

At the Intersection of Culture and Religion: A Cultural Analysis of Religion's Implications for Secondary Control and Social Affiliation

Joni Y. Sasaki and Heejung S. Kim
University of California, Santa Barbara

Religion helps people maintain a sense of control, particularly *secondary control*—acceptance of and adjustment to difficult situations—and contributes to strengthening social relationships in a religious community. However, little is known about how culture may influence these effects. The current research examined the interaction of culture and religion on secondary control and social affiliation, comparing people from individualistic cultures (e.g., European Americans), who tend to be more motivated toward personal agency, and people from collectivistic cultures (e.g., East Asians), who tend to be more motivated to maintain social relationships. In Study 1, an analysis of online church mission statements showed that U.S. websites contained more themes of secondary control than did Korean websites, whereas Korean websites contained more themes of social affiliation than did U.S. websites. Study 2 showed that experimental priming of religion led to acts of secondary control for European Americans but not Asian Americans. Using daily diary methodology, Study 3 showed that religious coping predicted more secondary control for European Americans but not Koreans, and religious coping predicted more social affiliation for Koreans and European Americans. These findings suggest the importance of understanding sociocultural moderators for the effects of religion.

Keywords: culture, religion, secondary control, social relationships, social affiliation

Imagine two religious gatherings: one, an evangelical outreach at a stadium in Houston, Texas, and another, a megachurch service in the heart of Seoul, South Korea. These two communities may share the same Christian faith founded on the same religious text, but is religion, in each of these cultures, experienced in the same way? Beyond the obvious differences in worship style or venue may lie deeper disparities. In one culture, religious messages may emphasize spiritual growth in the individual, whereas in the other, strength of the community may be the focus. Just as religion has played a role in the development of cultures through traditions and ideologies (e.g., Weber, 1904/1930), culture may act as a frame through which religion is made meaningful.

Religion is found in some form across all human cultures (Atran & Norenzayan, 2004; Boyer, 2003) and carries countless definitions across fields of inquiry (Martin, 1987; Pyysiäinen, 2001). Some of the key components of religion include highly committed,

ritualized practices and beliefs shared within a community and centered on the supernatural or divine (Atran & Norenzayan, 2004; James, 1902/1963; Pargament, 2002). In studying the phenomenon of religion, it can be conceptualized as a specific form of culture (Cohen, 2009) or a way to categorize distinct cultural practices (e.g., Judaism and Christianity: Cohen & Rozin, 2001; Catholicism and Protestantism: Sanchez-Burks, 2002; see Cohen, 2009, for a review). Yet religious beliefs and practices transpire within the context of national culture, and even the same religious teaching can manifest itself in different ways across these cultural contexts. Therefore, a critical task is to determine how culture may shape individual psychological experiences and collective expressions of religion.

In the current research, we address the question of how culture shapes the effect of religion on psychology at both collective and individual levels of analysis by examining cultural products and analyzing behavioral responses in the laboratory and in daily life. Drawing from a cultural psychological perspective, we consider two of the possible effects of religion—secondary control and social affiliation—to examine how religion can lead to divergent psychological effects in North American and East Asian cultural contexts.

Religion Promotes Secondary Control and Social Affiliation

Control may be one pathway through which people benefit from religion (e.g., George, Ellison, & Larson, 2002; Krause, 1992; Spilka, Hood, Hunsberger, & Gorsuch, 2003), and research suggests that control can take two forms: primary and secondary control. Although both forms of control involve active agency, *primary control* refers to the attempt to influence the external

This article was published Online First December 27, 2010.

Joni Y. Sasaki and Heejung S. Kim, Department of Psychology, University of California, Santa Barbara.

We thank Eunkook Suh, Jina Park, and Eunkyong Lee for their assistance with data collection in Korea; Ania Siedlecka, Caitlin Thompson, Marla Pontrelli, Yeseul Kim, Rashida Taher, Erin George, Rena Jan, Amanda Lane, Angela Giganti, Matthew Cohen, Todd Avellar, Inyoung Park, Hyejin Park, Sulki Yang, Pamela Brintrup, and Jack Schmidt for their assistance in running the studies; and we thank the UCSB culture lab group and David Sherman, and Aaron Kay for their feedback on earlier versions of the article. We also thank Adam S. Cohen at UCSB for his constant support and honest criticism of our research.

