whereas the correlations were smallest in the Hindu sample. Indeed, the correlation between fundamentalism and behaving was above the upper limits of acceptable in the aggregated Muslim data (.824). In the first Persian sample, fundamentalism had high correlations with all of the 4Bs' subfacets – all above the Study 1 upper limit of acceptability, but below the upper limit in this sample (.90). This pattern may indicate that fundamentalism is indistinguishable from religiousness in Muslim samples.

Table 10

Correlations between the 4Bs and the Six-factor Model

		<i>n</i>	Behaving		Belonging		Believing		Bonding	
Fundamentalism	Muslim-India	100	.77	***	.69	***	.66	***	.64	***
	Persian 1	109	.85	***	.87	***	.82	***	.86	***
	Persian 2	98	.75	***	.61	***	.62	***	.62	***
	Agg. Muslim	307	.82	***	.79	***	.76	***	.78	***
	Hindu	198	.50	***	.48	***	.49	***	.45	***
	Christian	205	.61	***	.57	***	.55	***	.58	***
Transcendent Connection	Muslim-India	100	.61	***	.63	***	.62	***	.65	***
	Persian 1	109	.49	***	.50	***	.51	***	.55	***
	Persian 2	98	.32	**	.30	**	.36	***	.42	***
	Agg. Muslim	307	.51	***	.52	***	.53	***	.57	***
	Hindu	198	.65	***	.62	***	.63	***	.63	***
	Christian	205	.62	***	.60	***	.57	***	.57	***
Tolerance	Muslim-India	100	.59	***	.47	***	.63	***	.55	***
	Persian 1	109	.72	***	.74	***	.74	***	.73	***
	Persian 2	98	.40	***	.49	***	.38	***	.41	***
	Agg. Muslim	307	.67	***	.66	***	.72	***	.68	***
	Hindu	198	.61	***	.53	***	.53	***	.60	***
	Christian	205	.33	***	.36	***	.36	***	.41	***
Religious Artifacts	Muslim-India	100	.48	***	.61	***	.48	***	.58	***
	Persian 1	109	.78	***	.82	***	.77	***	.82	***
	Persian 2	98	.53	***	.49	***	.44	***	.47	***
	Agg. Muslim	307	.69	***	.73	***	.70	***	.73	***

Table 10 (*Continued*)

		<i>n</i>	Behaving	Belonging	Believing	Bonding
Religious Artifacts	Hindu	198	.51 ***	.56 ***	.53 ***	.52 ***
	Christian	205	.53 ***	.57 ***	.54 ***	.55 ***
Public Integration	Muslim-India	100	.69 ***	.65 ***	.67 ***	.64 ***
	Persian 1	109	.79 ***	.85 ***	.78 ***	.81 ***
	Persian 2	98	.64 ***	.65 ***	.56 ***	.61 ***
	Agg. Muslim	307	.77 ***	.79 ***	.75 ***	.76 ***
	Hindu	198	.42 ***	.42 ***	.44 ***	.41 ***
	Christian	205	.38 ***	.51 ***	.47 ***	.42 ***
	Muslim-India	100	.60 ***	.65 ***	.62 ***	.61 ***
Consideration	Persian 1	109	.79 ***	.81 ***	.77 ***	.81 ***
	Persian 2	98	.59 ***	.60 ***	.56 ***	.53 ***
	Agg. Muslim	307	.73 ***	.75 ***	.72 ***	.74 ***
	Hindu	198	.48 ***	.40 ***	.36 ***	.37 ***
	Christian	205	.05	.01	.08	.02

* $p < .05$, ** $p < .01$, *** $p < .001$

The correlations between transcendent connection and the 4Bs were highest in the Indian samples (Hindu and Muslim) and lowest in the Persian samples. Even in the Indian samples, however, the correlations were below the upper limits of acceptability, indicating that transcendent connection is relatively independent of the 4Bs. The strength of the correlation in the Indian samples could reflect a tendency for mysticism (TC) to merge into religion in the context of India.

The religious artifacts content-grouping was relatively independent of the 4Bs except for the first Persian sample. In the first Persian sample, religious artifacts had high correlations with the belonging and bonding subfacets (.82 for both). Both correlations were over the upper limit from Study 1 (.79). There is some item similarity between religious artifacts and the bonding subfacet. They both have items pertaining to religious rituals and artistic expressions of religion. Despite the similarity, however, the correlations between religious artifacts and bonding are not

particularly high across the samples. This might be explained by the fact that only one of the religious artifacts items focuses on rituals. The rest pertain to the enjoyment of various artifacts of religion (i.e., art, architecture, and music). The bonding subfacet, on the other hand, focuses more on religious ritual and religious activities than it does on religious artistry.

The correlations for public integration were higher in the Muslim samples than in the Hindu and Christian samples. Despite the high correlations in the Muslim samples, public integration was still relatively independent of the 4Bs except in the first Persian sample, where it had high correlations with behaving (.79), belonging (.85), and bonding (.81). All three correlations were above the upper limit from Study 1 (.79).

Consideration of religion (versus indifference) had high correlations across the Muslim samples and low, nonsignificant correlations in the Christian sample. This might be explained by the relatively low mean and low variation for consideration in the Christian sample (see Table 7). In the first Persian sample, on the other hand, consideration had especially high correlations (over the upper limit from Study 1) with behaving (.79), belonging (.81), and bonding (.81).

The overall pattern indicates that the content-groupings are relatively independent of the 4Bs and are not redundant with them in these samples. Based on the high correlations in the first Persian sample and in the aggregated Muslim data, however, fundamentalism may overlap more with the other subfacets, especially the behaving subfacet. A more cut-down set of fundamentalism items may be more differentiated, and thus still potentially valuable as an addition to the 4Bs. The results also indicate that religiousness, as measured by the 4Bs model, may mean something different in different cultural and religious contexts, since the correlation patterns varied considerably across samples, especially with regard to fundamentalism and mysticism (TC).

Reliability of the Six-Factor Model Content-Groupings

Table 11 displays Cronbach's Alphas for each content-group or scale. As expected, the reliability of the 4Bs' subfacets ranged from acceptable to good, with few exceptions, and when the subfacets were combined into a single scale, the reliability was even better (ranging from .902 to .968 across samples).

Table 11

Cronbach's Alphas for the Content-Groupings and the 4Bs' Subfacets

	Muslim-India (n = 100)	Persian 1 (n = 109)	Persian 2 (n = 98)	Muslim-Agg (n = 307)	Hindu (n = 198)	Christian (n = 205)
Six-Factor Model						
F	.66	.87	.65	.79	.53	.59
TC	.79	.85	.68	.80	.75	.67
TR	.79	.93	.79	.89	.78	.56
A	.63	.78	.51	.69	.49	.39
I	.82	.89	.70	.86	.54	.18
C	.72	.89	.63	.82	.63	-.09
4Bs' Subfacets						
BH	.85	.91	.79	.89	.67	.58
BLG	.76	.87	.78	.84	.75	.61
BLV	.73	.88	.72	.83	.61	.56
BO	.74	.91	.77	.86	.73	.65

Note. F = fundamentalism; TC = transcendent connection; TR = tolerance (versus rejection); A = religious artifacts; I = public integration; C = consideration (versus indifference); BH = behaving; BLG = belonging; BLV = believing; BO = bonding

Some of the new content-groupings had much better overall reliability than others. The tolerance (versus rejection) content-grouping has acceptable to good reliability in all samples except for the Christian sample (.564). The transcendent connection content-grouping has acceptable to good reliability in most samples, with slightly low alphas in the Christian sample

(.668) and the second Persian sample (.682). The public integration content-grouping also had acceptable to good reliability in the Muslim samples, but weak reliability in the Hindu sample and the Christian sample. Only half of the samples had acceptable reliability for the consideration of religion (versus rejection) content-grouping.

The fundamentalism content-grouping was less reliable across samples. It had acceptable reliability in the first Muslim-Iran sample and in the aggregated Muslim data (.868 and .789, respectively), but weak reliability in the other samples (ranging from .528 to .669). A few of the items in this grouping have low item-total-correlations (ITC) in several of the samples. The ITC measures the correlation between an item and the total score, so a high ITC would indicate that an item converged with the other items in the content-grouping and a low ITC would indicate that an item did not converge with the other items in the content-grouping. The item with the worst ITC in the fundamentalism content-grouping is item 25, that reads “One either believes in the true religion or one has rejected it; there is nothing in between.” This item has a low ITC in the Hindu sample (-.019), Muslim-India sample (-.010), Christian sample (.068), and aggregated Muslim data (.253). This item worked well in the college sample, but not beyond, so the low ITCs could be due to the syntactic complexity.

The smallest content-grouping, religious artifacts, has acceptable reliability only in the first Muslim-Iran sample. For the rest of the samples, the reliability is weak or marginal. Item 31, the only reverse-keyed item from that content grouping (“Rituals concerning sacred objects have little value.”) has a low ITC in several of the samples. The phrasing of this item might be part of the issue. If the ritual is considered unimportant, why would the objects be identified as sacred? This scale might also contain two types of content: attitudes about rituals and sacred objects and

attitudes about religious art, architecture, and history. The lower reliability and ITC for this item might indicate that these two attitudes are too distinct to be combined.

The reliability statistics were consistently worse across all variables in the Christian and Hindu samples compared to the Muslim samples. Between the two, the Christian sample was by far the worst. It is possible that the data quality in these two samples was lower and impacted the results.

Overall, the tolerance (versus rejection) and transcendent connection content-groupings were the most reliable across samples. However, the content-groupings are not scales and have not been refined, so it is possible that the other content-groupings simply need refinement or more items.

Six-Factor Model Comparison

To test whether these content-groupings are generalizable, factor analyses were performed in each sample with six-factors and the resulting matrices were compared with Study 1. Because Study 2 contained a smaller pool of items, the factor analysis from Study 1 was repeated with a smaller set of items to match the items available for the Study 2 samples.

The factor analysis on the Study 1 data was done with six factors using Maximum Likelihood and Equamax with Kaiser Normalization. Table 12 displays the factor loadings from this analysis. There were some notable differences from the findings in Study 1. There is no identifiable factor representing public integration. Five of the items from this grouping load highest onto the fundamentalism factor. It's possible that, in the university sample, only those high in fundamentalism support the integration of religion into the public sphere, or that only those low in fundamentalism oppose it. The religious artifacts items split into two separate factors. There are some differences in wording and content between these two groups. One factor

Table 12*Study 1 Factor Analysis Results with Six Factors*

Item	Factor Loading					
	1	2	3	4	5	6
Fundamentalism (6 th factor)						
One must always dress and behave in the proper way that is defined by true religion.	.27	.04	.12	.10	.15	.61
Religion has given humanity a complete, unfailing guide to happiness.	.22	.15	.06	.27	.21	.53
Religion provides a complete, unfailing guide to preserving oneself from harm.	.31	.13	.12	.21	.20	.51
One either believes in the true religion or one has rejected it; there is nothing in between.	.18	.01	-.01	-.09	.03	.51
In true religion one finds a set of divine laws that should replace all man-made laws.	.26	.17	.13	.17	.17	.49
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.18	.08	.13	.09	.14	.47
I like religion because it tells me what a supernatural being says.	.34	.19	.17	.11	.29	.45
I think it is important for people to show religious devotion publicly.	.34	.11	.13	.22	.29	.44
I find that religion provides believers with prosperity and rich financial rewards.	.16	.19	.21	.10	.18	.43
Religion is the main thing I do in my life.	.58	.11	.07	.14	.23	.40
I don't follow a strict code based on religion.	.43	.13	.16	.14	.05	.36
Transcendent Connection (2 nd factor)						
I sometimes feel a spiritual connection to other people that I cannot explain in words.	-.01	.69	.09	.06	.24	.07
I have had an experience in which I realized the oneness of myself with all things.	-.02	.68	.19	.02	.10	.06
I have had an experience in which something greater than myself seemed to absorb me.	.14	.66	.16	.03	.14	.07
I have never felt any force or connection that I would call spiritual.	.22	.63	.06	.16	.13	-.02
I often feel a strong spiritual connection with all the people around me.	.01	.63	.11	.06	.23	.16
I have had an experience in which I felt everything in the world to be part of the same whole.	.03	.61	.23	.01	.09	.02
I often feel like I am a part of the spiritual force on which all life depends.	.15	.61	.16	.09	.18	.22
I have never had an experience which seemed holy to me.	.34	.49	.16	.17	.10	.03
I have had an experience which I knew to be sacred.	.16	.48	.20	.15	.21	.07

Table 12 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Tolerance (versus Rejection) (4 th factor)						
Reason, science, and technology have now made our religious traditions useless.	.16	.21	.20	.52	.26	-.03
Religion lacks value because it is antiquated and outdated.	.25	.17	.18	.51	.20	.12
I am hostile to religion.	.17	.02	.24	.50	.19	-.04
Religion has a bad effect on kids growing up.	.16	.04	.16	.50	.22	.28
Religion increases the amount of evil in the world.	.11	.02	.08	.49	.20	.18
I reject all religious values.	.14	.20	.26	.48	.26	-.02
Religious faith contributes to bad mental health.	.08	.13	.03	.42	.25	.22
I find that religious communities are not a good place to find friends.	.10	.13	.10	.39	.24	.13
I take pride in being heretical (holding opinions contrary to religious doctrine).	.21	-.02	.03	.29	.02	.02
Religious Artifacts (3 rd & 5 th factors)						
I enjoy religion because of the religious art.	-.10	.13	.77	-.02	.20	-.02
I enjoy religion because of the religious architecture.	-.09	.04	.74	-.03	.18	-.01
I value religion because it connects me to history.	.14	.19	.45	.14	.26	.13
There are sacred ritual actions that are important.	-.05	.17	.28	.11	.63	.04
There are sacred objects that are important.	-.13	.12	.23	.00	.68	.03
Rituals concerning sacred objects have little value.	-.05	.11	.20	.17	.42	-.04
Public Integration (6 th factor)						
Religion should play the most important role in civil affairs.	.31	.09	.11	.37	.05	.57
Religious considerations should be excluded from civil affairs.	.20	.08	.02	.26	.03	.50
A particular set of beliefs is superior to all others.	.34	.09	.08	.15	.09	.46
Religious teachings should be a central part of education.	.21	.15	.18	.38	.10	.45
Religious considerations should be excluded from education.	.13	.06	.14	.31	.12	.36
I place no value on religious traditions.	.31	.24	.37	.41	.30	.05

Table 12 (*Continued*)

Item	Factor Loading					
	1	2	3	4	5	6
Consideration (versus Indifference) (1 st factor)						
I devote a lot of my time to my religion.	.65	.22	.13	.18	.28	.33
It is important to me that I pray on a regular basis.	.63	.27	.14	.28	.28	.29
My personal and social activities are more important than prayer or religious activities.	.49	.19	.15	.33	.07	.28
I like to do practical things more than praying.	.43	.11	.09	.19	.01	.26
I have so much to do most days that I don't usually have time for prayer.	.27	.02	.04	.09	-.08	.07
I have never gotten any economic benefit from religion.	.24	.18	.17	.08	-.01	.26
Religion makes people escape from reality.	.23	-.01	-.06	.21	-.07	.10

Note. Loadings above .3 are in bold. The factor analysis was done with a limited pool of items to match items available in the Study 2 samples.

contains three items that state the importance/value of rituals and sacred objects. The other factor contains three items that are about enjoying/valuing religious art, architecture, and history. Lastly, only four of the consideration of religion items have loadings above .3 on that factor. The other three items do not have loadings above .3 on any factor.

The next step was to run factor analyses in each Study 2 sample and use Procrustes rotation to compare the similarity of the resulting matrices with the Study 1 matrix described in the previous paragraph. The resulting matrices and congruence coefficients for each Study 2 sample are displayed in Tables 13-18. As stated earlier, a benchmark of .85 was used to indicate fair factor similarity.

The tolerance (versus rejection) and transcendent connection content-groupings displayed the best fit across samples. For both, the congruence coefficients ranged from .84 to .95 in the Muslim samples, indicating that the factors are similar or even equal to the factors from the Study 1 data. In the Hindu sample, the congruence coefficients were just below the cutoff (.83 and .84 respectively). The transcendent connection items were mixed with the consideration (versus indifference) items in the Christian sample, and the congruence coefficient was much lower (.61). The consideration items that had high loadings on the transcendent connection factor all concerned prayer, which may be a common form of transcendent connection among Christians.

The religious artifacts content-grouping displayed good fit in only some of the samples. There was factor similarity in the first Persian sample, the Hindu sample, and the aggregated Muslim data. The congruence coefficients for the Indian Muslim sample and the second Persian sample were lower, but still relatively high (.79 and .83 respectively). In the Christian sample,

Table 13*Factor Analysis Results with Six Factors in the Indian Muslim Sample*

Item	Factor Loading					
	1	2	3	4	5	6
Fundamentalism, $\phi = .83$ (6 th factor)						
I think it is important for people to show religious devotion publicly.	.08	-.05	.39	-.01	.30	.58
One must always dress and behave in the proper way that is defined by true religion.	.40	.15	.16	.20	.09	.49
In true religion one finds a set of divine laws that should replace all man-made laws.	.36	.33	.05	.18	.16	.37
Religion has given humanity a complete, unfailing guide to happiness.	.23	.22	.07	.20	.17	.34
Religion is the main thing I do in my life.	.22	.30	.36	.30	.41	.33
I like religion because it tells me what a supernatural being says.	.22	.22	.34	-.06	.33	.31
I find that religion provides believers with prosperity and rich financial rewards.	.33	.26	.18	-.15	.26	.30
I don't follow a strict code based on religion.	.37	.14	.43	.13	.23	.27
Religion provides a complete, unfailing guide to preserving oneself from harm.	.33	.13	.07	.07	.02	.26
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.12	.02	.12	.09	.13	.11
One either believes in the true religion or one has rejected it; there is nothing in between.	.03	-.07	-.05	.04	-.07	-.09
Transcendent Connection, $\phi = .89$ (2 nd factor)						
I often feel a strong spiritual connection with all the people around me.	-.36	.72	.28	.21	.39	.26
I have had an experience in which I felt everything in the world to be part of the same whole.	.20	.59	.15	-.02	.12	.22
I have had an experience in which I realized the oneness of myself with all things.	-.03	.55	.33	.06	.18	.01
I have had an experience in which something greater than myself seemed to absorb me.	.26	.52	.21	-.16	.14	.23
I often feel like I am a part of the spiritual force on which all life depends.	.08	.50	.15	.16	.36	.28
I have had an experience which I knew to be sacred.	.29	.37	.04	-.10	.22	.02
I have never felt any force or connection that I would call spiritual.	.60	.35	-.02	.29	-.17	.00
I have never had an experience which seemed holy to me.	.25	.31	-.03	.37	-.11	-.06
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.05	.29	.11	.02	.37	.20

Table 13 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Tolerance (versus Rejection), $\phi = .89$ (4 th factor)						
Religious faith contributes to bad mental health.	.36	.01	.15	.54	.08	-.06
I find that religious communities are not a good place to find friends.	.21	-.15	.06	.54	.22	.24
I reject all religious values.	.15	.12	.41	.52	.09	-.03
Religion has a bad effect on kids growing up.	.31	.03	.29	.51	.14	.11
Religion increases the amount of evil in the world.	.30	.01	.24	.50	.21	-.02
Reason, science, and technology have now made our religious traditions useless.	.24	.12	.08	.49	.24	.09
I am hostile to religion.	.21	.16	.14	.38	-.17	-.07
Religion lacks value because it is antiquated and outdated.	.36	.26	-.07	.37	.26	.29
I take pride in being heretical (holding opinions contrary to religious doctrine).	.19	.07	-.38	.26	.14	.00
Religious Artifacts, $\phi = .79$ (3 rd factor)						
I enjoy religion because of the religious art.	-.06	.09	.74	-.11	.24	.22
I value religion because it connects me to history.	.00	.10	.55	.18	.28	.14
I enjoy religion because of the religious architecture.	.04	.11	.55	-.22	.19	.28
There are sacred objects that are important.	.25	.16	.31	-.08	.31	.26
Rituals concerning sacred objects have little value.	.11	.22	.01	.20	-.01	.00
There are sacred ritual actions that are important.	.32	.38	.00	.14	.20	.29
Public Integration, $\phi = .83$ (6 th factor)						
Religious considerations should be excluded from civil affairs.	-.01	.29	.13	.41	-.41	.75
Religious teachings should be a central part of education.	.18	.10	.11	.43	.31	.59
Religious considerations should be excluded from education.	.20	.19	-.14	.22	.43	.59
Religion should play the most important role in civil affairs.	.34	.27	.16	.38	.13	.46
A particular set of beliefs is superior to all others.	.20	.16	.27	.09	.09	.33
I place no value on religious traditions.	.22	.27	.17	.51	.18	.13

Table 13 (*Continued*)

Item	Factor Loading					
	1	2	3	4	5	6
Consideration (versus Indifference), $\phi = .77$ (1 st factor)						
I have never gotten any economic benefit from religion.	.41	.06	.19	.09	.05	.21
I devote a lot of my time to my religion.	.38	.39	.32	-.09	.17	.30
It is important to me that I pray on a regular basis.	.28	.29	.14	.34	.32	.30
My personal and social activities are more important than prayer or religious activities.	.24	.12	-.19	.38	.23	.25
I like to do practical things more than praying.	.19	.05	.18	.18	.44	.20
Religion makes people escape from reality.	.18	.09	.21	.57	.01	.14
I have so much to do most days that I don't usually have time for prayer.	.15	.06	.10	.22	.45	.12

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 100.