Correspondence concerning this article should be addressed to Joni Y. Sasaki, Department of Psychology, University of California, Santa Barbara, Santa Barbara, CA 93106-9660. E-mail: sasaki@psych.ucsb.edu

environment according to the self's needs, whereas *secondary control* refers to the attempt to adjust part of the self to accept the situation (Morling, Kitayama, & Miyamoto, 2002; Oerter, Oerter, Agostiani, Kim, & Wibowo, 1996; Weisz, Rothbaum, & Blackburn, 1984). Although religions may recruit varying amounts of primary and secondary control across situations, psychologists have theorized that religions emphasize mostly secondary control, as they endorse alignment of the self to a god or spiritual force and acceptance of circumstances as core principles (Spilka et al., 2003; Weisz et al., 1984). In addition, empirical research has shown that religious coping strategies predict positive psychological outcomes, with the most beneficial form being "collaborative" religious coping, or trying to gain a sense of control by believing that one shares responsibilities of solving a problem with God (Pargament et al., 1999). A recent review also concluded that religion promotes greater self-control, or the ability to override an initial inclination in order to achieve another desired goal (McCullough & Willoughby, 2009). It seems that, overall, religion may have the beneficial effect of increasing secondary control, allowing people to accept the situation and adjust the self by exerting greater control over their own behaviors.

Besides helping individuals to gain a sense of control, religion seems to carry socially relevant advantages. By encouraging fellowship with others and formal involvement in other social activities (Chen & Contrada, 2007), religious communities may offer members the benefits of social ties and increased social support to help them cope with mental and physical stress (George et al., 2002; Hill & Butter, 1995; Rogers, 1996; Seybold & Hill, 2001). For example, one study on the relationship between social ties and mortality showed that membership in a church predicted longevity, whereas membership in other types of groups (e.g., labor, political, service) was not significantly related to mortality risk for the elderly (Seeman, Kaplan, Knudsen, Cohen, & Guralnik, 1987). High levels of social support from religious involvement may also be associated with reduced cardiovascular reactivity, which is linked to lower risk of cardiovascular mortality (Chen & Contrada, 2007). Thus, it seems that social affiliation—drawing on a social support network and gaining a sense of belonging to a community—is also an important outcome of religious involvement. However, research on how religion relates to secondary control and social affiliation has been conducted primarily in North American cultural contexts, and most of these studies assume the impact of religion to be largely universal. Therefore, an interesting question is whether culture may moderate the effects of religion on the use of secondary control and social affiliation.

Cultural Shaping of the Role of Religion

Whereas religion can be conceptualized as a form of culture because it is a unified system of beliefs and practices that varies across different religious traditions, religion uniquely focuses on relationships with the divine and faith (Cohen, 2009). Although we acknowledge the conceptual overlap between culture and religion, we distinguish religion and culture in the present research. Rather than focusing on religion as a form of culture and on the content of its teaching and practices, which could vary from one group to another, we focus on the concept of religion as an overarching system of beliefs and practices concerning the supernatural. In contrast, we conceptualize culture as a meaning system in which

psychological processes are configured differently across nations (Kitayama, 2002) and, thus, as a context in which religion takes place.

Throughout history, there have been many instances of religion being shaped by the cultural context. For example, qualitative research in religious studies has shown that mainstream American values, such as independence and personal choice, have influenced the way Christianity is practiced in the United States today (Wolfe, 2005). This is an instance of one religion—in this case, Christianity—taking on the meanings of a particular culture and incorporating the needs and values of that group. However, the cultural shaping of religion has yet to be demonstrated empirically in psychology.

A cultural psychological perspective may offer some important insights for understanding how the influence of religion on secondary control and social affiliation may vary systematically by culture. For instance, people typically hold a more independent view of the self in more individualistic cultures, such as in North America. This view posits that the self is unique and separate from social surroundings (Markus & Kitayama, 1991) and places a strong emphasis on personal choice (Iyengar & Lepper, 1999; Savani, Markus, & Conner, 2008) and self-focused agency or control (Markus & Kitayama, 2003). On the other hand, people commonly hold a more interdependent view of the self in more collectivistic cultures, such as in East Asia. According to this view, the self is inherently connected to others, and value is placed on obligations and harmony in social relationships more than on personal agency (Markus & Kitayama, 1991; Miller, Bersoff, & Harwood, 1990).

Consistent with these cultural patterns, control may be more relevant for those with independent than those with interdependent self-construals, whereas social affiliation may be emphasized more than control for people with more interdependent self-construals. Although research on culture and control has shown that East Asians tend to emphasize secondary control more than primary control and vice versa for European Americans (e.g., Morling et al., 2002), there is other research that suggests that, in certain contexts, East Asians may prefer coping styles that are centered on social relationships over secondary control, whereas European Americans may prefer secondary control over social coping. For example, in a study of pregnant women, cultural differences emerged such that European Americans tended to use more individual-focused coping strategies, such as secondary control or acceptance (e.g., coming to terms with weight gain resulting from pregnancy), as a way to cope with the stressors associated with pregnancy. On the other hand, Japanese women tended to use social coping strategies, or taking comfort in the influence of close others, more than individual-focused coping strategies, including secondary control (Morling, Kitayama, & Miyamoto, 2003). It seems that control, whether by asserting personal influence or accepting the situation, may not be as central a concern for people from more collectivistic cultures. Rather, maintaining positive relationships with close others may be a greater priority.

Considering these cultural differences, we examine whether religion, as a specific set of beliefs and practices, will exert influences on psychology that are consistent with the patterns of beliefs and practices that exist within larger cultural contexts. A relatively strong cultural emphasis on control in individualistic cultures and on social relationships in collectivistic cultures should

implicate the meaning and effect of religion in these cultures, and this difference should be observable in many aspects of life, such as in cultural products and individuals' thoughts and actions.

Overview

Culture can be studied at different levels, from a more collective analysis of cultural products or practices (e.g., Morling & Lamoreaux, 2008) to a more individual analysis of psychological processes and behaviors (e.g., Markus & Kitayama, 1991). As multiple levels of analysis may allow for a clearer understanding of the mutual constitution of culture and psyche (H. Kim & Markus, 1999; Kitayama, Markus, Matsumoto, & Norasakkunit, 1997), the current investigation examined how culture shapes the effect of religion on secondary control and social affiliation at both an individual and a collective level.

First, in Study 1, we conducted a content analysis of church mission statements to examine collective representations of religious values and beliefs. In so doing, we aimed to measure one aspect of cultural contexts in which individuals' psychological processes take place and to show that the proposed culture-specific function of religion is shared within each cultural community. In Study 2, we examined whether experimentally priming religion impacts behavioral manifestations of secondary control and how this effect may be moderated by culture. In addition to understanding the causal relationship, our goal in this study was to examine how the culture-specific function of religion apparent in cultural products, such as church mission statements, manifests itself behaviorally in a social situation. In Study 3, we used daily diary methods and examined how culture may impact the relationship between religious coping and the use of secondary control-related coping or social coping strategies in daily life, generalizing the findings from Study 2. On the basis of cultural psychological theory on self-construal (Markus & Kitayama, 1991), we predicted that religion would be more strongly associated with exercise of secondary control among those from more individualistic cultures (i.e., European Americans) than among those from more collectivistic cultures (i.e., Koreans and Asian Americans), and this cultural pattern should be evident across different levels of analysis that are employed in our three studies. Considering past studies on religion and social affiliation conducted in North America, we hypothesized that religion would be associated with stronger social affiliation in both American and East Asian cultures across our three studies as well; however, we hypothesized that maintaining social relationships in a religious community would be even more important for people with East Asian compared with European American cultural backgrounds.

Study 1

In our first study, we used Korea and the United States as comparison groups to examine differences in culturally shared values of secondary control and social affiliation in the context of religion. Christianity is the most highly represented religious group in Korea, with about a third of the population identifying as Christian (Korea National Statistics Office, 2005, as cited in K. Kim, 2007), giving this country the highest Christian representation per capita in East Asia. Likewise, the United States is the most religious industrialized Western nation, and those who are reli-

gious largely identify as Christian (Pew Forum on Religion and Public Life, 2008). Thus, we focused our examination primarily on the impact of Christianity, as this is a religion that is well represented in both mainstream American and East Asian cultural contexts.