Table 14*Factor Analysis Results with Six Factors in the First Persian Sample*

Item	Factor Loading					
	1	2	3	4	5	6
Fundamentalism, $\phi = .88$ (6 th factor)						
I think it is important for people to show religious devotion publicly.	.32	.19	.22	.10	.41	.63
I don't follow a strict code based on religion.	.38	.10	.05	.06	.07	.61
Religion is the main thing I do in my life.	.42	.18	.18	.18	.36	.59
One must always dress and behave in the proper way that is defined by true religion.	.38	.31	.18	.31	.34	.55
One either believes in the true religion or one has rejected it; there is nothing in between.	-.03	.14	.09	.15	-.07	.49
I find that religion provides believers with prosperity and rich financial rewards.	.12	.19	.39	-.03	.28	.39
Religion has given humanity a complete, unfailing guide to happiness.	.54	.24	.26	.36	.35	.39
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.38	.14	.18	.16	.07	.39
In true religion one finds a set of divine laws that should replace all man-made laws.	.35	.37	.21	.10	.07	.38
Religion provides a complete, unfailing guide to preserving oneself from harm.	.48	.25	.26	.44	.37	.33
I like religion because it tells me what a supernatural being says.	.37	.21	.35	.19	.28	.30
Transcendent Connection, $\phi = .95$ (2 nd factor)						
I have had an experience in which something greater than myself seemed to absorb me.	.08	.72	-.03	-.03	.24	.14
I often feel like I am a part of the spiritual force on which all life depends.	.10	.70	.17	.03	.01	.21
I have had an experience in which I realized the oneness of myself with all things.	-.17	.65	.08	-.20	-.14	.14
I often feel a strong spiritual connection with all the people around me.	-.09	.64	.31	.05	.15	.22
I sometimes feel a spiritual connection to other people that I cannot explain in words.	-.19	.60	.14	-.01	.14	.09
I have had an experience which I knew to be sacred.	.50	.57	.13	-.06	.48	.04
I have had an experience in which I felt everything in the world to be part of the same whole.	.03	.55	.05	-.02	.27	.06
I have never felt any force or connection that I would call spiritual.	.46	.50	.16	.35	.05	-.05
I have never had an experience which seemed holy to me.	.64	.43	.16	.18	.26	-.03

Table 14 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Tolerance (versus Rejection), $\phi = .90$ (4 th factor)						
Religious faith contributes to bad mental health.	.26	.10	.22	.75	.38	.14
I reject all religious values.	.16	.11	.21	.73	.41	.05
Religion increases the amount of evil in the world.	.21	.13	.14	.72	.34	.29
I take pride in being heretical (holding opinions contrary to religious doctrine).	.15	.05	-.01	.71	.42	-.01
Religion has a bad effect on kids growing up.	.31	.13	.32	.71	.30	.24
I am hostile to religion.	.12	.17	.36	.63	.21	.21
Religion lacks value because it is antiquated and outdated.	.27	.16	.36	.57	.26	.19
Reason, science, and technology have now made our religious traditions useless.	.42	.17	.15	.55	.26	.06
I find that religious communities are not a good place to find friends.	.36	.08	.16	.43	.06	.37
Religious Artifacts, $\phi = .89$ (3 rd factor)						
I enjoy religion because of the religious architecture.	.00	.02	.81	-.01	.13	.03
I enjoy religion because of the religious art.	.02	.01	.67	.01	.18	.27
I value religion because it connects me to history.	.06	.33	.42	.20	.20	.37
There are sacred ritual actions that are important.	.33	.15	.29	.35	.49	.42
Rituals concerning sacred objects have little value.	.41	.13	.22	.59	.28	.15
There are sacred objects that are important.	.29	.17	.13	.25	.66	.25
Public Integration, $\phi = .88$ (6 th factor)						
Religious teachings should be a central part of education.	.47	.14	.15	.28	.27	.68
Religion should play the most important role in civil affairs.	.48	.07	.29	.29	.12	.57
Religious considerations should be excluded from civil affairs.	.32	.03	.20	.43	.37	.52
Religious considerations should be excluded from education.	.56	.18	.26	.38	.27	.42
I place no value on religious traditions.	.27	.13	.20	.69	.49	.13
A particular set of beliefs is superior to all others.	.27	-.04	.12	.02	.32	.06

Table 14 (*Continued*)

Item	Factor Loading					
	1	2	3	4	5	6
Consideration (versus Indifference), $\phi = .80$ (1 st factor)						
I have so much to do most days that I don't usually have time for prayer.	.44	.17	.18	.41	.17	.33
My personal and social activities are more important than prayer or religious activities.	.42	.09	.12	.44	.11	.42
Religion makes people escape from reality.	.42	.17	.22	.65	.17	.23
I like to do practical things more than praying.	.37	.10	.15	.50	.09	.32
I devote a lot of my time to my religion.	.33	.29	.24	.31	.31	.49
It is important to me that I pray on a regular basis.	.32	.32	.21	.28	.27	.42
I have never gotten any economic benefit from religion.	.21	.16	.17	.40	.08	.33

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 109.

Table 15*Factor Analysis Results with Six Factors in the Second Persian Sample*

Item	Factor Loading					
	1	2	3	4	5	6
Fundamentalism, $\phi = .78$ (6 th factor)						
I think it is important for people to show religious devotion publicly.	.33	.21	.12	.10	.24	.61
One must always dress and behave in the proper way that is defined by true religion.	.34	.16	.21	.08	.22	.53
In true religion one finds a set of divine laws that should replace all man-made laws.	-.05	.18	.18	-.05	.05	.44
I don't follow a strict code based on religion.	.24	.23	.07	-.03	.25	.43
One either believes in the true religion or one has rejected it; there is nothing in between.	.04	.27	-.07	-.01	.23	.40
Religion provides a complete, unfailing guide to preserving oneself from harm.	.42	.03	.10	.12	.25	.38
Religion has given humanity a complete, unfailing guide to happiness.	.29	.12	.12	.15	.25	.36
I like religion because it tells me what a supernatural being says.	-.16	.30	-.03	.03	.02	.35
Religion is the main thing I do in my life.	.38	.10	.22	.14	.38	.31
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.02	.00	.15	.15	.05	.19
I find that religion provides believers with prosperity and rich financial rewards.	.22	.11	.23	-.17	.36	.10
Transcendent Connection, $\phi = .86$ (2 nd factor)						
I have never had an experience which seemed holy to me.	.49	.68	.05	.39	-.34	-.16
I have had an experience in which something greater than myself seemed to absorb me.	-.02	.50	.19	-.05	.18	.05
I have had an experience in which I felt everything in the world to be part of the same whole.	-.07	.47	.09	.00	.19	-.05
I have had an experience which I knew to be sacred.	.44	.46	.13	-.03	-.15	-.01
I have never felt any force or connection that I would call spiritual.	.42	.41	.00	.34	-.03	.04
I often feel a strong spiritual connection with all the people around me.	-.02	.38	.13	-.28	.03	.17
I often feel like I am a part of the spiritual force on which all life depends.	.14	.35	.16	-.22	.51	.14
I sometimes feel a spiritual connection to other people that I cannot explain in words.	-.03	.32	.05	.00	.18	.11
I have had an experience in which I realized the oneness of myself with all things.	-.21	.32	.18	-.28	.22	-.03

Table 15 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Tolerance (versus Rejection), $\phi = .84$ (4 th factor)						
Religious faith contributes to bad mental health.	.20	.14	.05	.81	.26	-.12
Religion increases the amount of evil in the world.	.01	.12	-.07	.79	.28	-.20
I reject all religious values.	.10	.12	.14	.77	.25	.14
Religion lacks value because it is antiquated and outdated.	.29	.15	.10	.77	.31	-.18
Religion has a bad effect on kids growing up.	.31	.02	.21	.72	.33	-.01
I am hostile to religion.	-.15	-.02	-.10	.63	.10	.01
I find that religious communities are not a good place to find friends.	.35	-.11	.24	.41	.18	.13
Reason, science, and technology have now made our religious traditions useless.	.29	-.11	.05	.34	.08	.18
I take pride in being heretical (holding opinions contrary to religious doctrine).	.39	-.12	.35	.25	.06	.21
Religious Artifacts, $\phi = .83$ (3 rd factor)						
I enjoy religion because of the religious art.	-.05	.13	.85	-.23	.09	.06
I enjoy religion because of the religious architecture.	-.13	.17	.66	-.23	.07	.06
I value religion because it connects me to history.	-.05	.16	.65	-.12	.24	.17
There are sacred objects that are important.	.18	.08	.06	-.19	.14	.51
There are sacred ritual actions that are important.	.21	.12	.04	-.03	.05	.56
Rituals concerning sacred objects have little value.	.23	.19	.01	.66	.18	.10
Public Integration, $\phi = .78$ (6 th factor)						
Religious teachings should be a central part of education.	.17	-.05	.15	.53	.06	.57
Religious considerations should be excluded from civil affairs.	.44	-.04	.22	.26	.10	.56
Religion should play the most important role in civil affairs.	.49	-.04	.17	.19	.10	.47
Religious considerations should be excluded from education.	.19	-.11	.14	.51	-.07	.40
A particular set of beliefs is superior to all others.	.04	.09	.09	-.08	.18	.18
I place no value on religious traditions.	.34	.14	.16	.77	.23	-.24

Table 15 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Consideration (versus Indifference), $\phi = .73$ (1 st factor)						
I devote a lot of my time to my religion.	.43	.24	.25	.03	.20	.19
I have so much to do most days that I don't usually have time for prayer.	.38	-.05	.12	.39	.22	.13
I like to do practical things more than praying.	.32	.06	-.07	.30	.05	.07
It is important to me that I pray on a regular basis.	.32	.33	.07	-.02	.31	.26
I have never gotten any economic benefit from religion.	.20	.14	.30	.19	.23	.09
Religion makes people escape from reality.	-.01	.25	.08	.42	.04	.23
My personal and social activities are more important than prayer or religious activities.	-.03	.02	-.04	.34	-.07	.35

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 98.

Table 16*Factor Analysis Results with Six Factors in the Aggregated Muslim Data*

Item	Factor Loading					
	1	2	3	4	5	6
Fundamentalism, $\phi = .91$ (6 th factor)						
I think it is important for people to show religious devotion publicly.	.35	.13	.20	.10	.44	.53
One must always dress and behave in the proper way that is defined by true religion.	.38	.23	.20	.26	.28	.51
In true religion one finds a set of divine laws that should replace all man-made laws.	.09	.35	.15	.09	.02	.48
Religion is the main thing I do in my life.	.47	.20	.28	.19	.21	.46
I don't follow a strict code based on religion.	.42	.16	.21	.03	-.02	.46
Religion has given humanity a complete, unfailing guide to happiness.	.38	.19	.14	.30	.35	.39
Religion provides a complete, unfailing guide to preserving oneself from harm.	.27	.15	.11	.34	.41	.39
I like religion because it tells me what a supernatural being says.	.15	.22	.26	.12	.27	.35
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.18	.04	.11	.14	.16	.32
I find that religion provides believers with prosperity and rich financial rewards.	.25	.23	.31	-.07	.22	.27
One either believes in the true religion or one has rejected it; there is nothing in between.	.11	.11	.04	.05	.00	.26
Transcendent Connection, $\phi = .93$ (2 nd factor)						
I have had an experience in which I realized the oneness of myself with all things.	-.07	.61	.21	-.22	-.20	.03
I have had an experience in which something greater than myself seemed to absorb me.	.10	.61	.08	-.02	.28	.13
I have had an experience in which I felt everything in the world to be part of the same whole.	.02	.59	.09	.03	.21	.08
I often feel like I am a part of the spiritual force on which all life depends.	.27	.57	.22	-.06	.13	.15
I often feel a strong spiritual connection with all the people around me.	.07	.54	.26	-.04	.21	.16
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.09	.46	.12	-.06	.18	.04
I have had an experience which I knew to be sacred.	.21	.43	.05	.06	.36	.19
I have never felt any force or connection that I would call spiritual.	.24	.35	-.05	.42	.27	.09
I have never had an experience which seemed holy to me.	-.08	.03	-.01	.08	-.21	.03

Table 16 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Tolerance (versus Rejection), $\phi = .92$ (4 th factor)						
Religious faith contributes to bad mental health.	.28	.11	.20	.70	.21	.08
I reject all religious values.	.14	.17	.28	.66	.19	.07
Religion has a bad effect on kids growing up.	.35	.14	.32	.65	.18	.14
Religion increases the amount of evil in the world.	.33	.11	.21	.64	.20	.10
I am hostile to religion.	.08	.07	.10	.58	.39	.07
Religion lacks value because it is antiquated and outdated.	.29	.17	.12	.55	.41	.14
Reason, science, and technology have now made our religious traditions useless.	.27	.12	.12	.54	.23	.15
I take pride in being heretical (holding opinions contrary to religious doctrine).	.20	-.03	-.04	.43	.40	.05
I find that religious communities are not a good place to find friends.	.48	-.02	.20	.41	.07	.19
Religious Artifacts, $\phi = .90$ (3 rd factor)						
I enjoy religion because of the religious art.	.09	.05	.78	-.14	.12	.17
I enjoy religion because of the religious architecture.	-.10	.08	.69	-.15	.12	.13
I value religion because it connects me to history.	.15	.24	.60	.03	.03	.20
There are sacred objects that are important.	.12	.14	.15	.20	.69	.27
There are sacred ritual actions that are important.	.19	.17	.10	.33	.60	.38
Rituals concerning sacred objects have little value.	.16	.10	.01	.54	.46	.18
Public Integration, $\phi = .90$ (6 th factor)						
Religious considerations should be excluded from civil affairs.	.16	.08	.17	.44	.19	.64
Religion should play the most important role in civil affairs.	.30	.11	.20	.36	.15	.63
Religious teachings should be a central part of education.	.46	.08	.13	.35	.21	.58
Religious considerations should be excluded from education.	.39	.10	.07	.39	.40	.47
A particular set of beliefs is superior to all others.	-.02	.11	.14	.12	.21	.27
I place no value on religious traditions.	.25	.18	.23	.67	.27	.13

Table 16 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Consideration (versus Indifference), $\phi = .82$ (1 st factor)						
I have so much to do most days that I don't usually have time for prayer.	.62	.09	.12	.27	.23	.12
It is important to me that I pray on a regular basis.	.44	.34	.23	.20	.15	.30
I like to do practical things more than praying.	.42	.05	.07	.36	.33	.15
My personal and social activities are more important than prayer or religious activities.	.37	.07	.02	.37	.09	.34
I have never gotten any economic benefit from religion.	.37	.13	.21	.23	.12	.16
I devote a lot of my time to my religion.	.35	.31	.29	.17	.21	.39
Religion makes people escape from reality.	.24	.18	.18	.61	.15	.21

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 307.