To investigate cultural differences at the collective level, past research has examined themes in magazine advertisements (H. Kim & Markus, 1999) and in popular music lyrics (Snibbe & Markus, 2005) as meaningful public representations of cultural values that offer a more complete understanding of divergent cultural models (Morling & Lamoreaux, 2008). In the present study, we conducted a content analysis of mission statements on church websites, as they are publicly shared venues for the church's values and practices (K. Kim, 2007; Sturgill, 2004) and are ubiquitous in both the United States and Korea (e.g., P. Kim, 2006; Rhee & Kim, 2006; Stevens, Dunn, Loudon, & Cole, 2002). Specifically, Study 1 examined how culturally shaped religious teachings may manifest themselves in cultural products (i.e., on-line church mission statements) in European American and Korean cultural contexts. Given past research on religion conducted mainly in North American cultural contexts, we predicted that U.S. church mission statements would emphasize themes of secondary control, such as spiritual and personal growth and acceptance, more strongly than Korean church mission statements. In contrast, we predicted that Korean church mission statements would focus more on themes of social affiliation, such as increasing and maintaining close ties within the church community, compared with U.S. church mission statements.

Method

Materials. Our content analysis included websites from Presbyterian and Catholic churches in the United States and Korea. Catholics form the largest unitary denomination in the United States (23.9% of total U.S. population; Pew Forum on Religion and Public Life, 2008) and have the largest representation among Korean Christians (10.9% of total Korean population; Korea National Statistics Office, 2005, as cited in K. Kim, 2007). Because Protestantism is much more heterogeneous than Catholicism, we focused on Presbyterian churches. Presbyterianism is the largest Protestant group in Korea and was introduced primarily by American missionaries in the 19th century (Hwang, 2007), making it a good group for comparison between cultures. Presbyterian churches also have a sizable representation in the United States (about 10% of mainline Protestant churches; Pew Forum on Religion and Public Life, 2008).

We obtained U.S. church website URLs from the Big Church Directory (<http://www.bigchurchdirectory.com>) and the Open Directory Project (http://www.dmoz.org/Society/Religion_and_Spirituality/Christianity/Denominations) and Korean church websites URLs from the most commonly used Korean search portal, Naver, which has an internal index of churches by denomination (http://dir.naver.com/Culture_and_Art/Religion). Presbyterian and Catholic church website URLs were then compiled into separate numbered lists for the United States and Korea, and only website URLs which were working and linked to individual church websites were included in our church lists. Following stratified sampling techniques, we used a random number generator to select 50 websites at random from each of the church lists, yielding a

total of 200 websites (50 U.S. Presbyterian, 50 U.S. Catholic, 50 Korean Presbyterian, 50 Korean Catholic) for our analysis.

Coding scheme. The main coding was binary (0 = *present*, 1 = *absent*) such that coders determined whether or not church mission statements contained certain characteristics, which were combined into the broader themes of secondary control or social affiliation. The mission statement characteristics grouped in the secondary control theme were emphasizing growth or maturity in spiritual life by bettering the self and mentioning acceptance,¹ as these concern the importance of actively adjusting or changing oneself to better align with God's will. The characteristics grouped in the social affiliation theme were emphasizing closeness or knowing people intimately within the church, encouraging people to spend time and participate in social activities with others in the church, and mentioning a connection to other believers (see Table 1 for grouping of characteristics within each theme and examples).

Procedure. A total of four undergraduate research assistants coded the websites for this study. Two American students—one European American and one multiracial Latino/European American—at a university in California coded the U.S. websites. Two Korean visiting students from a Korean university who were fluent in both Korean and English coded the Korean websites. American and Korean coders were all born and raised in their respective countries and only coded websites from their own culture, as suggested by previous research comparing cultural artifacts (e.g., H. Kim & Markus, 1999).² An American graduate student used the same coding instructions to train American coders and Korean coders separately. Originally written in English, the coding instructions were translated into Korean by a Korean-English bilingual person and then back-translated into English by an independent Korean-English bilingual person. All coders were instructed to code the section of the church websites labeled “mission statement” or the equivalent (e.g., “church vision,” “core values”). Coders were unaware that the study involved coding websites from a culture other than their own and were unaware of the hypotheses.

Results

Coder reliability. Calculating intercoder reliabilities within each culture produced a high percentage of agreement between Korean coders (97.08%) and U.S. coders (92.08%). Within each culture, any disagreement between the two coders was resolved by a third same-culture, independent coder.

Cultural differences in church mission statements. To address our hypothesis, we examined differences in secondary control or social affiliation themes present in U.S. and Korean church mission statements. For the analyses, each theme was rated as “present” if the mission statement contained at least one of the specific characteristics within a given theme.

We first conducted a chi-square analysis of culture (United States vs. Korea) and the secondary control theme (present vs. absent) and found that there was a significant difference in presence of the secondary control theme between cultures, $\chi^2(1, N = 200) = 15.34, p < .001, \Phi = -.28$. Whereas only 16% of Korean websites contained the theme of secondary control, 41% of U.S. websites contained this theme. To test for possible effects of denomination, we conducted a 2 (Culture: United States vs.

Korea) \times 2 (Secondary Control Theme: present vs. absent) \times 2 (Denomination: Catholic vs. Presbyterian) log linear test. Results showed that there was a marginal main effect of denomination, $\chi^2(1, N = 200) = 3.23, p = .072, \Phi = .13$, such that marginally more Presbyterian mission statements contained the theme of secondary control (34%) compared to Catholic mission statements (23%). However, the cultural difference in prevalence of the secondary control theme remained significant, even after controlling for the effects of denomination, $\chi^2(1, N = 200) = 15.99, p < .001, \Phi = .28$, and there was no interaction of culture, secondary control theme, and denomination, $\chi^2(1, N = 200) = 0.54, p = .464, \Phi = .05$, meaning that denominational differences in use of this theme were similar across U.S. and Korean websites.

Next, we conducted a chi-square analysis of culture and the social affiliation theme and found a significant cultural difference in social affiliation theme prevalence, $\chi^2(1, N = 200) = 78.42, p < .001, \Phi = .63$. Of the U.S. websites, 12% contained the theme of social affiliation, whereas 74% of the Korean websites contained the social affiliation theme. A 2 (Culture: United States vs. Korea) \times 2 (Social Affiliation Theme: present vs. absent) \times 2 (Denomination: Catholic vs. Presbyterian) log linear test showed that there was a significant main effect of denomination on the social affiliation theme, $\chi^2(1, N = 200) = 4.90, p = .027, \Phi = .16$, such that there were more Catholic mission statements containing the theme of social affiliation (49%) compared with Presbyterian mission statements (37%). After controlling for denomination, the effect of culture and social affiliation theme remained highly significant, $\chi^2(1, N = 200) = 87.29, p < .001, \Phi = .66$, and the three-way interaction of culture, social affiliation theme, and denomination was marginally significant, $\chi^2(1, N = 200) = 2.81, p = .094, \Phi = .12$. To investigate the nature of this marginal interaction, we conducted a chi-square analysis of denomination and social affiliation theme, split by culture. Results of this analysis showed that there was no difference in the prevalence of social

¹ The word “acceptance” in this context can have multiple meanings depending on how it is used. For example, it can mean that the individual or community has accepted Christ, which is consistent with secondary control, or that Christ has accepted them, which is not necessarily consistent with secondary control. In the present coding, “acceptance” is in line with the former meaning, which indicates secondary control.