Table 17*Factor Analysis Results with Six Factors in the Hindu Sample*

Item	Factor Loading					
	1	2	3	4	5	6
Fundamentalism, $\phi = .80$ (6 th factor)						
One must always dress and behave in the proper way that is defined by true religion.	.28	-.02	.31	.08	.17	.50
I think it is important for people to show religious devotion publicly.	.24	-.01	.06	-.07	.11	.43
Religion is the main thing I do in my life.	.48	.11	.19	-.01	.06	.43
I find that religion provides believers with prosperity and rich financial rewards.	.32	.10	.09	.00	.08	.34
I don't follow a strict code based on religion.	.28	.27	.27	-.09	-.05	.30
I like religion because it tells me what a supernatural being says.	.26	.16	.22	.02	.20	.27
Religion has given humanity a complete, unfailing guide to happiness.	.06	.14	.07	.25	.25	.25
In true religion one finds a set of divine laws that should replace all man-made laws.	.15	.10	.27	-.16	.12	.23
One either believes in the true religion or one has rejected it; there is nothing in between.	-.25	-.05	-.06	-.21	-.07	.22
Religion provides a complete, unfailing guide to preserving oneself from harm.	.01	.29	.06	.17	.19	.09
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.07	.29	.31	-.28	-.01	.08
Transcendent Connection, $\phi = .84$ (2 nd factor)						
I have had an experience in which something greater than myself seemed to absorb me.	.21	.57	.11	-.01	.24	.23
I have had an experience which I knew to be sacred.	.18	.51	.05	.03	.28	.04
I have had an experience in which I felt everything in the world to be part of the same whole.	.06	.47	.09	-.01	-.02	.09
I often feel like I am a part of the spiritual force on which all life depends.	.22	.38	.31	-.02	.12	.24
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.07	.37	.27	.17	.17	.21
I have had an experience in which I realized the oneness of myself with all things.	.03	.36	.16	.10	.06	.17
I often feel a strong spiritual connection with all the people around me.	.05	.32	.31	.15	.29	.28
I have never felt any force or connection that I would call spiritual.	.18	.32	-.09	.47	.17	-.14
I have never had an experience which seemed holy to me.	.40	.23	.16	.35	.06	-.08

Table 17 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Tolerance (versus Rejection), $\phi = .83$ (4 th factor)						
Reason, science, and technology have now made our religious traditions useless.	.21	.14	-.04	.58	.20	-.02
Religion lacks value because it is antiquated and outdated.	-.01	.27	.15	.57	.20	.14
I find that religious communities are not a good place to find friends.	.07	.05	.05	.56	.16	.04
Religion has a bad effect on kids growing up.	.03	.42	.43	.52	.02	.04
Religion increases the amount of evil in the world.	-.02	.12	.43	.43	.14	-.07
Religious faith contributes to bad mental health.	-.02	-.04	.18	.43	.54	.06
I am hostile to religion.	.07	.13	.27	.39	.20	-.38
I reject all religious values.	.25	.20	.46	.37	.08	-.09
I take pride in being heretical (holding opinions contrary to religious doctrine).	-.05	.09	.02	.24	.18	-.23
Religious Artifacts, $\phi = .88$ (5 th factor)						
There are sacred objects that are important.	.04	.06	.08	-.13	.75	-.18
There are sacred ritual actions that are important.	-.02	.22	-.04	.06	.62	.06
I value religion because it connects me to history.	.03	.14	.41	.30	.29	.25
I enjoy religion because of the religious art.	.01	.07	.54	.14	.18	.39
I enjoy religion because of the religious architecture.	-.12	.21	.37	.12	.14	.41
Rituals concerning sacred objects have little value.	-.03	.14	-.17	.26	.13	.00
Public Integration, $\phi = .80$ (6 th factor)						
A particular set of beliefs is superior to all others.	-.07	.18	.27	-.22	-.06	.47
Religious considerations should be excluded from education.	.16	.10	-.12	.51	-.06	.45
Religious considerations should be excluded from civil affairs.	.17	.11	-.09	.23	.11	.40
Religion should play the most important role in civil affairs.	.26	.06	.13	.15	.01	.37
Religious teachings should be a central part of education.	.57	-.01	.08	.22	.08	.31
I place no value on religious traditions.	.12	.19	.25	.56	.19	-.13

Table 17 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Consideration (versus Indifference), $\phi = .76$ (1 st factor)						
I have never gotten any economic benefit from religion.	.51	.06	-.04	-.03	-.10	.19
I like to do practical things more than praying.	.42	-.03	-.27	.18	-.05	.19
I devote a lot of my time to my religion.	.35	.26	.15	-.02	.23	.40
I have so much to do most days that I don't usually have time for prayer.	.32	.30	-.04	.34	.10	.02
My personal and social activities are more important than prayer or religious activities.	.31	.01	-.34	.25	.23	.18
It is important to me that I pray on a regular basis.	.14	.49	.21	.27	.25	.28
Religion makes people escape from reality.	.05	.13	.17	.52	.04	.05

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 198.

Table 18*Factor Analysis Results with Six Factors in the Christian Sample*

Item	Factor Loading					
	1	2	3	4	5	6
Fundamentalism, $\phi = .65$ (6 th factor)						
In true religion one finds a set of divine laws that should replace all man-made laws.	.03	.36	.31	.07	.07	.53
I don't follow a strict code based on religion.	.31	.05	.62	.20	.26	.32
I think it is important for people to show religious devotion publicly.	.19	.26	.25	.05	.12	.30
Religion has given humanity a complete, unfailing guide to happiness.	.07	.15	.04	-.12	.27	.29
It is important to me to avoid association with opinions that are contrary to religious doctrine.	-.19	.19	.29	-.03	.37	.27
I find that religion provides believers with prosperity and rich financial rewards.	.22	.17	.28	.18	.12	.25
I like religion because it tells me what a supernatural being says.	.23	.13	.37	.05	.08	.23
Religion provides a complete, unfailing guide to preserving oneself from harm.	-.03	.09	.11	-.09	.18	.20
One either believes in the true religion or one has rejected it; there is nothing in between.	-.28	.00	-.11	-.06	.21	.17
Religion is the main thing I do in my life.	.42	.31	.34	.12	.08	.17
One must always dress and behave in the proper way that is defined by true religion.	.19	.46	.26	-.01	.20	.13
Transcendent Connection, $\phi = .61$ (2 nd factor)						
I have had an experience in which I realized the oneness of myself with all things.	.13	.53	.14	.09	.22	.23
I have had an experience in which I felt everything in the world to be part of the same whole.	.07	.51	.22	.16	.13	.28
I have had an experience in which something greater than myself seemed to absorb me.	.16	.48	.21	.07	.14	.18
I often feel like I am a part of the spiritual force on which all life depends.	-.04	.33	.18	.19	.17	.39
I have never felt any force or connection that I would call spiritual.	.08	.29	.01	.17	.08	-.12
I often feel a strong spiritual connection with all the people around me.	.26	.21	.32	.06	.35	.09
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.21	.16	.29	.09	.30	.14
I have had an experience which I knew to be sacred.	-.14	.03	-.26	-.03	.13	.18
I have never had an experience which seemed holy to me.	.12	-.01	.08	.24	.09	.01

Table 18 (Continued)

Item	Factor Loading					
	1	2	3	4	5	6
Tolerance (versus Rejection), $\phi = .68$ (4 th factor)						
Religion increases the amount of evil in the world.	.09	.09	.29	.56	.18	-.03
I am hostile to religion.	-.05	.27	.44	.53	.34	-.08
Religious faith contributes to bad mental health.	.16	.43	.34	.41	.06	.25
Religion has a bad effect on kids growing up.	.22	.28	.20	.40	.15	-.17
Religion lacks value because it is antiquated and outdated.	.02	.22	.25	.39	.28	-.05
I reject all religious values.	.23	.20	.51	.31	.06	.15
I find that religious communities are not a good place to find friends.	.29	.02	-.22	.19	.14	-.05
Reason, science, and technology have now made our religious traditions useless.	.02	-.12	-.32	-.08	-.10	-.15
I take pride in being heretical (holding opinions contrary to religious doctrine).	-.25	.00	-.33	-.12	-.03	-.28
Religious Artifacts, $\phi = .53$ (3 rd factor)						
Rituals concerning sacred objects have little value.	.04	.27	.43	.57	.12	-.07
I enjoy religion because of the religious architecture.	.18	.23	.35	.00	.23	.25
I value religion because it connects me to history.	.28	.33	.30	.02	.30	.18
I enjoy religion because of the religious art.	.30	.37	.27	.05	.36	.19
There are sacred ritual actions that are important.	.13	-.04	-.06	-.09	.37	.32
There are sacred objects that are important.	-.36	.00	-.08	-.12	.36	.15
Public Integration, $\phi = .65$ (6 th factor)						
Religion should play the most important role in civil affairs.	.15	.00	.12	.31	-.15	.60
Religious teachings should be a central part of education.	.38	.11	.15	.25	.09	.27
A particular set of beliefs is superior to all others.	.15	.36	.36	-.03	.18	.24
Religious considerations should be excluded from education.	-.13	-.13	-.54	-.04	-.07	.11
I place no value on religious traditions.	.17	.18	.43	.55	.18	.06
Religious considerations should be excluded from civil affairs.	.25	-.03	-.37	-.23	.09	-.19

Table 18 (*Continued*)

Item	Factor Loading					
	1	2	3	4	5	6
Consideration (versus Indifference), $\phi = .54$ (1 st factor)						
I devote a lot of my time to my religion.	.34	.29	.10	-.01	.07	.17
It is important to me that I pray on a regular basis.	.31	.52	.19	.10	.22	.26
I have never gotten any economic benefit from religion.	.24	.05	.43	.23	-.13	.05
I have so much to do most days that I don't usually have time for prayer.	.12	.15	-.25	.23	-.30	.03
My personal and social activities are more important than prayer or religious activities.	.04	-.45	-.46	.02	-.07	-.06
Religion makes people escape from reality.	.03	-.12	-.15	.02	.13	-.14
I like to do practical things more than praying.	-.17	-.47	-.39	.14	.09	-.09

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 205.

however, many of the fundamentalism and public integration items also had high loadings on the religious artifacts factor, resulting in less similarity (.53).

The other content-groupings – fundamentalism, public integration, and consideration (versus indifference) of religion – had lower congruence coefficients. Similar to the results from the Study 1 data, the fundamentalism items and the public integration items tended to load onto the same factor. The congruence coefficients for the combined fundamentalism/public integration factor were only above the benchmark in the first Persian sample (.88) and the aggregated Muslim data (.91). The consideration content-grouping did not have factor similarity in any of the samples. Fundamentalism items loaded onto the consideration factor in several of the samples. Ultimately, fundamentalism, public integration, and consideration of religion are not clearly distinct in all samples.

Overall, the model fit comparisons provide some evidence that some of the content-groupings, especially transcendent connection and tolerance (versus rejection), may be generalizable across samples. In the other content-groupings, the low congruence coefficients may also be due to bad or problematic items, which might be addressed in future research. The fact that the weakest factors were fundamentalism, public integration, and consideration (versus indifference) suggests that the four-factor model might be a better model since two of these groupings are found only in the six-factor model.

Prediction of Relevant Outcomes

In order to compare the content-groupings with the findings of Saroglou et al. on the 4Bs' subfacets, a hierarchical regression was run with need for closure (NfC) and life satisfaction (LS). Saroglou et al. ran predictive regressions on these two outcomes to assess how the 4Bs'

subfacets are similar and yet distinct in terms of the psychological characteristics and outcomes they predict. Meaning in life (MiL; not examined by Saroglou et al.) was also included as an outcome in this analysis to assess further how the content-groupings are related to important psychological outcomes. The content-groupings should perform similarly to the 4Bs' subfacets by increasing prediction of the three outcomes (NfC, LS, and MiL). Table 19 displays the correlations between the content-groupings and the outcomes, and Table 20 displays the correlations with the 4Bs' subfacets. The analyses described below were also completed with quadratic forms of the content-groupings added. The results of these analyses can be found in the supplementary materials. The pattern of results was not consistent enough across sample to result in clear interpretations.

Need for Closure (NfC)

Table 21 displays the model comparisons for each content-grouping and Table 22 displays the standard estimates from the final model. In the first step, age and sex/gender (1 = male, 2 = female) were the predictors. Across several samples (Hindu, Indian Muslim, and Aggregated Muslim), age was a positive predictor of need for closure. Older participants were more likely to have a high need for closure. In the final model, sex/gender was not a significant predictor in any sample. Although the standard estimate for sex in the second Persian sample is large, there are not enough men in the sample ($n = 4$) to make comparisons.

In the second step, the 4Bs' subfacets were added to the model. This significantly improved the prediction capacity of the model in all samples except for the second Persian sample and the Study 1. However, in the final model (including all new content-groupings), most 4Bs' subfacets were only significant predictors in some samples. Behaving, belonging, and believing all predicted higher need for closure (positive predictors) in at least one sample.

Table 19

Correlations Between the Content-Groupings and Need for Closure, Meaning in Life, and Life Satisfaction

	<i>n</i>	F		TC		TR		A		I		C	
Need for Closure													
Muslim-India	100	.42	***	.31	**	.41	***	.27	**	.50	***	.41	***
Persian 1	109	.31	**	.06		.38	***	.24	*	.35	***	.37	***
Persian 2	98	.19		.13		.05		.06		.12		.26	**
Agg. Muslim	307	.32	***	.15	**	.35	***	.25	***	.34	***	.36	***
Hindu	198	.10		.25	***	.41	***	.31	***	.16	*	.03	
Christian	205	.26	***	.36	***	.36	***	.32	***	.26	***	.05	
US-Student	472	.08		.23	***	.23	***	.10	*	.12	**	.10	*
Meaning in Life													
Muslim-India	100	.39	***	.40	***	.42	***	.12		.45	***	.42	***
Persian 1	109	.29	**	.35	***	.33	***	.29	**	.27	**	.32	***
Persian 2	98	.13		.29	**	.33	***	.16		.26	*	.36	***
Agg. Muslim	307	.30	***	.36	***	.39	***	.26	***	.34	***	.37	***
Hindu	198	.18	*	.46	***	.43	***	.40	***	.35	***	.19	**
Christian	205	.52	***	.58	***	.55	***	.57	***	.45	***	.21	**
US-Student	472	-.06		.03		.10	*	-.02		-.02		-.03	
Life Satisfaction													
Muslim-India	100	.09		.33	***	.12		.22	*	.21	*	.26	**
Persian 1	109	.10		.06		.04		.01		.03		.10	
Persian 2	98	.19		.31	**	.06		.08		.06		.15	
Agg. Muslim	307	.08		.18	**	.01		.03		.05		.11	*
Hindu	198	.24	***	.12		-.13		.04		.27	***	.26	***
Christian	205	.43	***	.39	***	.32	***	.44	***	.26	***	.06	
US-Student	472	-.04		-.11	*	-.03		-.04		-.03		-.06	

Note. F = fundamentalism; TC = transcendent connection; TR = tolerance (versus rejection); A = religious artifacts; I = public integration; C = consideration (versus indifference)

* $p < .05$, ** $p < .01$, *** $p < .001$

In contrast, Saroglou et al. (2020) found that all subfacets were positively related to need for closure, and that behaving was uniquely predictive. This may be a statistical-power issue. The sample size in Saroglou et al.'s research (3,218) was much larger than this study's sample sizes.

Table 20

Correlations Between the 4Bs' Subfacets and Need for Closure, Meaning in Life, and Life Satisfaction

	<i>n</i>	BH		BLG		BLV		BO	
Need for Closure									
Muslim-India	100	.54	***	.50	***	.45	***	.39	***
Persian 1	109	.38	***	.27	**	.26	**	.35	***
Persian 2	98	.15		.16		.14		.17	
Agg. Muslim	307	.37	***	.29	***	.31	***	.35	***
Hindu	198	.34	***	.30	***	.28	***	.31	***
Christian	205	.31	***	.36	***	.25	***	.29	***
Study 1	472	.19	***	.18	***	.22	***	.15	**
Meaning in Life									
Muslim-India	100	.51	***	.53	***	.49	***	.43	***
Persian 1	109	.38	***	.39	***	.29	**	.34	***
Persian 2	98	.26	**	.35	***	.21	*	.18	
Agg. Muslim	307	.41	***	.41	***	.36	***	.38	***
Hindu	198	.43	***	.47	***	.45	***	.51	***
Christian	205	.56	***	.58	***	.60	***	.62	***
Study 1	472	.02		.02		.02		-.01	
Life Satisfaction									
Muslim-India	100	.10		.28	**	.17		.18	
Persian 1	109	.08		.04		-.04		.07	
Persian 2	98	.12		.16		.07		.17	
Agg. Muslim	307	.04		.06		-.01		.11	
Hindu	198	.00		-.05		.00		-.03	
Christian	205	.29	***	.39	***	.49	***	.46	***
Study 1	472	-.04		.01		-.07		-.10	*

Note. BH = behaving; BLG = belonging; BLV = believing; BO = bonding

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 21*Results of Hierarchical Regression Predicting Need for Closure*

Independent Variables	Sample										
	MI (n = 100)		P1 (n = 109)		P2 (n = 98)		MA (n = 307)		Hd (n = 198)		S1 (n = 472)
Step 1. Demographic variables											
R^2	.053		.058 *		.054		.050 ***		.067 **		.030 **
F	2.72		3.18 *		2.72		7.93 ***		6.95 **		4.75 **
Step 2. 4Bs' subfacets											
R^2	.377		.193		.075		.171		.170		.054
ΔR^2	.323 ***		.135 **		.021		.121 ***		.104 ***		.024 *
ΔF	12.06 ***		4.19 **		0.51		10.92 ***		5.97 ***		2.95 *
Fundamentalism											
Step 3. Content-Grouping											
R^2	.377		.194		.085		.172		.181		.055
ΔR^2	.000		.000		.010		.000		.010		.001
ΔF	0.10		0.12		0.97		0.35		2.39		0.70
Step 4. Other Content-Groupings											
R^2	.411		.264		.134		.193		.267		.063
ΔR^2	.034		.070		.049		.021		.087 ***		.008
ΔF	1.00		1.79		0.97		1.50		4.39 ***		0.73
Transcendent Connection											
Step 3. Content-Grouping											
R^2	.380		.214		.077		.175		.170		.057
ΔR^2	.003		.021		.002		.004		.000		.021 *
ΔF	0.44		2.67		0.23		1.29		0.01		4.83 *

Table 21 (Continued)

Independent Variables	Sample						
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)
Transcendent Connection							
Step 4. Other Content-Groupings							
R^2	.411	.264	.134	.193	.267	.212	.063
ΔR^2	.031	.050	.057	.018	.097 ***	.049 *	.005
ΔF	0.93	1.27	0.23	1.31	4.91 ***	2.40 *	0.53
Tolerance (versus Rejection)							
Step 3. Content-Grouping							
R^2	.391	.220	.081	.182	.208	.199	.054
ΔR^2	.015	.027	.006	.011 *	.038 **	.056 ***	.000
ΔF	2.20	3.45	0.63	3.91 *	9.07 **	13.80 ***	0.04
Step 4. Other Content-Groupings							
R^2	.411	.264	.134	.193	.267	.212	.063
ΔR^2	.020	.044	.053	.011	.059 *	.014	.009
ΔF	0.59	1.12	0.63	0.79	3.00 *	0.66	0.86
Religious Artifacts							
Step 3. Content-Grouping							
R^2	.380	.203	.075	.173	.184	.156	.056
ΔR^2	.004	.010	.000	.002	.013	.013	.002
ΔF	0.52	1.26	0.00	0.61	3.08	3.10	1.16
Step 4. Other Content-Groupings							
R^2	.411	.264	.134	.193	.267	.212	.063
ΔR^2	.031	.061	.059	.020	.084 **	.057 *	.007
ΔF	0.91	1.56	1.16	1.44	4.24 **	2.75 *	0.64

Table 21 (Continued)

Independent Variables	Sample						
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)
Public Integration							
Step 3. Content-Grouping							
R^2	.397	.203	.075	.177	.171	.149	.054
ΔR^2	.020	.010	.000	.006	.000	.006	.000
ΔF	3.06	1.28	0.01	2.17	0.09	1.46	0.17
Step 4. Other Content-Groupings							
R^2	.411	.264	.134	.193	.267	.212	.063
ΔR^2	.014	.061	.059	.016	.097 ***	.063 *	.009
ΔF	0.42	1.55	1.16	1.14	4.89 ***	3.09 *	0.84
Consideration of Religion							
Step 3. Content-Grouping							
R^2	.385	.224	.103	.184	.199	.145	.057
ΔR^2	.008	.031	.028	.012 *	.029 **	.002	.003
ΔF	1.25	3.91	2.76	4.51 *	6.88 **	0.41	1.69
Step 4. Other Content-Groupings							
R^2	.411	.264	.134	.193	.267	.212	.063
ΔR^2	.026	.040	.032	.009	.068 **	.068 **	.005
ΔF	0.77	1.03	0.62	0.67	3.44 **	3.31 **	0.54

Note. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA = aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1

sample

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 22

Standardized Regression Coefficients from the Hierarchical Regression Analysis of Need for Closure

Independent Variables	Sample						
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)
Demographic variables							
sex	-.172	.300	.667	.211	.021	-.056	.331 **
age	.234 **	.054	.178	.121 *	.151 *	-.012	-.042
4Bs' subfacets							
Behaving	.457 *	-.249	-.190	-.031	.194	.060	.113
Belonging	.220	.374	.083	.171	.010	.168	.179 *
Believing	.011	.382	-.024	.253 *	-.049	-.066	-.051
Bonding	-.228	-.186	.058	-.193	.000	-.037	-.229 **
Content-groupings							
Fundamentalism	-.055	.000	.104	.054	-.044	-.005	-.029
Transcendent Connection	-.073	-.158	-.012	-.063	.076	.143	-.078
Tolerance	.072	.201	-.214	.087	.288 **	.235 **	-.014
Religious Artifacts	-.059	-.277	-.004	-.072	.113	.057	.058
Public Integration	.192	.018	.045	.033	.082	.033	.016
Consideration	.052	.170	.313 *	.126	-.294 **	-.018	-.058

Note. All standardized regression coefficients are from the final model. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA = aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1 sample

* $p < .05$. ** $p < .01$. *** $p < .001$

In the third step, one of the content-groupings was added. Most of the content-groupings are not significant predictors of need for closure, and the coefficients often vary across sample in their direction. However, the tolerance (versus rejection) content-grouping was more consistently predictive of need for closure. In the Hindu sample, Christian sample, and aggregated Muslim data, adding tolerance to the model resulted in a significantly higher R^2 . After controlling for the other content-groupings, tolerance was a significant positive predictor in the Hindu and Christian samples. The tolerance (versus rejection) content-grouping is made up of items about rejecting religion but scored so that high levels indicate more tolerance of religion. This indicates that those who like things to be predictable and orderly are also more likely to disagree with hostile statements about religion (i.e., have a tolerant non-rejective view of religion). To put it another way, those who agree with hostile statements about religion are less likely to demand orderliness and predictability from what happens in life. They might be more willing to risk disorder and unpredictability.