² We used this coding method because being born and raised in their native country provides coders with a more nuanced understanding of cultural meanings in the language. Those who were not born and raised in that culture, but are nonetheless fluent in the language, may not perceive these subtleties. However, given that this method of coding confounds the coder's culture with the culture of the coded material, it is difficult to determine whether results reflect cultural differences in the material or in the coders' perceptions. To address this issue, we had a representative subset of the U.S. church mission statements (20 Catholic and 20 Presbyterian) coded by a Korean coder who was fluent in Korean and English, and the percentage of agreement between the Korean coder and the U.S. coders was acceptable (74%). Examining the direction of error revealed that the Korean coder tended to code themes as “present” more often than the U.S. coders overall, suggesting that our findings are more likely to be a reflection of cultural differences in church mission statements rather than coder perceptions. In addition, we conducted chi-square analyses of the main results using the Korean coder's ratings in place of the original U.S. coders' ratings and found no change in results ($ps < .001$ for both secondary control and social affiliation themes).

Table 1

Mission Statement Characteristics and Examples Within Themes of Secondary Control and Social Affiliation

Theme	Characteristics	Examples
Secondary control	Emphasizing growth or maturity in spiritual life by bettering the self	"To provide opportunities for Christian nurture, care and spiritual growth."
	Mentioning acceptance	"To provide an atmosphere of love and acceptance."
Social affiliation	Emphasizing closeness or knowing people intimately within the church	"By intentionally forming and being in holy relationship with Christ and each other."
	Encouraging people to spend time and participate in social activities with others in the church	"To pray together and celebrate as a community every day throughout the week."
	Mentioning a connection to other believers	"Forming a loving fellowship among people (사랑이 넘치는 성도간의 교제 형성)."

affiliation theme between denominations for U.S. websites (12% for both Presbyterian and Catholic mission statements), $\chi^2(1, N = 200) = 0.00, p = 1.00, \Phi = .00$. However, for Korean websites there was a significant effect, $\chi^2(1, N = 200) = 7.48, p = .006, \Phi = .19$, such that the theme of social affiliation was more prevalent in Catholic mission statements (86%) than Presbyterian mission statements (62%). Figure 1 shows the main results by culture and theme.

Discussion

The results of this study supported our hypothesis that U.S. mission statements would emphasize themes of secondary control more than would Korean mission statements. There were significantly more U.S. mission statements that focused on personal or spiritual growth and acceptance compared to those in Korea. In contrast, the number of Korean mission statements that emphasized social affiliation—that is, close, loving relationships involving spending time within the community or having a connection to other believers—was significantly higher than in U.S. mission statements. Thus, our hypothesis that Korean mission statements would emphasize social affiliation more than U.S. mission statements was also supported.

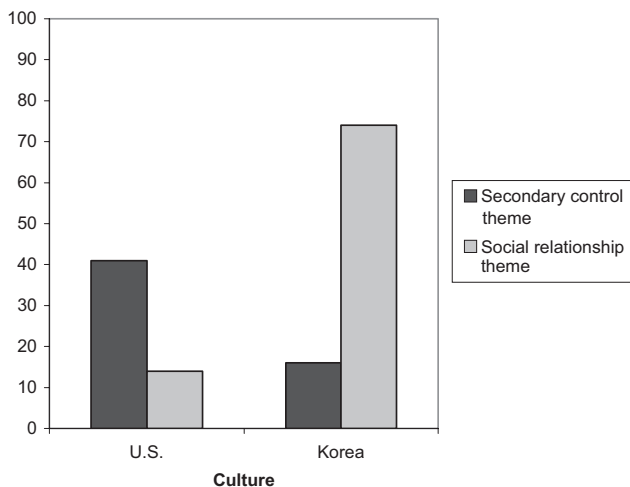


Figure 1. Cultural differences in themes of church mission statements in Study 1.

This study also showed that there seem to be systematic differences between Presbyterians and Catholics. It is notable, however, that the effects of denomination did not account for the differences in themes between cultures. Our finding of denominational difference was qualified by an interaction of culture and denomination such that Presbyterian and Catholic churches diverged in their emphasis on social affiliation in an East Asian cultural context, whereas we found no evidence of denominational differences in a mainstream American cultural context. This latter finding is particularly interesting because, although it is unexpected, it is consistent with our perspective that religion is shaped by culture. These results suggest that, in examining the potential impact of religion, it may be critical to move to the intersection of culture and religion in addition to examining their independent paths.