Meaning in Life

Table 23 and 24 display the model comparisons and standard estimates. Of the demographic variables, the only significant predictor in the final model was age in the Christian sample, indicating that older participants had more meaning in life.

As with need for closure (NfC), the tolerance (versus rejection) content-grouping was predictive of meaning in life in most of the samples. Adding it to the model resulted in an increased R^2 in all samples except for the Indian Muslim sample and the first Persian sample. In the final model it positively predicted meaning in life in both the Christian sample and the aggregated Muslim data, indicating that those who do not reject religion are likely to have more meaning in their life.

Table 23*Results of Hierarchical Regression Predicting Meaning in Life*

Independent Variables	Samples											
	MI (n = 100)		P1 (n = 109)		P2 (n = 98)		MA (n = 307)		Hd (n = 198)		Ch (n = 205)	S1 (n = 472)
Step 1. Demographic variables												
R^2	.013		.072 *		.053		.023 *		.022		.228 ***	.021 *
F	0.63		4.04 *		2.67		3.56 *		2.22		29.80 ***	3.38 *
Step 2. 4Bs' subfacets												
R^2	.330		.232		.173		.203		.292		.584	.070
ΔR^2	.318	***	.160	***	.119 *		.180 ***		.270 ***		.356 ***	.049 ***
ΔF	11.03	***	5.20	***	3.28 *		16.86 ***		18.19 ***		42.45 ***	6.10 ***
Fundamentalism												
Step 3. Content-Grouping												
R^2	.335		.235		.182		.210		.306		.590	.076
ΔR^2	.005		.003		.009		.007		.014		.006	.005
ΔF	0.68		0.42		1.00		2.51		3.85		2.70	2.69
Step 4. Other Content-Groupings												
R^2	.432		.271		.274		.258		.375		.663	.113
ΔR^2	.096 *		.036		.092		.048 **		.069 **		.073 ***	.037 **
ΔF	2.95 *		0.92		2.17		3.78 **		0.41 **		8.29 ***	3.84 **
Transcendent Connection												
Step 3. Content-Grouping												
R^2	.332		.255		.191		.222		.306		.595	.085
ΔR^2	.001		.023		.019		.019 **		.014		.010 *	.015 **
ΔF	0.20		3.10		2.08		7.12 **		3.75		5.05 *	7.33 **

Table 23 (Continued)

Independent Variables	Sample													
	MI (n = 100)		P1 (n = 109)		P2 (n = 98)		MA (n = 307)		Hd (n = 198)		Ch (n = 205)		S1 (n = 472)	
Transcendent Connection														
Step 4. Other Content-Groupings														
R^2	.432		.271		.274		.258		.375		.663		.113	
ΔR^2	.100 *		.016		.083		.036 *		.069 **		.068 ***		.028 *	
ΔF	3.06 *		0.40		1.94		2.84 *		4.11 **		7.75 ***		2.90 *	
Tolerance (versus Rejection)														
Step 3. Content-Grouping														
R^2	.344		.233		.215		.216		.309		.633		.082	
ΔR^2	.013		.001		.042 *		.012 *		.017 *		.048 ***		.012 *	
ΔF	1.83		0.17		4.84 *		4.68 *		4.66 *		25.97 ***		6.15 *	
Step 4. Other Content-Groupings														
R^2	.432		.271		.274		.258		.375		.663		.113	
ΔR^2	.088 *		.037		.059		.042 **		.066 **		.030 **		.030 **	
ΔF	2.70 *		0.97		1.39		3.33 **		3.92 **		3.42 **		3.14 **	
Religious Artifacts														
Step 3. Content-Grouping														
R^2	.411		.232		.177		.210		.301		.607		.070	
ΔR^2	.080 ***		.000		.004		.006		.009		.023 ***		.000	
ΔF	12.50 ***		0.06		0.44		2.44		2.57		11.46 ***		0.04	
Step 4. Other Content-Groupings														
R^2	.432		.271		.274		.258		.375		.663		.113	
ΔR^2	.021		.038		.098		.048 **		.074 ***		.056 ***		.043 ***	
ΔF	0.65		0.99		2.28		3.80 **		4.36 ***		6.33 ***		4.39 ***	

Table 23 (Continued)

Independent Variables	Sample							
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)	
Public Integration								
Step 3. Content-Grouping								
R^2	.334	.239	.185	.203	.309	.590	.072	
ΔR^2	.003	.007	.012	.000	.017 *	.006	.002	
ΔF	0.45	0.86	1.31	0.01	4.58 *	2.91	0.81	
Step 4. Other Content-Groupings								
R^2	.432	.271	.274	.258	.375	.663	.113	
ΔR^2	.098 *	.032	.090	.055 ***	.066 **	.072 ***	.041 ***	
ΔF	3.00 *	0.83	2.10	4.31 ***	3.93 **	8.24 ***	4.23 ***	
Consideration of Religion								
Step 3. Content-Grouping								
R^2	.333	.232	.222	.206	.293	.611	.074	
ΔR^2	.003	.000	.050 *	.003	.001	.026 ***	.004	
ΔF	0.41	0.00	5.77 *	0.93	0.30	13.25 ***	1.80	
Step 4. Other Content-Groupings								
R^2	.432	.271	.274	.258	.375	.663	.113	
ΔR^2	.098 *	.039	.052	.052 **	.082 ***	.052 ***	.039 **	
ΔF	3.01 *	1.00	1.21	4.11 **	4.85 ***	5.95 ***	4.03 **	

Note. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA = aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1

sample

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 24

Standardized Regression Coefficients from the Hierarchical Regression Analysis of Meaning in Life

Independent Variables	Samples						
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)
Demographic variables							
sex	-.100	-.292	.262	-.052	-.202	.148	.096
age	.117	.123	.147	.102	-.035	.278 ***	.031
4Bs' subfaces							
Behaving	.130	-.297	-.062	-.025	.034	.076	.030
Belonging	.434 **	.008	-.271	.092	.126	.109	.078
Believing	.096	.306	.054	.201	.022	.131 *	.121
Bonding	-.039	.402	.312	.175	.193	.136 *	-.141
Content-Groupings							
Fundamentalism	-.004	-.161	-.173	-.168	-.177 *	.091	-.076
Transcendent Connection	.157	.197	.179	.218 ***	.174 *	.052	.189 **
Tolerance	.112	.156	.162	.217 *	.108	.199 ***	.202 **
Religious Artifacts	-.396 ***	-.032	.061	-.150	.098	.101	-.009
Public Integration	.075	-.143	.059	-.002	.252 **	-.015	-.041
Consideration	-.007	.031	.200	-.013	-.193 *	.128 **	-.080

Note. All standardized regression coefficients are from the final model. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA = aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1 sample

* $p < .05$. ** $p < .01$. *** $p < .001$

Transcendent connection was also predictive of meaning in life. Adding it improved the prediction capacity of the model in the Christian sample and the aggregated Muslim data. In the final model (with all content-groupings added), it was a significant, positive predictor in the Hindu sample and the aggregated Muslim data. The model estimates were fairly similar for transcendent connection and tolerance, but tolerance resulted in a significantly better model in more samples.

Life Satisfaction

Tables 25 and 26 display the model comparisons and standard estimates. Sex/gender was unrelated to life satisfaction in the final model, and age was a significant predictor only in the Hindu sample, where being younger predicted more life satisfaction.

Adding the 4B's subfacets to the model resulted in increased prediction in the Indian Muslim sample, the Hindu sample, and the aggregated Muslim data. The most predictive subfacet in the final model was the behaving subfacet, which was a negative predictor of life satisfaction in the Christian sample, the first Persian sample, and the aggregated Muslim data. The zero-order correlation between behaving and life satisfaction, however, was an insignificant positive correlation in most samples (see Table 19), so the contribution that the behaving subfacet makes to predicting life satisfaction was only clear when the other predictors were taken into account. Believing was also a positive predictor in the Christian sample, and belonging in the aggregated Muslim data. This is somewhat of a divergence from previous research. Saroglou et al. found that all of the 4Bs' subfacets were positively associated with life satisfaction, but again the differences are possibly due to the much smaller sample sizes in this study.

Table 25*Results of Hierarchical Regression Predicting Life Satisfaction*

Independent Variables	Samples													
	MI		P1		P2		MA		Hd		Ch		S1	
	(n = 100)		(n = 109)		(n = 98)		(n = 307)		(n = 198)		(n = 205)		(n = 472)	
Step 1. Demographic variables														
R^2	.007		.003		.058		.023 *		.054 **		.063 **		.002	
F	0.35		0.18		2.92		3.54 *		5.59 **		6.75 **		0.33	
Step 2. 4Bs' subfacets														
R^2	.108		.068		.102		.065		.060		.299		.005	
ΔR^2	.101 *		.065		.044		.042 *		.005		.236 ***		.003	
ΔF	2.64 *		1.73		1.12		3.34 *		0.27		16.67 ***		0.30	
Fundamentalism														
Step 3. Content-Grouping														
R^2	.113		.092		.128		.073		.143		.321		.016	
ΔR^2	.005		.024		.026		.008		.084 ***		.022 *		.011 *	
ΔF	0.53		2.60		2.66		2.65		18.53 ***		6.44 *		5.30 *	
Step 4. Other Content-Groupings														
R^2	.189		.116		.180		.108		.254		.347		.039	
ΔR^2	.075		.024		.052		.035 *		.111 ***		.026		.023	
ΔF	1.61		0.52		1.08		2.31 *		5.50 ***		1.53		2.17	
Transcendent Connection														
Step 3. Content-Grouping														
R^2	.168		.069		.165		.093		.091		.304		.005	
ΔR^2	.060 *		.000		.063 *		.028 **		.031 *		.005		.000	
ΔF	6.58 *		0.07		6.79 *		9.15 **		6.50 *		1.55		0.20	

Table 25 (Continued)

Independent Variables	Samples						
	MI	P1	P2	MA	Hd	Ch	S1
	(n = 100)	(n = 109)	(n = 98)	(n = 307)	(n = 198)	(n = 205)	(n = 472)
Transcendent Connection							
Step 4. Other Content-Groupings							
R^2	.189	.116	.180	.108	.254	.347	.039
ΔR^2	.021	.048	.015	.016	.163 ***	.043 *	.034 **
ΔF	0.44	1.01	0.31	1.02	8.09 ***	2.52 *	3.20 **
Tolerance (versus Rejection)							
Step 3. Content-Grouping							
R^2	.109	.068	.107	.066	.077	.309	.019
ΔR^2	.000	.000	.005	.001	.017	.010	.014 **
ΔF	0.09	0.00	0.45	0.44	3.50	2.89	6.83 **
Step 4. Other Content-Groupings							
R^2	.189	.116	.180	.108	.254	.347	.039
ΔR^2	.079	.048	.073	.042 *	.177 ***	.038	.020
ΔF	1.70	1.02	1.52	2.76 *	8.79 ***	2.24	1.86
Religious Artifacts							
Step 3. Content-Grouping							
R^2	.111	.071	.106	.066	.068	.325	.005
ΔR^2	.003	.003	.004	.000	.008	.026 **	.000
ΔF	0.28	0.34	0.39	0.19	1.67	7.61 **	0.13
Step 4. Other Content-Groupings							
R^2	.189	.116	.180	.108	.254	.347	.039
ΔR^2	.077	.045	.074	.043 *	.186 ***	.022	.034 **
ΔF	1.66	0.96	1.53	2.81 *	9.23 ***	1.30	3.21 **

Table 25 (Continued)

Independent Variables	Samples						
	MI	P1	P2	MA	Hd	Ch	S1
	(n = 100)	(n = 109)	(n = 98)	(n = 307)	(n = 198)	(n = 205)	(n = 472)
Public Integration							
Step 3. Content-Grouping							
R^2	.117	.070	.106	.065	.161	.299	.007
ΔR^2	.008	.002	.003	.000	.101 ***	.000	.003
ΔF	0.88	0.24	0.34	0.05	22.85 ***	0.05	1.20
Step 4. Other Content-Groupings							
R^2	.189	.116	.180	.108	.254	.347	.039
ΔR^2	.072	.046	.074	.043 *	.093 ***	.048 *	.031 *
ΔF	1.54	0.98	1.54	2.84 *	4.63 ***	2.83 *	2.99 *
Consideration of Religion							
Step 3. Content-Grouping							
R^2	.125	.078	.104	.074	.144	.300	.010
ΔR^2	.017	.011	.002	.009	.084 ***	.001	.005
ΔF	1.75	1.13	0.17	2.76	18.65 ***	0.37	2.46
Step 4. Other Content-Groupings							
R^2	.189	.116	.180	.108	.254	.347	.039
ΔR^2	.064	.038	.076	.035 *	.110 ***	.047 *	.029 *
ΔF	1.36	0.80	1.58	2.29 *	5.47 ***	2.76 *	2.74 *

Note. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA = aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1 sample.

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 26

Standardized Regression Coefficients from the Hierarchical Regression Analysis of Life Satisfaction

Independent Variables	Samples						
	MI	P1	P2	MA	Hd	Ch	S1
	(n = 100)	(n = 109)	(n = 98)	(n = 307)	(n = 198)	(n = 205)	(n = 472)
Demographic variables							
sex	.034	-.173	.696	-.181	-.256	-.135	.049
age	.046	.009	.179	.091	-.146 *	.073	.032
4Bs' subfacets							
Behaving	-.259	-.655 **	-.355	-.405 **	-.010	-.221 *	.054
Belonging	.282	.216	.221	.267 *	-.197	.076	.062
Believing	.006	.271	-.046	.032	-.068	.280 **	.018
Bonding	-.079	-.027	.055	-.038	-.001	.137	-.129
Content-Groupings							
Fundamentalism	-.181	.416	.187	.119	.171 *	.182 *	-.114
Transcendent Connection	.332 *	-.029	.252 *	.182 *	.104	.021	.062
Tolerance	.023	-.022	-.005	-.074	-.249 **	.100	.200 **
Religious Artifacts	.035	-.036	-.023	-.059	.084	.134	-.037
Public Integration	.107	-.322	-.043	-.044	.240 *	-.078	-.042
Consideration	.077	.235	.035	.181	.178	.039	-.080

Note. All standardized regression coefficients are from the final model. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA = aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1 sample

* $p < .05$. ** $p < .01$. *** $p < .001$

Of the content-groupings, transcendent connection was the most predictive of life satisfaction. In more than half of the samples, adding transcendent connection to the model resulted in an improvement. In the final model, it was a positive predictor in the Indian Muslim sample, the second Persian sample, and the aggregated Muslim data. Adding fundamentalism also improved the prediction capacity of the model and was a significant, positive predictor of life satisfaction in the final model in the Hindu and Christian samples. It is possible that fundamentalism was less predictive of life satisfaction in the Muslim samples because fundamentalism is less distinct from other aspects of religiousness.

Overall, the strongest content-groupings for predicting the three outcomes were tolerance (versus rejection) and transcendent connection. Those who were tolerant of religion were more likely to have a high need for closure and more meaning in life, while those who scored high in transcendent connection were more likely to have meaning in life and higher well-being. The predictive power of these two content-groupings make them more valuable as potential additions to the 4Bs compared to the other content-groupings. The relationship with need for closure may give some insight into the cognition and motivation behind these aspects of religiousness. Transcendent connection and religion-tolerance may also be helpful in their ability to predict desirable outcomes in the case of meaning in life and, for transcendent connection, life satisfaction.

Relationship with Religious Variables

The content-groupings and the 4Bs subfacets should be related to other religious variables to some degree, although the strength and pattern of the associations may vary based on the content-grouping/subfacet.

Table 27 displays the correlations between the 4Bs' subfacets and a variety of religiousness-related variables, including religiousness, spirituality, frequency of public religious activities, frequency of private religious activities, and the brief mysticism scale. Overall, the 4Bs' subfacets were consistently related to religiousness, spirituality, and religious activities (both public and private) across samples. The correlations with spirituality and mysticism were sometimes weaker or even non-significant in the case of mysticism.