These analyses of cultural products suggest that individual acts of secondary control or forming close social bonds may be culturally shaped by collective representations of values and meanings. The findings from the current study build on past research on cultural products (e.g., H. Kim & Markus, 1999; Snibbe & Markus, 2005), supporting the notion that investigations of culture “outside the head” are particularly important for understanding the process by which culture and the psyche make each other up (Morling & Lamoreaux, 2008; Shweder, 1991). The effect sizes for our main analyses were medium to large (.28 for secondary control themes and .63 for social affiliation themes), thus demonstrating significant cultural differences in religious teachings at the collective level of analysis. Regardless of culture, a key purpose of church websites is to express the values and practices of the congregation in a public forum (e.g., K. Kim, 2007; Sturgill, 2004). The mission statements in particular serve to teach and reinforce the values and practices of the church to each individual member; it is what the members collectively contribute to and hold as an ideal of what the church should be. However, this study suggests that the content of these religious teachings may differ in meaningful ways.

This first study was conducted at the more collective level to examine the cultural context in which people live via cultural products. Moving from this examination of culture “outside the head” in Study 1 to an investigation of its manifestation in individual behaviors in Study 2, we examine how people’s behavior at the individual level can be shaped by these larger cultural meanings. Specifically, we focus our investigation on control in order to establish religion’s causal impact on secondary control and to determine whether culture may moderate its impact.

Study 2

Using experimental methods in Study 2, we investigated religion's causal impact on behavioral manifestations of secondary control and whether culture may moderate its impact. This study involved a mildly distressing situation created in the laboratory, and we primed religion to investigate its effects on behavior, affect, and evaluations that reflect secondary control—that is, self-adjustment and willing acceptance of the situation. In this controlled situation, we coded whether people expressed dissatisfaction to attempt to change the situation or, instead, refrained from expressing discontent and accepted the situation. We predicted that manipulating religious salience would increase secondary control, and thus, European Americans should express less discontent, reflecting increased adjustment to and acceptance of the situation. However, we predicted that the impact of religious salience on secondary control would not hold for Asians/Asian Americans, or those who are less control-focused, consistent with our findings from Study 1.

Method

Participants. All participants in this study indicated that they were religious³ in a separate, larger prescreening questionnaire and were unaware that they were recruited on the basis of this response. There were 49 European Americans (37 female and 12 male), 48 of whom were born in the United States and had at least one U.S.-born parent. One European American participant came to the United States at age three. Of the 40 Asians/Asian Americans (28 female and 12 male), 17 were born in Asia, and for all but one participant, both their parents were born in their East Asian country of origin. The European American sample was mostly Christian ($n = 36$), followed by Jewish ($n = 8$) and other faiths ($n = 5$). The Asian/Asian American sample was also largely Christian ($n = 30$), with a few Buddhists ($n = 4$) and other faiths ($n = 7$).⁴ Everyone received course credit or \$7 payment for participation.

Materials and procedure.

Overview. Participants completed tasks alone, and experimenters were unaware of the priming condition and study purpose. Participants first completed pre-task evaluations of different prizes, and they were told that they would receive their first choice prize if they performed well on the cognitive task. Next, participants were randomly assigned to a priming condition that either primed religion or not before completing the cognitive task. The feedback on the cognitive task was rigged such that every participant scored high enough to receive his or her first choice prize. However, participants were “accidentally” given their last choice prize, and experimenters coded participants’ reactions to receiving the wrong prize. Participants completed post-task prize evaluations to check whether they appraised the mildly distressing situation equally across cultural groups.

Pre-task prize evaluations. The experimenter presented the participants with four prize items (i.e., a ballpoint pen, a mechanical pencil, a small notepad, and a folder) pretested to be equally desirable, and participants ranked the four prizes and were asked to indicate which they preferred to receive if they did well on the upcoming cognitive task. Participants completed four items about each prize on how much they liked it (1 = *I really dislike it*, 7 = *I really like it*), its quality (1 = *very low quality*, 7 = *very high*

quality), its usefulness (1 = *not useful at all*, 7 = *very useful*), and the attractiveness of its design (1 = *very unattractive design*, 7 = *very attractive design*). The four rating items were later combined into a composite scale for each prize (α s ranged from .70 to .81). Participants then wrote down the name of the prize they most wanted.