Table 27

Correlations Between the 4Bs' Subfacets and Religiousness Variables

	<i>n</i>	Religious		Spiritual		Public		Private		Mysticism	
				Behaving							
Muslim-India	100	.60	***	.27	**	-.34	***	-.30	**	.26	**
Persian 1	109	.74	***	.49	***	-.49	***	-.75	***	.26	**
Persian 2	98	.28	**	.31	**	-.30	**	-.45	***	.22	*
Agg. Muslim	307	.49	***	.31	***	-.30	***	-.60	***	.21	***
Hindu	198 ^a	.47	***	.38	***	-.38	***	-.47	***	.20	**
Christian	205	.32	***	.16	*	-.38	***	-.30	***	.19	**
Study 1	472	.73	***	.33	***	-.58	***	-.55	***	.30	***
				Belonging							
Muslim-India	100	.60	***	.38	***	-.41	***	-.35	***	.35	***
Persian 1	109	.73	***	.51	***	-.59	***	-.73	***	.31	***
Persian 2	98	.33	***	.26	*	-.28	**	-.49	***	.19	
Agg. Muslim	307	.52	***	.34	***	-.37	***	-.60	***	.25	***
Hindu	198 ^a	.40	***	.33	***	-.36	***	-.36	***	.10	
Christian	205	.39	***	.18	**	-.46	***	-.40	***	.26	***
Study 1	472	.70	***	.28	***	-.59	***	-.43	***	.26	***
				Believing							
Muslim-India	100	.49	***	.27	**	-.28	**	-.38	***	.34	***
Persian 1	109	.72	***	.48	***	-.47	***	-.75	***	.31	**
Persian 2	98	.36	***	.31	**	-.23	*	-.48	***	.13	
Agg. Muslim	307	.57	***	.33	***	-.34	***	-.59	***	.22	***
Hindu	198 ^a	.41	***	.41	***	-.37	***	-.40	***	.14	*
Christian	205	.39	***	.25	***	-.42	***	-.39	***	.31	***

Table 27 (Continued)

	<i>n</i>	Religious		Spiritual		Public		Private		Mysticism	
Believing											
Study 1	472	.66	***	.39	***	-.48	***	-.52	***	.41	***
Bonding											
Muslim-India	100	.49	***	.31	**	-.30	**	-.34	***	.33	***
Persian 1	109	.74	***	.49	***	-.60	***	-.75	***	.32	***
Persian 2	98	.43	***	.23	*	-.33	***	-.48	***	.16	
Agg. Muslim	307	.58	***	.34	***	-.43	***	-.60	***	.25	***
Hindu	198 ^a	.41	***	.40	***	-.36	***	-.35	***	.09	
Christian	205	.43	***	.23	***	-.45	***	-.40	***	.24	***
Study 1	472	.54	***	.33	***	-.44	***	-.38	***	.35	***

Note. Public = public religious activities; Private = private religious activities

* $p < .05$, ** $p < .01$, *** $p < .001$

^a The sample size is only 197 for the correlations with public religious activities.

Table 28 displays the correlations between the content-groupings and the religiousness-related variables. The content-groupings tended to have stronger relationships with religiousness and private religious activities and weaker relationships with mysticism, but this varied considerably depending on the content-grouping.

Transcendent connection had stronger correlations with mysticism and spirituality than the other content-groupings, even with all overlapping items removed from both variables. Transcendent connection also had varying associations with religious activities across samples. The correlations between transcendent connection and public religious activities were considerably stronger in the Hindu and Christian samples than in the Muslim samples. The association with private religious activities was much weaker in the Christian sample compared to the rest of the samples.

Table 28*Correlations Between the Content-Groupings and Religiousness Variables*

	<i>n</i>	Religious		Spiritual		Public		Private		Mysticism	
Fundamentalism											
Muslim-India	100	.43	***	.20		.13		.17		.31	**
Persian 1	109	.73	***	.49	***	.54	***	.74	***	.33	***
Persian 2	98	.20	*	.20		.28	**	.38	***	.18	
Agg. Muslim	307	.49	***	.30	***	.32	***	.54	***	.25	***
Hindu	198 ^a	.45	***	.29	***	.34	***	.25	***	.30	***
Christian	205	.33	***	.21	**	.35	***	.29	***	.28	***
Study 1	472	.51	***	.13	**	.43	***	.35	***	.18	***
Transcendent Connection											
Muslim-India	100	.42	***	.45	***	.29	**	.32	**	.58	***
Persian 1	109	.42	***	.55	***	.27	**	.44	***	.65	***
Persian 2	98	.20	*	.27	**	.18		.27	**	.52	***
Agg. Muslim	307	.35	***	.42	***	.24	***	.39	***	.55	***
Hindu	198 ^a	.41	***	.50	***	.45	***	.39	***	.26	***
Christian	205	.32	***	.21	**	.39	***	.40	***	.20	***
Study 1	472	.44	***	.58	***	.25	***	.36	***	.59	***
Tolerance (versus Rejection)											
Muslim-India	100	.47	***	.29	**	.35	***	.37	***	.18	
Persian 1	109	.71	***	.50	***	.47	***	.69	***	.24	*
Persian 2	98	.40	***	.18		.27	**	.34	***	.09	
Agg. Muslim	307	.49	***	.29	***	.30	***	.55	***	.14	*
Hindu	198 ^a	.42	***	.28	***	.36	***	.37	***	.09	
Christian	205	.23	**	.13		.27	***	.28	***	.22	**
Study 1	472	.51	***	.14	**	.50	***	.36	***	.07	
Religious Artifacts											
Muslim-India	100	.39	***	.35	***	.27	**	.23	*	.35	***
Persian 1	109	.63	***	.45	***	.44	***	.65	***	.21	*
Persian 2	98	.26	*	.11		.16		.23	*	.18	
Agg. Muslim	307	.40	***	.27	***	.25	***	.47	***	.19	**
Hindu	198 ^a	.29	***	.36	***	.31	***	.26	***	.22	**
Christian	205	.40	***	.22	**	.37	***	.36	***	.32	***
Study 1	472	.25	***	.23	***	.18	***	.15	**	.25	***

Table 28 (Continued)

	<i>n</i>	Religious	Spiritual	Public	Private	Mysticism
Public Integration						
Muslim-India	100	.54 ***	.29 **	.26 **	.38 ***	.36 ***
Persian 1	109	.70 ***	.42 ***	.55 ***	.72 ***	.22 *
Persian 2	98	.37 ***	.18	.28 **	.41 ***	.03
Agg. Muslim	307	.53 ***	.28 ***	.36 ***	.58 ***	.18 **
Hindu	198 ^a	.60 ***	.40 ***	.45 ***	.40 ***	.34 ***
Christian	205	.35 ***	.16 *	.28 ***	.27 ***	.30 ***
Study 1	472	.60 ***	.16 ***	.53 ***	.43 ***	.15 **
Consideration (versus Indifference)						
Muslim-India	100	.58 ***	.49 ***	.41 ***	.46 ***	.41 ***
Persian 1	109	.79 ***	.56 ***	.56 ***	.73 ***	.26 **
Persian 2	98	.50 ***	.34 ***	.37 ***	.49 ***	.25 *
Agg. Muslim	307	.63 ***	.44 ***	.43 ***	.62 ***	.26 ***
Hindu	198 ^a	.59 ***	.45 ***	.43 ***	.39 ***	.41 ***
Christian	205	.10	.03	.17 *	.07	.04
Study 1	472	.61 ***	.19 ***	.51 ***	.50 ***	.10 *

Note. Public = public religious activities; Private = private religious activities

* $p < .05$, ** $p < .01$, *** $p < .001$

^aThe sample size is only 197 for the correlations with public religious activities.

Consideration (versus indifference) had the strongest association with religiousness across nearly all samples. Among the Muslim samples, it also had strong associations with private religious practice. The relationship with mysticism tended to be weaker. In the Christian sample, consideration was related to public religious activities, but the associations with the rest of the religious variables were not significant. The Christian sample also scored lower in consideration compared to the other content-groupings and had less variation in scores (see Table 7), which might help explain the low correlations.

As would be expected for potential additions to the 4Bs, the content-groupings are consistently related to religiousness, spirituality, religious activities, and mysticism. The strong

correlations with religiousness for most of the content-groupings indicate that they are tied to the core concept of religiousness. The fact that transcendent connection has strong associations with mysticism and spirituality shows that it is more closely tied with them than with more traditional aspects of religiousness.

Four-Factor Model Results

Since consideration (versus indifference) and public integration were the weakest of the content-groupings overall, the four-factor model that excludes those two factors might be a better fit. The results of the analyses using scorings based on the four-factor model are presented below. The content-groupings from the four-factor model are very similar to four of the groupings from the six-factor model, so there will be some redundancy with the section above. Because of the potential redundancy, the differences in results for the four-factor model will be highlighted. Table 29 displays the means and standard deviations for each content-grouping across sample.

Table 29

Means and Standard Deviations (in Parentheses) for the Four-factor model Content-Groupings

	<i>n</i>	F	TC	TR	A
Muslim-India	100	0.65 (1.06)	0.51 (0.93)	1.12 (1.09)	0.59 (1.13)
Persian 1	109	0.80 (1.60)	0.59 (1.32)	1.80 (1.43)	0.76 (1.33)
Persian 2	98	1.56 (0.97)	1.02 (0.90)	2.34 (0.69)	1.29 (1.10)
Agg. Muslim	307	1.00 (1.31)	0.59 (1.03)	1.75 (1.22)	0.87 (1.23)
Hindu	198	0.04 (0.67)	0.26 (0.70)	0.35 (0.89)	0.34 (0.75)
Christian	205	0.31 (0.70)	0.36 (0.64)	0.32 (0.73)	0.42 (0.65)
Study 1	472	-1.40 (0.99)	-0.31 (1.30)	0.08 (0.99)	0.20 (1.21)

Note. F = fundamentalism; TC = transcendent connection; TR = tolerance (versus rejection); A = religious artifacts.

Independence of Content-Groupings

Table 30 displays the correlations between the 4Bs and the reduced content-groupings (four-factor model) and the intercorrelations of the reduced content-groupings. The correlation pattern was similar to the one reported already for the six-factor model. The only difference is that fundamentalism, as scored in the four-factor model, was highly correlated (above .79) with behaving in the first Persian sample, the second Persian sample, and the aggregated Muslim data. Belonging was also correlated highly with fundamentalism in both the first Persian sample and the aggregated Muslim data. The other content-groupings had correlations lower or similar to the correlations of the 4Bs. The same conclusion can be drawn with the four-factor model: the content-groupings are, for the most part, relatively independent of the 4Bs' dimensions, but fundamentalism overlaps the most.

Table 31 displays the correlations between the content-groupings derived from the four-factor model and the correlations derived from the six-factor model. The correlations between the corresponding content-groupings are high as expected with correlations ranging from .80 to .99 across samples. The content-groupings unique to the six-factor model had the highest correlations with the four-factor model fundamentalism content-grouping. The correlations between Public Integration and Fundamentalism ranged from .56 to .90, and the correlations between Consideration and Fundamentalism ranged from .12 to .84. The low correlation (.12) is from the Christian sample, which had low correlations with most religious variables as discussed earlier.

Table 30*Correlations for the Four-factor model Content-Groupings and the 4Bs' Subfacets*

		4Bs								Content-Groupings								
		<i>n</i>	BH		BLG		BLV		BO		F		TC		TR		A	
Fundamentalism																		
Muslim-India	100	.73	***	.78	***	.67	***	.62	***	—								
Persian 1	109	.85	***	.88	***	.83	***	.85	***	—								
Persian 2	98	.79	***	.72	***	.70	***	.69	***	—								
Agg. Muslim	307	.83	***	.84	***	.78	***	.79	***	—								
Hindu	198	.49	***	.48	***	.46	***	.37	***	—								
Christian	205	.66	***	.68	***	.60	***	.67	***	—								
Transcendent Connection																		
Muslim-India	100	.62	***	.63	***	.66	***	.68	***	.65	***	—						
Persian 1	109	.33	***	.36	***	.36	***	.41	***	.35	***	—						
Persian 2	98	.30	**	.27	**	.34	***	.40	***	.34	***	—						
Agg. Muslim	307	.44	***	.45	***	.46	***	.51	***	.46	***	—						
Hindu	198	.67	***	.62	***	.62	***	.63	***	.46	***	—						
Christian	205	.59	***	.58	***	.56	***	.57	***	.58	***	—						
Tolerance (versus Rejection)																		
Muslim-India	100	.60	***	.48	***	.63	***	.55	***	.51	***	.40	***	—				
Persian 1	109	.70	***	.71	***	.73	***	.71	***	.70	***	.21	*	—				
Persian 2	98	.40	***	.49	***	.38	***	.41	***	.36	***	.11		—				
Agg. Muslim	307	.66	***	.65	***	.71	***	.67	***	.62	***	.29	***	—				
Hindu	198	.60	***	.52	***	.52	***	.57	***	.28	***	.50	***	—				
Christian	205	.40	***	.42	***	.43	***	.47	***	.41	***	.52	***	—				

Table 30 (Continued)

	<i>n</i>	4Bs								Content-Groupings						
		BH		BLG		BLV		BO		F		TC		TR		A
Religious Artifacts																
Muslim-India	100	.53	***	.67	***	.50	***	.59	***	.64	***	.51	***	.29	**	—
Persian 1	109	.76	***	.81	***	.71	***	.80	***	.74	***	.34	***	.64	***	—
Persian 2	98	.47	***	.42	***	.36	***	.38	***	.40	***	.37	***	.04		—
Agg. Muslim	307	.65	***	.70	***	.60	***	.67	***	.65	***	.43	***	.46	***	—
Hindu	198	.57	***	.64	***	.63	***	.64	***	.46	***	.49	***	.47	***	—
Christian	205	.53	***	.57	***	.56	***	.55	***	.58	***	.51	***	.31	***	—

Note. BH = behaving; BLG = belonging; BLV = believing; BO = bonding; F = fundamentalism; TC = transcendent connection; TR = tolerance (versus rejection); A = religious artifacts

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 31

Correlations Between the Four-factor model and the Six-factor Model

			Six-Factor Model											
<i>n</i>			F		TC		TR		A		I		C	
Four-factor model	Fundamentalism													
	Muslim-India	100	.86	***	.64	***	.51	***	.62	***	.78	***	.69	***
	Persian 1	109	.94	***	.50	***	.72	***	.76	***	.90	***	.84	***
	Persian 2	98	.86	***	.35	***	.35	***	.46	***	.68	***	.55	***
	Agg. Muslim	307	.91	***	.53	***	.64	***	.70	***	.85	***	.77	***
	Hindu	198	.81	***	.47	***	.28	***	.41	***	.63	***	.54	***
	Christian	205	.80	***	.58	***	.31	***	.59	***	.56	***	.12	
	Transcendent Connection													
	Muslim-India	100	.58	***	.97	***	.39	***	.54	***	.59	***	.61	***
	Persian 1	109	.40	***	.95	***	.21	*	.28	**	.22	*	.29	**
	Persian 2	98	.35	***	.98	***	.10		.40	***	.16		.36	***
	Agg. Muslim	307	.46	***	.95	***	.29	***	.42	***	.36	***	.42	***
	Hindu	198	.42	***	.96	***	.51	***	.46	***	.51	***	.53	***
	Christian	205	.54	***	.95	***	.46	***	.58	***	.40	***	.11	
	Tolerance (versus Rejection)													
	Muslim-India	100	.43	***	.35	***	.98	***	.28	**	.60	***	.63	***
	Persian 1	109	.70	***	.34	***	.99	***	.73	***	.79	***	.83	***
	Persian 2	98	.25	*	.07		.99	***	.17		.68	***	.60	***
	Agg. Muslim	307	.59	***	.34	***	.99	***	.59	***	.75	***	.76	***
	Hindu	198	.22	**	.44	***	.97	***	.44	***	.46	***	.42	***
Christian	205	.33	***	.47	***	.95	***	.48	***	.47	***	.24	***	

Table 31 (Continued)

		Six-Factor Model												
		<i>n</i>	F		TC		TR		A		I		C	
		Religious Artifacts												
Four-factor model	Muslim-India	100	.55	***	.54	***	.28	**	.93	***	.47	***	.45	***
	Persian 1	109	.75	***	.45	***	.65	***	.95	***	.72	***	.66	***
	Persian 2	98	.42	***	.41	***	.05		.94	***	.26	*	.20	*
	Agg. Muslim	307	.64	***	.49	***	.46	***	.93	***	.58	***	.53	***
	Hindu	198	.48	***	.51	***	.47	***	.89	***	.40	***	.32	***
	Christian	205	.60	***	.54	***	.27	***	.88	***	.33	***	.06	

Note. F = fundamentalism; TC = transcendent connection; TR = tolerance (versus rejection); A = religious artifacts; I = public integration; C = consideration (versus indifference).

* $p < .05$, ** $p < .01$, *** $p < .001$

Reliability

Table 32 displays the reliabilities for the content-groupings of the four-factor model. Since the content-groupings of the four-factor model are made up of nearly the same items, it is not surprising that the reliabilities are also very similar. The only notable differences are the improvements in the reliability of fundamentalism and religious artifacts. The fundamentalism content-grouping had acceptable reliability across the board, with slightly lower reliability in the Hindu sample (.67). This might be explained by the fact that the item discussed earlier with the low ITC is not included in the four-factor model version of fundamentalism. The reliabilities for religious artifacts were much higher in the Hindu, Christian, and second Persian sample, even though it still had poor reliability in the Christian sample (.53). The item with the low ITC (as described in the reliability results from the six-factor model version of religious artifacts) is not part of the four-factor model version of this content-grouping. The higher reliability of these content-groupings suggests that the four-factor model is more consistent across samples than the six-factor model.

Table 32

Cronbach's Alphas for the Four-factor model Content-Groupings

	Samples					
	Muslim- India	Persian 1	Persian 2	Muslim- Agg	Hindu	Christian
F	.82	.92	.77	.87	.67	.71
TC	.77	.84	.68	.71	.72	.70
TR	.78	.93	.78	.88	.77	.53
A	.74	.78	.71	.72	.64	.53

Note. F = fundamentalism; TC = transcendent connection; TR = tolerance (versus rejection); A = religious artifacts.

Model Comparison

In the results from the factor analysis of the Study 1 data, each of the four content-groupings mapped onto a factor perfectly (see Table 33). The religious artifacts items did not split into two factors like they did in the results from the six-factor model.

Transcendent connection was still the most similar across the samples (see Tables 34-39 for the factor analysis results and congruence coefficients). It had factor similarity in all of the Muslim samples and the congruence coefficients were still relatively high in the Hindu (.71) and Christian (.71) samples. Tolerance (versus rejection) and fundamentalism had fairly similar results across samples. They both had factor similarity in one of the Muslim samples and in the aggregated Muslim data, but lower congruence coefficients in the other samples, ranging from .58 to .91 for both content-groupings. Religious artifacts did not have factor similarity in any of the samples, but most of the congruence coefficients were relatively high (.55 to .77).

Overall, the factor analysis results show that transcendent connection is still the most generalizable content-grouping. Tolerance and fundamentalism also seem relatively consistent across samples, especially in the Muslim samples. Religious artifacts, on the other hand, seems less generalizable than the other three content-groupings. That may be due to the way it was originally conceptualized here, involving the combination of ritual and appreciation of artifacts.

Prediction of Relevant Outcomes

The results of the hierarchical regression from the six-factor model were very similar to those found with the four-factor model. The zero-order correlations are displayed in Table 40 and the model comparisons are displayed in Table 41. Need for closure was most consistently predicted by tolerance (versus rejection; see Table 42). Those who were more tolerant of

Table 33*Study 1 Factor Analysis Results with Four Factors*

Item	Factor Loading			
	1	2	3	4
Fundamentalism (1 st factor)				
One must always dress and behave in the proper way that is defined by true religion.	.67	.07	.12	-.14
Religion should play the most important role in civil affairs.	.62	.11	.07	-.38
Religion is the main thing I do in my life.	.60	.20	.04	-.35
Religion provides a complete, unfailing guide to preserving oneself from harm.	.59	.17	.16	-.26
I like religion because it tells me what a supernatural being says.	.56	.25	.22	-.21
Religion has given humanity a complete, unfailing guide to happiness.	.56	.17	.13	-.27
In true religion one finds a set of divine laws that should replace all man-made laws.	.55	.19	.15	-.20
One either believes in the true religion or one has rejected it; there is nothing in between.	.55	.02	-.04	.07
I think it is important for people to show religious devotion publicly.	.54	.16	.20	-.31
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.51	.09	.15	-.11
I don't follow a strict code based on religion.	.49	.18	.05	-.26
I find that religion provides believers with prosperity and rich financial rewards.	.47	.21	.24	-.11
Transcendent Connection (2 nd factor)				
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.05	.69	.19	-.04
I have had an experience in which something greater than myself seemed to absorb me.	.11	.68	.16	-.06
I have had an experience in which I realized the oneness of myself with all things.	.03	.67	.21	.03
I have never felt any force or connection that I would call spiritual.	.04	.66	.05	-.22
I often feel a strong spiritual connection with all the people around me.	.14	.63	.20	-.04
I often feel like I am a part of the spiritual force on which all life depends.	.25	.63	.19	-.10
I have had an experience in which I felt everything in the world to be part of the same whole.	.03	.61	.22	.01
I have never had an experience which seemed holy to me.	.16	.53	.10	-.28
I have had an experience which I knew to be sacred.	.13	.51	.23	-.19

Table 33 (*Continued*)

Item	Factor Loading			
	1	2	3	4
Tolerance (versus Rejection) (4 th factor)				
Reason, science, and technology have now made our religious traditions useless.	.02	.24	.29	-.55
Religion lacks value because it is antiquated and outdated.	.20	.20	.23	-.55
I am hostile to religion.	.02	.04	.28	-.54
I reject all religious values.	.03	.23	.34	-.50
Religion has a bad effect on kids growing up.	.30	.06	.24	-.49
Religion increases the amount of evil in the world.	.19	.04	.17	-.47
I find that religious communities are not a good place to find friends.	.15	.15	.21	-.39
Religious faith contributes to bad mental health.	.22	.14	.16	-.39
I take pride in being heretical (holding opinions contrary to religious doctrine).	.09	.00	.00	-.35
Religious Artifacts (3 rd factor)				
I enjoy religion because of the religious art.	.00	.14	.72	.04
I enjoy religion because of the religious architecture.	.01	.06	.69	.05
There are sacred ritual actions that are important.	.07	.23	.55	-.15
There are sacred objects that are important.	.03	.17	.53	-.04
I value religion because it connects me to history.	.21	.23	.49	-.17
Rituals concerning sacred objects have little value.	-.03	.15	.39	-.18

Note. Loadings above .3 are in bold. The factor analysis was done with a limited pool of items to match items available in the Study 2

samples. The sample size for this analysis was 472.

Table 34*Factor Analysis Results with Four Factors in the Indian Muslim Sample*

Item	Factor Loading			
	1	2	3	4
Fundamentalism, $\phi = .84$ (1 st factor)				
I think it is important for people to show religious devotion publicly.	.63	-.03	.43	.02
One must always dress and behave in the proper way that is defined by true religion.	.52	.25	.13	-.29
Religion should play the most important role in civil affairs.	.51	.30	.14	-.43
Religion is the main thing I do in my life.	.47	.33	.43	-.34
In true religion one finds a set of divine laws that should replace all man-made laws.	.43	.42	.05	-.26
I find that religion provides believers with prosperity and rich financial rewards.	.40	.36	.20	.03
Religion has given humanity a complete, unfailing guide to happiness.	.40	.26	.08	-.24
I like religion because it tells me what a supernatural being says.	.39	.34	.39	.00
I don't follow a strict code based on religion.	.37	.20	.42	-.26
Religion provides a complete, unfailing guide to preserving oneself from harm.	.28	.22	.03	-.16
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.18	.03	.12	-.13
One either believes in the true religion or one has rejected it; there is nothing in between.	-.10	-.06	-.06	-.06
Transcendent Connection, $\phi = .90$ (2 nd factor)				
I have had an experience in which I felt everything in the world to be part of the same whole.	.24	.63	.15	-.03
I have had an experience in which something greater than myself seemed to absorb me.	.28	.57	.21	.07
I have had an experience in which I realized the oneness of myself with all things.	.04	.52	.37	-.03
I often feel a strong spiritual connection with all the people around me.	.33	.48	.39	-.04
I often feel like I am a part of the spiritual force on which all life depends.	.38	.47	.25	-.14
I have never felt any force or connection that I would call spiritual.	.05	.45	-.11	-.47
I have had an experience which I knew to be sacred.	.14	.44	.08	-.02
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.32	.29	.20	-.03
I have never had an experience which seemed holy to me.	-.03	.28	-.09	-.44

Table 34 (Continued)

Item	Factor Loading			
	1	2	3	4
Tolerance (versus Rejection), $\phi = .91$ (4 th factor)				
Religious faith contributes to bad mental health.	.02	.05	.14	-.66
Religion increases the amount of evil in the world.	.12	.01	.26	-.60
I find that religious communities are not a good place to find friends.	.34	-.15	.10	-.58
Religion has a bad effect on kids growing up.	.15	.13	.30	-.57
Reason, science, and technology have now made our religious traditions useless.	.19	.16	.14	-.54
I reject all religious values.	.00	.15	.41	-.52
Religion lacks value because it is antiquated and outdated.	.42	.31	-.02	-.46
I am hostile to religion.	-.09	.15	.06	-.43
I take pride in being heretical (holding opinions contrary to religious doctrine).	.11	.08	-.33	-.31
Religious Artifacts, $\phi = .75$ (3 rd factor)				
I enjoy religion because of the religious art.	.23	.07	.77	.12
I value religion because it connects me to history.	.19	.09	.61	-.16
I enjoy religion because of the religious architecture.	.28	.16	.56	.21
There are sacred objects that are important.	.34	.28	.36	-.01
There are sacred ritual actions that are important.	.37	.46	.02	-.22
Rituals concerning sacred objects have little value.	.03	.20	-.02	-.22

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 100.

Table 35*Factor Analysis Results with Four Factors in the First Persian Sample*

Item	Factor Loading			
	1	2	3	4
Fundamentalism, $\phi = .91$ (1 st factor)				
Religion should play the most important role in civil affairs.	.72	.11	.22	-.37
Religion is the main thing I do in my life.	.72	.27	.18	-.33
I think it is important for people to show religious devotion publicly.	.72	.29	.24	-.23
I don't follow a strict code based on religion.	.71	.11	.05	-.12
One must always dress and behave in the proper way that is defined by true religion.	.64	.35	.28	-.39
Religion has given humanity a complete, unfailing guide to happiness.	.60	.36	.19	-.55
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.52	.17	.12	-.22
Religion provides a complete, unfailing guide to preserving oneself from harm.	.51	.35	.23	-.60
In true religion one finds a set of divine laws that should replace all man-made laws.	.50	.38	.17	-.14
I like religion because it tells me what a supernatural being says.	.46	.32	.23	-.33
I find that religion provides believers with prosperity and rich financial rewards.	.45	.28	.30	-.04
One either believes in the true religion or one has rejected it; there is nothing in between.	.38	.01	.31	.02
Transcendent Connection, $\phi = .94$ (2 nd factor)				
I have had an experience which I knew to be sacred.	.30	.79	-.08	-.28
I have had an experience in which something greater than myself seemed to absorb me.	.13	.70	.15	.01
I often feel like I am a part of the spiritual force on which all life depends.	.20	.62	.30	.06
I have never had an experience which seemed holy to me.	.28	.60	-.08	-.47
I often feel a strong spiritual connection with all the people around me.	.15	.58	.50	.08
I have had an experience in which I felt everything in the world to be part of the same whole.	.05	.58	.15	-.02
I have never felt any force or connection that I would call spiritual.	.14	.52	.09	-.44
I sometimes feel a spiritual connection to other people that I cannot explain in words.	-.02	.52	.34	.14
I have had an experience in which I realized the oneness of myself with all things.	.02	.51	.25	.39

Table 35 (Continued)

Item	Factor Loading			
	1	2	3	4
Tolerance (versus Rejection), $\phi = .77$ (4 th factor)				
Religious faith contributes to bad mental health.	.20	.14	.39	-.80
I reject all religious values.	.08	.15	.41	-.77
I take pride in being heretical (holding opinions contrary to religious doctrine).	.00	.09	.25	-.77
Religion has a bad effect on kids growing up.	.33	.15	.43	-.74
Religion increases the amount of evil in the world.	.30	.11	.41	-.70
Reason, science, and technology have now made our religious traditions useless.	.22	.25	.15	-.68
Religion lacks value because it is antiquated and outdated.	.28	.19	.41	-.60
I am hostile to religion.	.21	.13	.54	-.55
I find that religious communities are not a good place to find friends.	.45	.06	.22	-.44
Religious Artifacts, $\phi = .77$ (3 rd factor)				
I value religion because it connects me to history.	.37	.32	.50	-.13
I enjoy religion because of the religious art.	.34	.10	.40	-.04
I enjoy religion because of the religious architecture.	.16	.14	.38	-.05
There are sacred ritual actions that are important.	.54	.28	.31	-.50
Rituals concerning sacred objects have little value.	.30	.19	.23	-.70
There are sacred objects that are important.	.37	.36	.16	-.50

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 109.

Table 36*Factor Analysis Results with Four Factors in the Second Persian Sample*

Item	Factor Loading			
	1	2	3	4
Fundamentalism, $\phi = .82$ (1 st factor)				
I think it is important for people to show religious devotion publicly.	.70	.24	.14	-.17
One must always dress and behave in the proper way that is defined by true religion.	.64	.20	.24	-.15
Religion should play the most important role in civil affairs.	.62	.08	.11	-.29
Religion provides a complete, unfailing guide to preserving oneself from harm.	.53	.13	.12	-.24
I don't follow a strict code based on religion.	.51	.27	.09	-.05
Religion is the main thing I do in my life.	.46	.20	.28	-.27
Religion has given humanity a complete, unfailing guide to happiness.	.45	.14	.19	-.23
In true religion one finds a set of divine laws that should replace all man-made laws.	.39	.13	.16	.09
One either believes in the true religion or one has rejected it; there is nothing in between.	.38	.20	.00	-.02
I like religion because it tells me what a supernatural being says.	.24	.15	-.01	.04
I find that religion provides believers with prosperity and rich financial rewards.	.22	.24	.31	.06
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.18	-.01	.15	-.13
Transcendent Connection, $\phi = .88$ (2 nd factor)				
I have never had an experience which seemed holy to me.	-.02	.63	-.11	-.43
I have had an experience which I knew to be sacred.	.13	.56	.00	-.05
I have never felt any force or connection that I would call spiritual.	.16	.51	-.10	-.42
I have had an experience in which something greater than myself seemed to absorb me.	.04	.49	.22	.04
I have had an experience in which I felt everything in the world to be part of the same whole.	-.07	.44	.14	-.01
I often feel like I am a part of the spiritual force on which all life depends.	.24	.39	.30	.10
I often feel a strong spiritual connection with all the people around me.	.16	.39	.09	.28
I have had an experience in which I realized the oneness of myself with all things.	-.08	.31	.22	.30
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.10	.24	.13	-.01

Table 36 (Continued)

Item	Factor Loading			
	1	2	3	4
Tolerance (versus Rejection), $\phi = .84$ (4 th factor)				
Religious faith contributes to bad mental health.	-.07	.14	.15	-.86
Religion lacks value because it is antiquated and outdated.	-.07	.20	.19	-.86
Religion has a bad effect on kids growing up.	.10	.12	.29	-.81
Religion increases the amount of evil in the world.	-.20	.06	.09	-.81
I reject all religious values.	.14	.05	.24	-.77
I am hostile to religion.	-.08	-.16	.00	-.57
I find that religious communities are not a good place to find friends.	.25	.01	.26	-.48
Reason, science, and technology have now made our religious traditions useless.	.26	-.02	.05	-.40
I take pride in being heretical (holding opinions contrary to religious doctrine).	.35	.04	.28	-.31
Religious Artifacts, $\phi = .75$ (3 rd factor)				
I enjoy religion because of the religious art.	.10	.19	.75	.28
I value religion because it connects me to history.	.19	.17	.70	.16
I enjoy religion because of the religious architecture.	.05	.17	.64	.30
Rituals concerning sacred objects have little value.	.15	.16	.09	-.70
There are sacred objects that are important.	.57	.13	.03	.14
There are sacred ritual actions that are important.	.60	.14	-.03	.00

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 98.

Table 37*Factor Analysis Results with Four Factors in the Aggregated Muslim Data*

Item	Factor Loading			
	1	2	3	4
Fundamentalism, $\phi = .91$ (1 st factor)				
I think it is important for people to show religious devotion publicly.	.68	.32	.09	-.27
Religion should play the most important role in civil affairs.	.65	.12	.22	-.38
Religion is the main thing I do in my life.	.63	.23	.31	-.28
One must always dress and behave in the proper way that is defined by true religion.	.63	.29	.22	-.35
I don't follow a strict code based on religion.	.59	.09	.29	-.05
Religion has given humanity a complete, unfailing guide to happiness.	.52	.29	.16	-.43
Religion provides a complete, unfailing guide to preserving oneself from harm.	.47	.30	.07	-.47
In true religion one finds a set of divine laws that should replace all man-made laws.	.43	.28	.22	-.04
I like religion because it tells me what a supernatural being says.	.41	.30	.21	-.18
I find that religion provides believers with prosperity and rich financial rewards.	.40	.31	.24	-.01
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.37	.09	.07	-.19
One either believes in the true religion or one has rejected it; there is nothing in between.	.26	.08	.08	-.04
Transcendent Connection, $\phi = .87$ (2 nd factor)				
I have had an experience in which something greater than myself seemed to absorb me.	.15	.65	.14	-.04
I have had an experience in which I felt everything in the world to be part of the same whole.	.06	.58	.18	-.04
I often feel a strong spiritual connection with all the people around me.	.19	.56	.29	.03
I have had an experience which I knew to be sacred.	.27	.54	.07	-.18
I often feel like I am a part of the spiritual force on which all life depends.	.25	.53	.34	.04
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.08	.47	.19	.03
I have had an experience in which I realized the oneness of myself with all things.	-.04	.40	.37	.36
I have never felt any force or connection that I would call spiritual.	.13	.38	.09	-.50
I have never had an experience which seemed holy to me.	-.06	-.10	.08	.03

Table 37 (Continued)

Item	Factor Loading			
	1	2	3	4
Tolerance (versus Rejection), $\phi = .89$ (4 th factor)				
Religious faith contributes to bad mental health.	.15	.09	.33	-.72
Religion increases the amount of evil in the world.	.20	.11	.33	-.68
Religion lacks value because it is antiquated and outdated.	.24	.30	.14	-.67
Religion has a bad effect on kids growing up.	.25	.10	.45	-.67
I am hostile to religion.	.09	.21	.08	-.66
I reject all religious values.	.08	.15	.39	-.64
Reason, science, and technology have now made our religious traditions useless.	.21	.15	.21	-.59
I take pride in being heretical (holding opinions contrary to religious doctrine).	.13	.14	-.07	-.58
I find that religious communities are not a good place to find friends.	.36	-.06	.29	-.47
Religious Artifacts, $\phi = .72$ (3 rd factor)				
I value religion because it connects me to history.	.30	.21	.55	.02
I enjoy religion because of the religious art.	.31	.16	.48	.12
I enjoy religion because of the religious architecture.	.18	.19	.40	.16
There are sacred ritual actions that are important.	.46	.41	-.01	-.50
Rituals concerning sacred objects have little value.	.22	.27	-.02	-.67
There are sacred objects that are important.	.37	.45	-.03	-.41

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 307.

Table 38*Factor Analysis Results with Four Factors in the Hindu Sample*

Item	Factor Loading			
	1	2	3	4
Fundamentalism, $\phi = .82$ (1 st factor)				
Religion is the main thing I do in my life.	.66	.06	.12	-.15
One must always dress and behave in the proper way that is defined by true religion.	.54	.17	.21	-.11
I think it is important for people to show religious devotion publicly.	.48	.12	-.03	.02
I don't follow a strict code based on religion.	.47	.12	.23	.00
I find that religion provides believers with prosperity and rich financial rewards.	.47	.11	.04	-.10
Religion should play the most important role in civil affairs.	.41	.14	.05	-.17
I like religion because it tells me what a supernatural being says.	.39	.17	.22	-.11
In true religion one finds a set of divine laws that should replace all man-made laws.	.33	.07	.26	.10
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.22	.05	.34	.21
Religion has given humanity a complete, unfailing guide to happiness.	.18	.35	.07	-.21
Religion provides a complete, unfailing guide to preserving oneself from harm.	.06	.32	.13	-.16
One either believes in the true religion or one has rejected it; there is nothing in between.	.03	.11	-.13	.35
Transcendent Connection, $\phi = .71$ (2 nd factor)				
I often feel a strong spiritual connection with all the people around me.	.25	.42	.36	-.12
I have had an experience in which something greater than myself seemed to absorb me.	.34	.40	.23	-.09
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.21	.37	.32	-.15
I have had an experience which I knew to be sacred.	.19	.31	.20	-.16
I have had an experience in which I realized the oneness of myself with all things.	.17	.30	.20	-.07
I often feel like I am a part of the spiritual force on which all life depends.	.38	.25	.36	-.06
I have never felt any force or connection that I would call spiritual.	-.08	.24	.04	-.53
I have had an experience in which I felt everything in the world to be part of the same whole.	.15	.24	.18	-.01
I have never had an experience which seemed holy to me.	.17	.05	.21	-.51

Table 38 (*Continued*)

Item	Factor Loading			
	1	2	3	4
Tolerance (versus Rejection), $\phi = .84$ (4 th factor)				
Reason, science, and technology have now made our religious traditions useless.	-.01	.24	.00	-.62
I find that religious communities are not a good place to find friends.	-.05	.26	.05	-.51
Religion lacks value because it is antiquated and outdated.	.01	.48	.19	-.45
I am hostile to religion.	-.27	.04	.38	-.45
I reject all religious values.	.09	.08	.49	-.44
Religion has a bad effect on kids growing up.	.03	.39	.45	-.42
Religious faith contributes to bad mental health.	-.05	.33	.22	-.38
Religion increases the amount of evil in the world.	-.10	.21	.44	-.35
I take pride in being heretical (holding opinions contrary to religious doctrine).	-.24	.10	.11	-.24
Religious Artifacts, $\phi = .90$ (3 rd factor)				
I enjoy religion because of the religious art.	.32	.29	.45	-.04
I value religion because it connects me to history.	.18	.36	.39	-.23
I enjoy religion because of the religious architecture.	.24	.43	.32	.04
There are sacred objects that are important.	-.05	.14	.23	-.07
There are sacred ritual actions that are important.	.02	.38	.11	-.13
Rituals concerning sacred objects have little value.	-.10	.23	-.11	-.23

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 198.

Table 39*Factor Analysis Results with Four Factors in the Christian Sample*

Item	Factor Loading			
	1	2	3	4
Fundamentalism, $\phi = .58$ (1 st factor)				
I don't follow a strict code based on religion.	.53	.06	.47	-.38
In true religion one finds a set of divine laws that should replace all man-made laws.	.47	.30	.33	-.06
Religion is the main thing I do in my life.	.46	.28	.10	-.36
I like religion because it tells me what a supernatural being says.	.42	.08	.22	-.19
I think it is important for people to show religious devotion publicly.	.39	.26	.20	-.12
Religion should play the most important role in civil affairs.	.37	.02	.15	-.17
I find that religion provides believers with prosperity and rich financial rewards.	.34	.17	.22	-.25
One must always dress and behave in the proper way that is defined by true religion.	.32	.44	.18	-.14
Religion has given humanity a complete, unfailing guide to happiness.	.26	.22	.19	.17
Religion provides a complete, unfailing guide to preserving oneself from harm.	.19	.11	.20	.11
It is important to me to avoid association with opinions that are contrary to religious doctrine.	.17	.21	.54	.12
One either believes in the true religion or one has rejected it; there is nothing in between.	-.10	.07	.23	.29
Transcendent Connection, $\phi = .71$ (2 nd factor)				
I have had an experience in which I realized the oneness of myself with all things.	.26	.56	.19	-.12
I have had an experience in which I felt everything in the world to be part of the same whole.	.28	.48	.25	-.18
I have had an experience in which something greater than myself seemed to absorb me.	.28	.47	.17	-.17
I often feel like I am a part of the spiritual force on which all life depends.	.24	.33	.34	-.08
I have never felt any force or connection that I would call spiritual.	-.07	.31	.01	-.22
I often feel a strong spiritual connection with all the people around me.	.30	.25	.30	-.20
I sometimes feel a spiritual connection to other people that I cannot explain in words.	.29	.20	.29	-.18
I have had an experience which I knew to be sacred.	-.09	.14	.03	.26
I have never had an experience which seemed holy to me.	.02	.03	.09	-.24

Table 39 (Continued)

Item	Factor Loading			
	1	2	3	4
Tolerance (versus Rejection), $\phi = .68$ (4 th factor)				
Religion increases the amount of evil in the world.	-.04	.11	.35	-.53
I am hostile to religion.	-.07	.27	.56	-.53
Religion has a bad effect on kids growing up.	-.01	.28	.14	-.51
I reject all religious values.	.37	.12	.31	-.50
Religious faith contributes to bad mental health.	.27	.38	.30	-.45
Religion lacks value because it is antiquated and outdated.	-.04	.24	.37	-.38
I find that religious communities are not a good place to find friends.	-.05	.14	-.12	-.14
Reason, science, and technology have now made our religious traditions useless.	-.17	-.10	-.29	.12
I take pride in being heretical (holding opinions contrary to religious doctrine).	-.40	.00	-.19	.22
Religious Artifacts, $\phi = .55$ (3 rd factor)				
Rituals concerning sacred objects have little value.	-.02	.22	.40	-.62
There are sacred objects that are important.	-.16	.11	.36	.40
I enjoy religion because of the religious architecture.	.41	.20	.31	-.11
I enjoy religion because of the religious art.	.38	.41	.28	-.17
I value religion because it connects me to history.	.39	.35	.26	-.17
There are sacred ritual actions that are important.	.23	.12	.17	.20

Note. Loadings above .3 are in bold. Tucker's phi (ϕ) is reported for each factor. The sample size for this analysis is 205.

Table 40

Correlations Between Four Content-Groupings and Need for Closure, Meaning in Life, and Life Satisfaction

	<i>n</i>	F		TC		TR		A	
Need for Closure									
Muslim-India	100	.45	***	.36	***	.44	***	.28	**
Persian 1	109	.27	**	.02		.38	***	.20	*
Persian 2	98	.19		.13		.05		.03	
Agg. Muslim	307	.30	***	.13	*	.36	***	.19	***
Hindu	198	.09		.26	***	.42	***	.30	***
Christian	205	.33	***	.37	***	.32	***	.26	***
Study 1	472	.11	*	.24	***	.22	***	.08	
Meaning in Life									
Muslim-India	100	.44	***	.41	***	.45	***	.21	*
Persian 1	109	.31	**	.28	**	.33	***	.29	**
Persian 2	98	.23	*	.35	***	.32	**	.04	
Agg. Muslim	307	.34	***	.34	***	.40	***	.23	***
Hindu	198	.23	**	.49	***	.43	***	.44	***
Christian	205	.64	***	.61	***	.62	***	.47	***
Study 1	472	-.06		.04		.08		-.04	
Life Satisfaction									
Muslim-India	100	.22	*	.33	***	.14		.31	**
Persian 1	109	.09		.07		.06		.04	
Persian 2	98	.18		.32	**	.06		.07	
Agg. Muslim	307	.11		.20	***	.02		.10	
Hindu	198	.33	***	.14		-.12		.04	
Christian	205	.51	***	.42	***	.39	***	.36	***
Study 1	472	-.05		-.10	*	-.04		-.05	

Note. F = fundamentalism; TC = transcendent connection; TR = tolerance (versus rejection); A = religious artifacts.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 41*Results of Hierarchical Regression Predicting Need for Closure with Four Content-Groupings*

Independent Variables	Samples													
	MI (n = 100)		P1 (n = 109)		P2 (n = 98)		MA (n = 307)		Hd (n = 198)		Ch (n = 205)		S1 (n = 472)	
Step 1. Demographic variables														
R^2	.053		.058 *		.054		.050 ***		.067 **		.017		.030 **	
F	2.72		3.18 *		2.72		7.93 ***		6.95 **		1.70		4.75 **	
Step 2. 4Bs' subfacets														
R^2	.377		.193		.075		.171		.170		.143		.054	
ΔR^2	.323 ***		.135 **		.021		.121 ***		.104 ***		.126 ***		.024 *	
ΔF	12.06 ***		4.19 **		0.51		10.92 ***		5.97 ***		7.28 ***		2.95 *	
Fundamentalism														
Step 3. Content-Grouping														
R^2	.377		.199		.085		.172		.182		.149		.056	
ΔR^2	.000		.006		.010		.000		.012		.006		.002	
ΔF	0.00		0.80		0.98		0.31		2.78		1.39		1.16	
Step 4. Other Content-Groupings														
R^2	.402		.261		.093		.190		.228		.191		.060	
ΔR^2	.025		.061		.008		.018		.045 *		.042 *		.004	
ΔF	1.25		2.66		0.26		2.19		3.65 *		3.35 *		0.70	

Table 41 (*Continued*)

Independent Variables	Samples						
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)
Transcendent Connection							
Step 3. Content-Grouping							
R^2	.377	.212	.077	.174	.171	.170	.056
ΔR^2	.000	.019	.002	.003	.000	.027 *	.003
ΔF	0.02	2.41	0.21	0.97	0.09	6.49 *	1.31
Step 4. Other Content-Groupings							
R^2	.402	.261	.093	.190	.228	.191	.060
ΔR^2	.025	.049	.016	.016	.057 **	.021	.004
ΔF	1.24	2.11	0.51	1.96	4.59 **	1.64	0.65
Tolerance (versus Rejection)							
Step 3. Content-Grouping							
R^2	.395	.222	.082	.185	.209	.170	.054
ΔR^2	.018	.029	.007	.014 *	.039 **	.028 *	.000
ΔF	2.74	3.64	0.69	4.94 *	9.38 **	6.54 *	0.15
Step 4. Other Content-Groupings							
R^2	.402	.261	.093	.190	.228	.191	.060
ΔR^2	.007	.039	.011	.005	.018	.020	.006
ΔF	0.35	1.70	0.35	0.65	1.47	1.63	1.03

Table 41 (Continued)

Independent Variables	Samples						
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)
Religious Artifacts							
Step 3. Content-Grouping							
R^2	.386	.209	.075	.176	.177	.144	.055
ΔR^2	.009	.016	.000	.005	.007	.001	.002
ΔF	1.41	1.96	0.00	1.83	4.06	0.30	0.86
Step 4. Other Content-Groupings							
R^2	.402	.261	.093	.190	.228	.191	.060
ΔR^2	.016	.052	.018	.014	.050 **	.047 *	.005
ΔF	0.78	2.26	0.58	1.68	4.06 **	3.72 *	0.79

Note. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA = aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1

sample

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 42

Standardized Regression Coefficients from the Hierarchical Regression Analysis of Need for Closure with Four Content-Groupings

Independent Variables	Samples													
	MI (n = 100)		P1 (n = 109)		P2 (n = 98)		MA (n = 307)		Hd (n = 198)		Ch (n = 205)		S1 (n = 472)	
Demographic variables														
sex	-.174		.328		.623		.206		.005		-.072		.332 **	
age	.241 **		.065		.201		.128 *		.154 *		-.010		-.042	
4Bs' subfacets														
Behaving	.445 **		-.173		-.118		.031		.142		.033		.106	
Belonging	.273		.550 *		.122		.254 *		.017		.165		.184 *	
Believing	-.006		.333		.003		.239 *		-.008		-.071		-.062	
Bonding	-.226		-.150		.045		-.169		-.007		-.047		-.223 *	
Content-Groupings														
Fundamentalism	.015		-.211		.164		-.047		-.142		.097		-.059	
Transcendent Connection	.040		-.117		.044		-.032		.033		.173		-.067	
Tolerance	.166		.264		-.097		.162 *		.247 **		.159 *		-.020	
Religious Artifacts	-.118		-.246		-.041		-.083		.132		.019		.056	

Note. All standardized regression coefficients are from the final model. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA =

aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1 sample.

*p < .05. **p < .01. ***p < .001

religion were likely to have a significantly higher need for closure in the Hindu sample, Christian sample, and in the aggregated Muslim data.

For meaning in life, transcendent connection and tolerance (versus rejection) were still the most consistent predictors (see Tables 43 and 44). Those who were more tolerant or had more experiences of transcendent connection tended to have more meaning in life. The effects of these two content-groupings were very similar in most of the samples. One notable difference is that tolerance, but not transcendent connection, was a significant predictor in the Christian sample.

Transcendent connection was also the most consistent predictor for life satisfaction. (See Tables 45 and 46.) Those who had more experience with transcendent connection had significantly higher satisfaction with life in several of the samples. Adding fundamentalism also significantly improved the predictive power of the model for most of the samples. The direction of the effect varied by sample, however. In the Christian and Hindu samples, more fundamentalist participants tended to have higher life satisfaction, but in the university sample (Study 1 sample), more fundamentalist participants tended to have lower life satisfaction. This effect was present with the six-factor model, but considerably weaker. This might suggest that the relationship between life satisfaction and fundamentalism is moderated by or interacts with level of education or one's political views.

Relationship with Religious Variables

The four content-groupings were consistently related to the religious variables (see Table 47). The pattern was very similar to the correlations with the six-factor model. One difference was that the correlations between fundamentalism and the religious variables tended to be

Table 43*Results of Hierarchical Regression Predicting Meaning in Life with Four Content-Groupings*

Independent Variables	Samples													
	MI (n = 100)		P1 (n = 109)		P2 (n = 98)		MA (n = 307)		Hd (n = 198)		Ch (n = 205)		St (n = 472)	
Step 1. Demographic variables														
R^2	.013		.072	*	.053		.023	*	.022		.228	***	.021	*
F	0.63		4.04	*	2.67		3.56	*	2.22		29.80	***	3.38	*
Step 2. 4Bs' subfacets														
R^2	.330		.232		.173		.203		.292		.584		.070	
ΔR^2	.318	***	.160	***	.119	*	.180	***	.270	***	.356	***	.049	***
ΔF	11.03	***	5.20	***	3.28	*	16.86	***	18.19	***	42.45	***	6.10	***
Fundamentalism														
Step 3. Content-Grouping														
R^2	.332		.233		.174		.204		.293		.602		.074	
ΔR^2	.002		.001		.001		.000		.000		.018	**	.004	
ΔF	0.27		0.17		0.16		0.30		0.17		8.95	**	2.01	
Step 4. Other Content-Groupings														
R^2	.393		.254		.264		.254		.349		.669		.107	
ΔR^2	.060	*	.021		.090	*	.050	***	.057	**	.066	***	.033	***
ΔF	2.95	*	0.90		3.56	*	6.51	***	5.41	**	12.95	***	5.72	***

Table 43 (*Continued*)

Independent Variables	Samples													
	MI (n = 100)		P1 (n = 109)		P2 (n = 98)		MA (n = 307)		Hd (n = 198)		Ch (n = 205)		S1 (n = 472)	
Transcendent Connection														
Step 3. Content-Grouping														
R^2	.332		.248		.211		.222		.322		.602		.085	
ΔR^2	.001		.016		.039 *		.019 **		.030 **		.017 **		.015 **	
ΔF	0.16		2.14		4.39 *		7.28 **		8.43 **		8.49 **		7.63 **	
Step 4. Other Content-Groupings														
R^2	.393		.254		.264		.254		.349		.669		.107	
ΔR^2	.061 *		.006		.053		.031 **		.027		.067 ***		.022 *	
ΔF	3.00 *		0.26		2.10		4.11 **		2.59		13.12 ***		3.82 *	
Tolerance (versus Rejection)														
Step 3. Content-Grouping														
R^2	.350		.234		.211		.219		.313		.649		.081	
ΔR^2	.019		.002		.039 *		.016 *		.021 *		.064 ***		.011 *	
ΔF	2.73		0.26		4.39 *		6.08 *		5.89 *		35.98 ***		5.27 *	
Step 4. Other Content-Groupings														
R^2	.393		.254		.264		.254		.349		.669		.107	
ΔR^2	.043		.020		.053		.034 **		.036 *		.020 **		.027 **	
ΔF	2.11		0.88		2.10		4.51 **		3.43 *		3.95 **		4.61 **	

Table 43 (Continued)

Independent Variables	Samples													
	MI		P1		P2		MA		Hd		Ch		S1	
	(n = 100)		(n = 109)		(n = 98)		(n = 307)		(n = 198)		(n = 205)		(n = 472)	
Religious Artifacts														
Step 3. Content-Grouping														
R^2	.377		.232		.174		.210		.299		.586		.072	
ΔR^2	.047 *		.000		.001		.007		.007		.001		.001	
ΔF	6.89 *		0.03		0.14		2.49		2.01		0.59		0.74	
Step 4. Other Content-Groupings														
R^2	.393		.254		.264		.254		.349		.669		.107	
ΔR^2	.016		.022		.090 *		.044 ***		.050 **		.083 ***		.036 ***	
ΔF	0.77		0.95		3.56 *		5.75 ***		4.76 **		16.24 ***		6.15 ***	

Note. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; Hd = Hindu; Ch = Christian; St = US-Student; MA = aggregated Muslim

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 44

Standardized Regression Coefficients from the Hierarchical Regression Analysis of Meaning in Life with Four Content-Groupings

Independent Variables	Samples						
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)
Demographic variables							
sex	-.081	-.333	.132	-.110	-.188	.135	.088
age	.101	.132	.111	.105 *	-.026	.255 ***	.020
4Bs' subfacets							
Behaving	.169	-.309	-.065	-.059	-.084	.052	-.002
Belonging	.460 **	-.076	-.205	.092	.102	.060	.057
Believing	.090	.326	.044	.178	.031	.119	.125
Bonding	-.073	.375	.281	.148	.155	.092	-.088
Content-Groupings							
Fundamentalism	-.023	-.097	.042	-.075	-.071	.194 **	-.125 *
Transcendent Connection	.094	.154	.268 *	.201 ***	.251 **	.080	.186 **
Tolerance (versus Rejection)	.158	.108	.247 *	.214 **	.165 *	.281 ***	.174 **
Religious Artifacts	-.282 *	.005	-.084	-.130	.130	.021	-.049

Note. All standardized regression coefficients are from the final model. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA =

aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1 sample.

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 45*Results of Hierarchical Regression Predicting Life Satisfaction with Four Content-Groupings*

Independent Variables	Samples									
	MI	P1	P2	MA	Hd	Ch	St			
	(n = 100)	(n = 109)	(n = 98)	(n = 307)	(n = 198)	(n = 205)	(n = 472)			
Step 1. Demographic variables										
R^2	.007	.003	.058	.023	*	.054	**	.063	**	.002
F	0.35	0.18	2.92	3.54	*	5.59	**	6.75	**	0.33
Step 2. 4Bs' subfacets										
R^2	.108	.068	.102	.065		.060		.299		.005
ΔR^2	.101	*	.064	.044	*	.005		.236	***	.003
ΔF	2.64	*	1.73	1.12	*	0.27		16.67	***	0.30
Fundamentalism										
Step 3. Content-Grouping										
R^2	.113	.082	.129	.079		.214		.349		.019
ΔR^2	.005	.014	.027	.014	*	.154	***	.051	***	.014
ΔF	0.48	1.48	2.80	4.38	*	37.20	***	15.32	***	6.64
Step 4. Other Content-Groupings										
R^2	.200	.083	.192	.114		.247		.375		.035
ΔR^2	.087	*	.001	.063	**	.034	*	.026	*	.016
ΔF	3.21	*	0.04	2.25	**	2.80	*	2.69	*	2.58

Table 45 (*Continued*)

Independent Variables	Samples											
	MI (n = 100)		P1 (n = 109)		P2 (n = 98)		MA (n = 307)		Hd (n = 198)		Ch (n = 205)	S1 (n = 472)
Transcendent Connection												
Step 3. Content-Grouping												
R^2	.168		.069		.171		.102		.099		.313	.006
ΔR^2	.060	*	.000		.069	**	.038	***	.039	**	.014	* .001
ΔF	6.61	*	0.07		7.52	**	12.42	***	8.25	**	4.06	* 0.54
Step 4. Other Content-Groupings												
R^2	.200		.083		.192		.114		.247		.375	.035
ΔR^2	.031		.014		.021		.012		.149	***	.062	*** .029 **
ΔF	1.16		0.50		0.74		1.28		12.31	***	6.46	*** 4.63 **
Tolerance (versus Rejection)												
Step 3. Content-Grouping												
R^2	.111		.068		.107		.065		.073		.322	.014
ΔR^2	.002		.000		.005		.000		.013		.023	* .009 *
ΔF	0.23		0.05		0.49		0.16		2.70		6.65	* 4.16 *
Step 4. Other Content-Groupings												
R^2	.200		.083		.192		.114		.247		.375	.035
ΔR^2	.089	*	.015		.085	*	.049	**	.175	***	.054	** .021 *
ΔF	3.30	*	0.51		3.04	*	5.37	**	14.46	***	5.55	** 3.41 *

Table 45 (*Continued*)

Independent Variables	Samples						
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)
Religious Artifacts							
Step 3. Content-Grouping							
R^2	.135	.068	.108	.070	.070	.302	.007
ΔR^2	.027	.000	.006	.005	.010	.003	.002
ΔF	2.85	0.04	0.59	1.67	2.03	0.96	0.87
Step 4. Other Content-Groupings							
R^2	.200	.083	.192	.114	.247	.375	.035
ΔR^2	.064	.015	.084 *	.044 **	.178 ***	.073 ***	.028 **
ΔF	2.39	0.51	3.01 *	4.85 **	14.73 ***	7.58 ***	4.52 **

Note. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; Hd = Hindu; Ch = Christian; St = US-Student; MA = aggregated Muslim

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 46

Standardized Regression Coefficients from the Hierarchical Regression Analysis of Life Satisfaction with Four Content-Groupings

Independent Variables	Samples						
	MI (n = 100)	P1 (n = 109)	P2 (n = 98)	MA (n = 307)	Hd (n = 198)	Ch (n = 205)	S1 (n = 472)
Demographic variables							
sex	.021	-.136	.780	-.188	.268	-.175	.040
age	.021	.003	.190	.110	-.139 *	.039	.023
4Bs' subfacets							
Behaving	-.316	-.621 *	-.370	-.410 **	-.061	-.258 **	.051
Belonging	.220	.073	.210	.198	-.236 *	-.012	.060
Believing	-.027	.251	-.070	.013	-.096	.243 **	.015
Bonding	-.136	.036	.030	-.060	.025	.079	-.102
Content-Groupings							
Fundamentalism	-.072	.271	.250	.201	.424 ***	.340 ***	-.193 **
Transcendent Connection	.370 *	.030	.280 *	.210 **	.228 *	.087	.074
Tolerance (versus Rejection)	.132	.026	-.040	.005	-.150	.156 *	.155 *
Religious Artifacts	.239	.030	-.010	.056	.066	.030	-.057

Note. All standardized regression coefficients are from the final model. MI = Muslim-India; P1 = Persian 1; P2 = Persian 2; MA =

aggregated Muslim; Hd = Hindu; Ch = Christian; S1 = Study 1 sample.

*p < .05. **p < .01. ***p < .001.

Table 47*Correlations Between Four Content-Groupings and Religiousness Variables*

	<i>n</i>	Religious		Spiritual		Public		Private		Mysticism	
Fundamentalism											
Muslim-India	100	.57	***	.39	***	-.31	**	-.31	**	.40	***
Persian 1	109	.72	***	.47	***	-.55	***	-.77	***	.28	**
Persian 2	98	.32	**	.18		-.28	**	-.48	***	.13	
Agg. Muslim	307	.56	***	.34	***	-.38	***	-.61	***	.24	***
Hindu	198 ^a	.54	***	.36	***	-.41	***	-.36	***	.36	***
Christian	205	.46	***	.26	***	-.41	***	-.34	***	.36	***
Study 1	472	.62	***	.20	***	.53	***	.47	***	.22	***
Transcendent Connection											
Muslim-India	100	.41	***	.40	***	-.31	**	-.30	**	.52	***
Persian 1	109	.30	**	.49	***	-.21	*	-.31	***	.57	***
Persian 2	98	.21	*	.30	**	-.22	*	-.30	**	.59	***
Agg. Muslim	307	.32	***	.39	***	-.27	***	-.35	***	.52	***
Hindu	198 ^a	.45	***	.49	***	-.44	***	-.41	***	.30	***
Christian	205	.34	***	.25	***	-.41	***	-.43	***	.21	**
Study 1	472	.46	***	.59	***	-.27	***	-.38	***	.59	***
Tolerance (versus Rejection)											
Muslim-India	100	.50	***	.31	**	-.39	***	-.35	***	.17	
Persian 1	109	.69	***	.50	***	-.45	***	-.68	***	.23	*
Persian 2	98	.41	***	.19		-.25	*	-.34	***	.10	
Agg. Muslim	307	.48	***	.30	***	-.30	***	-.53	***	.13	*
Hindu	198 ^a	.44	***	.27	***	-.37	***	-.38	***	.11	
Christian	205	.28	***	.17	*	-.33	***	-.33	***	.24	***
Study 1	472	.52	***	.18	***	-.50	***	-.37	***	.14	**

Table 47 (Continued)

	<i>n</i>	Religious	Spiritual	Public	Private	Mysticism
Religious Artifacts						
Muslim-India	100	.41 ***	.34 ***	-.30 **	-.33 ***	.36 ***
Persian 1	109	.56 ***	.41 ***	-.46 ***	-.60 ***	.25 **
Persian 2	98	.20	.06	-.13	-.19	.13
Agg. Muslim	307	.40 ***	.27 ***	-.30 ***	-.45 ***	.22 ***
Hindu	198 ^a	.38 ***	.39 ***	-.33 ***	-.30 ***	.15 *
Christian	205	.36 ***	.16 *	-.37 ***	-.34 ***	.28 ***
Study 1	472	.30 ***	.21 ***	-.23 ***	-.18 ***	.29 ***

Note. Public = public religious activities; Private = private religious activities

* $p < .05$, ** $p < .01$, *** $p < .001$

^aThe sample size is only 197 for the correlations with public religious activities.

stronger, especially for the Indian Muslim sample. This might be related to the improved reliability for fundamentalism with the four-factor model.

Overall, the evidence presented above suggests that transcendent connection would be the most valuable addition to the 4Bs out of the content-groupings examined. It is relatively independent of the 4Bs, reliable, consistent across samples, predictive of important outcomes, and correlated appropriately with religious variables. There is also some evidence that tolerance (versus rejection) might be a valuable addition. It also performed well in the analyses, but not as consistently. Fundamentalism and religious artifacts could also be valuable additions with more item refinement.

Chapter Seven: Discussion

In Study 1, six groups of content were identified that potentially contained aspects of religiousness beyond what is included in the 4Bs model: fundamentalism, an appreciation for strict and literal application of religious laws/rules and a lack of ambiguity in religious thought and opinions; transcendent connection, mystical experiences of oneness and connection; tolerance of religion, the view that religion is not harmful; religious artifacts, the valuing of religious artifacts and customary expression of religiousness, such as art, architecture, ritual, and religious objects; public integration, the view that religion should be placed in the center of public domains; and consideration of religion (versus indifference), the relative importance and prioritization of religion and religious activities. These content-groupings were all relatively independent of the 4Bs' subfacets, but only some of them were consistent across cultures and religious groups – transcendent connection and tolerance of religion. Those two content-groupings also contributed the most to predicting need for closure, meaning in life, and life satisfaction. Lastly, the content-groupings were fairly consistently related to religiousness, spirituality, religious activities, and mysticism.

Based on the evidence presented in this research, transcendent connection and tolerance of religion would be the most valuable additions to the 4Bs out of the content-groupings examined. Transcendent connection had minimal overlap with the 4Bs' subfacets, and it was the most consistent across cultures. It also was the most consistent predictor for the two positive outcome variables: meaning in life and life satisfaction. This corroborates other findings to some extent. Life satisfaction is more related to spirituality and personal forms of religiousness than it is to other forms of religiousness, such as religious practices, institutional religiousness, or fundamentalist forms of religion (Hackney & Sanders, 2003; Yaden et al., 2022). It is important

to note that transcendent connection was not a significant predictor in all samples. It was a significant predictor in the Hindu sample only when using the content-groupings derived from the four-factor model, and for the Christian sample, it was not a significant predictor in either. Thus, adding content related to transcendent connection to the 4Bs model could improve its ability to predict positive outcomes in at least Muslim samples. It could also improve understanding of how religiousness as a whole relates to life satisfaction and meaning in life. More research is needed to investigate whether this pattern is consistent.

Through the correlations between transcendent connection and the religiousness-related variables, it is clear that this content-grouping relates the most to mysticism and spirituality. Since some researchers and scholars separate religiousness from both spirituality and mysticism, there may be theoretical concerns to adding transcendent connection to the 4Bs model. Future research should explore the relationship between transcendent connection and religiousness across diverse populations to address this concern.

Interestingly, the correlations between transcendent connection and religious activities varied across samples. In the Hindu and Christian samples, transcendent connection had stronger correlations with public religious activities, but not the Muslim samples. It also had strong correlations with private religious activities across samples except for in the Christian sample. It is likely that the activity that triggers a transcendent experience differs across culture/religious group. Another interpretation could be that public versus private religious activities are associated with different types of religiousness across culture/religious group. In other words, mystical religiousness might be associated with private religious activities in some cultural religious groups (e.g., some Muslim and Hindu groups), and public religious activities in other cultural religious groups (e.g., some Hindu and Christian groups).

Tolerance of religion (versus rejection) also had minimal overlap with the 4Bs' subfacets and was relatively consistent across cultures. While it was not a consistent predictor for life satisfaction, being more tolerant of religion was linked with having a higher need for closure and more meaning in life. The connection with need for closure provides a glimpse into the motivation behind this type of religiousness. In other words, experiencing a need for order and predictability could motivate one to reject hostile views of religion. To put it another way, those who view religion as harmful might be more willing to risk disorder and unpredictability. The association with meaning in life, on the other hand, might provide insight into the connection between meaning in life and religiousness at lower levels of religiousness.

The evidence for adding the fundamentalism content-grouping to the 4Bs model is more mixed. The version of this content-grouping derived from the six-factor model was not consistent across samples and did not consistently predict any of the outcome variables. The content-groupings unique to the six-factor model, public integration and consideration of religion (versus indifference), overlapped more with fundamentalism, often loading onto the same factor. This was especially true for public integration. Because of this, the evidence that uses the content-groupings derived from the four-factor model was more supportive, specifically this form of fundamentalism was more consistent across sample and more predictive of life satisfaction.

There were notable differences in the correlations between fundamentalism and the 4Bs across samples. More specifically, the high correlations between fundamentalism and the 4Bs among Muslims may indicate that these forms of religiousness are more culturally normalized forms of religiousness among Muslims compared to Hindus and Christians. This may be related to the correlation patterns between transcendent connection and religiousness across samples.

The correlational data indicated that there may be more cultural normalization of mysticism as a mainstream or typical form of religiousness in India. Mysticism was less linked to religiousness in the Persian samples. Although there is a history of mysticism (e.g., the Sufis) in Iran, the current mainstream form of religiousness in that context may be more informed by fundamentalism. Fundamentalists are often suspicious of mysticism, because it is more subjective and individualistic (Saucier & Skrzypińska, 2006).

Although fundamentalism was predictive of life satisfaction (as mentioned above), the direction of this association varied across sample. It predicted more life satisfaction among Hindus and Christians, but less life satisfaction among university students. Fundamentalism might tend to provide a type of relief or gratification for many people within their context, but it does not seem like a standout source of satisfaction in the university-student context. The university sample is unique in a couple of ways. The participants are on average younger than in the other samples, and they are all students at a non-religious university. It is possible that any psychological benefits of fundamentalism might be dependent on context. The university students tended to score lower in fundamentalism than the participants in the other samples, so those that are high in fundamentalism within this sample might have less life satisfaction because they are more of an outlier in their community. Based on the mixed pattern of associations between fundamentalism and life satisfaction, along with the mixed findings for this content-grouping from the six-factor model, more research and refinement are needed before it can be recommended as a potential addition to the 4Bs model. Additionally, the focus of this content-grouping may be seen as too “evaluative” (e.g., not a value-neutral way of describing religiousness) to fit the premise of the 4Bs model, which aims to avoid “the risk of evaluative biases in favor of a ‘good’ versus ‘bad’ religion” (Saroglou et al., 2020, p. 554).

The main problem with the religious artifacts content-grouping is that it is not consistent across groups, partially because the content-grouping seems to be made up of two distinct attitudes about religious artifacts. Some of the items contain attitudes about rituals and sacred objects, and others contain attitudes about religious art, architecture, and history. Although the two attitudes grouped together in Study 1, the reliability and the factor analysis results from Study 2 indicate that these two attitudes should not be combined.

The consideration of religion (versus indifference) content-grouping was overall weaker than most of the other content-groupings. It was not consistent in the factor analyses results across sample and had lower reliability. It is possible that the theme behind this content-grouping has a weaker signal, and only the strongest items congealed into a weak factor in some of the samples. It also varied more in its relation to religiousness across samples. Consideration of religion was more tied to religiousness in the Muslim samples, and less in the Christian sample. This is reflected in both the correlations between this content-grouping and the 4Bs' subfacets and in the correlations with the other religiousness variables (religiousness, spirituality, and religious activities). The fact that consideration of religion is more closely tied to religiousness among Muslims might indicate high cultural normalization of being or presenting oneself as a devout practitioner. The insignificant correlations in the Christian sample, on the other hand, would indicate very low cultural normalization of being or presenting oneself as a devout practitioner (i.e., one can claim to be religious generally while not engaging in much religious practice). These findings are also reflected in the weak correlations between consideration and the other religious variables (religiousness, spirituality, religious activities, and mysticism). There are a couple possible interpretations of this. It is possible that it is more fashionable in the U.S. to claim to be religious without being a devout practitioner. It is also possible that the

Christian teaching of “salvation by faith not works” contributes to this in some Christian denominations. If salvation is not based on works, then it would be less important to prioritize religious devotion in everyday life. Although denominations differ in how much they emphasize this teaching (“salvation by faith”), the large proportion of emphasis on faith over works may average across Christian denominations to drive this effect.

One of the relatively consistent patterns was that the content-groupings were less reliable across samples than the 4Bs’ subfacets. However, there are a few ways to explain this. First, the content-groupings are not finished scales and would need item refinement in order to be fully comparable with the 4Bs’ subfacets. Secondly, there is often a trade-off between reliability/internal-consistency and predictive validity. The reliability and internal consistency of a scale can be enhanced by adding items that are only slight variations on the content theme. It is possible that this approach was used in the development of the 4Bs scale. For the content-groupings, one of the considerations in item selection was each item’s contribution to creating an equidiscriminating content-grouping that can capture the distinction between extreme and typical scores as well as the distinction between low and high scores. This can easily lead to more heterogeneous content and thus may have contributed to the pattern of lower reliability and internal consistency in the content-groupings.

The results of Study 2 also revealed another general difference across samples. The 4Bs had consistently high correlations across samples, providing some support for the claim that the 4Bs are religious universals. However, the correlations were more moderately sized in the Christian sample. This might indicate more heterogeneity among the Christians. It’s also possible that the other samples have a more unidimensional schema of religious (i.e., “I am religious in all ways or in none of them”). The differences between the two Persian samples were

also notable. The second Persian sample was mostly made up of students, whereas the first Persian sample was recruited from colleagues, former students, and current students' social networks. In the first Persian sample, the correlations between the content-groupings and the 4Bs' subfacets were very strong. In the second Persian sample, the correlations were considerably lower, especially with the four-factor model content-groupings. The contrast illustrates the importance of sampling method. The high correlations in the first Persian sample may indicate that participants are encoding every item as being about generalized religiosity, instead of reading items carefully for the distinct meaning of the item. It might also reflect something about religiosity in the Persian context. In a more mixed Persian sample, religiousness might be especially linked with fundamentalism, religious devotion (consideration), and the integration of religion into the public sphere.

Limitations and Future Directions

The purpose of this research was not to generate new items and new measurement scales, but rather to investigate the feasibility of one or more potential additional constructs that might justifiably be considered for increasing the comprehensiveness of the current 4Bs model. To this end, it was especially useful to consider contents already in use elsewhere in the field. Therefore, the research emphasized harvesting items from existing research materials that would likely already be familiar to those conversant with the research literature. Additionally, items from existing measures have gone through rigorous creation and validation processes which reduce subjective bias. Nevertheless, there were 62 original items used in Study 1 that could have introduced subjective bias or at least could have reflected an original contribution of this author (see supplemental material to read all original items). Because of the item reduction in Study 1, only nineteen original items were used in Study 2 and only 12 of those were used in the content-

groupings (five in Receptiveness, two in Consideration, three in Fundamentalism, and two in Artifacts). The rest of the original items in Study 2 were used either for acquiescence centering or for the four-factor content-groupings.

There were also limitations to using life satisfaction as an outcome in Study 2. The relationship between religiousness and well-being, while well-documented, may not be consistent across diverse populations. Life satisfaction correlates more strongly with religiousness in older samples, samples collected from more religious countries, and samples collected from countries lower on the human development index (D. B. Yaden et al., 2022). Additionally, the connection between religiousness and well-being was non-significant in a meta-analysis of Chinese samples (Li & Wang, 2022). The evidence indicates that religiousness is a common predictor of life satisfaction, but not a universal one (Diener et al., 2018).

The single-item measure of religiousness used in Study 2 also contains limitations. The psychometric properties of the item have been validated in previous research (Fetzner/NIA, 1999 as cited in Hall et al., 2008), but although global self-assessments like this are a common approach to measuring religiousness, they are inherently subjective. When answering such items, it was up to the participant to decide what “religious” meant, introducing the possibility that participants interpreted the item differently. This is especially concerning in religiously and culturally diverse samples, such as the ones used in Study 2. The limitations of this item should be taken into account when interpreting the results of Study 2, especially when comparing across samples. Fortunately, it was not the only measure of religiousness used. Religiousness was also measured through two items about how frequently participants engage in religious practice. These two approaches were complementary in that they provided different types of information about religiousness and have different types of limitations.

The research was also limited in the types of the samples. Only samples from predominantly Christian, Muslim, and Hindu populations were included. The first two are both monotheistic, Abrahamic religions, potentially skewing the results. Secondly, there are differences between the samples included that could complicate the comparisons. Most samples were collected via MTurk. Compared to the undergraduate sample and the Persian samples, the MTurk samples tended to be older (except for the first Persian sample) and more male-dominated. Based on previous research, MTurk samples are also more likely to be from families with lower average incomes compared to undergraduate samples (B. D. Douglas et al., 2023). Future research is needed to develop measures for transcendent connection and tolerance of religion (versus indifference). This should involve a rigorous item creation process and a CFA with comparable, diverse religious groups. Based on maximal differences from the samples included in this research, it would be helpful to include Buddhists and adherents of traditional African religions in future research.

This research has identified potential additions to the 4Bs model, but it did not conclusively demonstrate whether the constructs identified in the content-groupings are essential aspects of religiousness or proximal constructs. One purpose of the 4Bs model is to use basic subfacets of religiousness to delimit religion from proximal constructs. A potential addition that falls into the category of “proximal constructs” instead of “religiousness” will not be useful as an addition to the 4Bs model. There are two content-groupings that may count as “proximal”: Transcendent Connection and Religious Artifacts. The valuing of religious artifacts could, in some cases, be independent from religion. An individual might appreciate religious music and architecture without engaging in any other part of religion; yet even the attitude just described displays some sympathy for religion. Appreciating the trappings of religion would lend itself to

wishing to preserve or retain them, which is a kind of support for religion that is a step above indifference. Transcendent Connection, closely tied to mysticism, has similar issues. There are religious and nonreligious types of mysticism and there are mystical and non-mystical types of religiousness (Chen et al., 2012; Hyland et al., 2010; Leuba, 1929, pp. 3–7). This study is inconclusive as to whether these two content-groupings, or others, are theoretically proximal or essential to religion, but it does examine their value as potential additions to the 4Bs model. Future research should analyze in depth how the potential additions relate to religiousness.

On the other hand, there may be religiousness-related phenomena worthy of consideration that were not included in this research. The operational definition used to collect religiousness-related items in Study 1 may have been too narrow instead of too broad. Asad challenged the notion that religion is distinctly separate from other constructs such as politics and science. With a broader approach to religiousness, there may be more religiousness-related phenomena that could improve the 4Bs model, such as patriotism or Marxism.

Conclusion

Psychological models of religiousness are often Christian-centric and narrow in the type of content they include. The purpose of this dissertation was to use diverse samples to examine whether more content could be added to the 4Bs model to increase its comprehensiveness. Increasing the comprehensiveness of the 4Bs model, by adding content related to mysticism or tolerance of religion, could allow the model to capture more nuanced aspects of religiousness and increase its power to predict important outcomes, such as happiness and meaning in life. Examining the relationship between religiousness and these outcomes using a more comprehensive model and diverse samples could also improve understanding of what type of

religiousness is related to happiness or meaning and whether that generalizes across cultures and religions.

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