Priming condition. Next, participants were randomly assigned to one of two priming conditions: religion or no-religion. In the *religion condition*, the two writing options were “religious values” and “romantic values,” whereas in the *no-religion condition*, the two options were non-religion values (i.e., “relations with friends/family” and “romantic values”). Participants rated both values on a scale from 1 (*extremely unimportant*) to 7 (*extremely important*), chose one value, and wrote about its importance to them for five minutes.⁵

Cognitive task. All participants were given 5 min to work on the easy version of the Remote Associates Test (RAT; McFarlin & Blascovich, 1984), in which they had to produce a novel word (e.g., foot) that connected three clue words (e.g., athletes-web-rabbit). The easy RAT was administered to increase the plausibility that participants did well on the task. Participants were told that they would receive their first choice prize if they scored within the 90th percentile of students who did the task in the previous year.

Behavioral observation and post-task prize evaluations. The experimenter scored participants’ RATs in a separate room and informed all participants that they scored in the 92nd percentile. The experimenter then told participants that they would receive their first choice prize for doing well on the task, but since the lab was “out of prizes,” another lab assistant would run to a different lab to get their *first choice* prize. After leaving the lab for a few minutes, the assistant returned, not with their *first choice*, but with their *last choice* prize. The experimenter gave the participant instructions for completing the post-task prize evaluations, which included the same four prize-rating items from the pre-task prize evaluations, for the prize they received (i.e., for their last choice prize if they did not complain that it was the wrong prize, or for their first choice prize if they complained before completing post-task prize evaluations). During this interaction, the experimenter

³ Although Asian/Asian American participants were significantly higher than the European Americans on a measure of religiosity ($p = .046$), controlling for religiosity does not change the results in this study.

⁴ Results do not change significantly with non-Christian participants excluded from analyses.

⁵ Participants were given a choice of writing topics to reduce the problem of demand characteristics associated with religion. Given that participants were preselected to be religious, we anticipated that the majority of participants in the *religion condition* would choose to write on the topic of “religious values,” which they did (66%). Even for those who did not choose to write on “religious values” (34%), simply seeing this religion-relevant option should have primed the concept, particularly because all participants were religiously identified. In the written responses, some participants in the *religion condition* freely mentioned religion, even if they had chosen “romantic values.” All main analyses revealed the same pattern of results, either at significance or marginal significance, when participants who wrote on “romantic values” were excluded. Thus, participants in the *religion condition* were included in analyses regardless of chosen topic, maintaining random assignment to conditions.

carefully observed the participant's verbal and nonverbal cues of dissatisfaction. If participants verbalized that they had received the wrong prize, the lab assistant retrieved the correct prize for them. Last, participants completed demographics before being probed for suspicion about the study purpose and thoroughly debriefed. As additional compensation, all participants were offered a small gift of equal value to the original prizes and thanked for their participation.

Behavioral observation coding. The experimenter completed a coding sheet immediately following the behavioral observation in a room separate from the participant. We operationalized secondary control as the extent to which participants accepted the situation by controlling themselves to not express dissatisfaction, rather than trying to exert primary control, or influencing and changing the situation by expressing their dissatisfaction with the prize. Specifically, the binary coding indicated whether or not the participants verbally complained that they had received the wrong prize, and if the participants did not verbally complain, whether or not the participant showed at least one indication of discontent nonverbally (e.g., being clearly hesitant to continue on in the next task). The experimenter also rated to what extent participants expressed negative affect from 1 (*not at all bothered*) to 7 (*very much bothered*). A total of nine different laboratory assistants of various ethnicities were used as the experimenter during the course of data collection to ensure that coding responses were not the result of peculiarities of one experimenter, and there were no systematic differences in coding patterns among these experimenters.

Results

We hypothesized that European Americans would exert secondary control or accept the situation more (i.e., less attempt to change the situation)—as indicated by fewer verbal complaints, fewer signs of nonverbal dissatisfaction, and less negative affect—in the *religion condition* than the *no-religion condition* but that Asians/Asian Americans would not differ between conditions.

Effects on observed reactions. First, the results for frequency of verbal complaints showed that about 11% of all participants told the experimenter that they had received the wrong prize, but this outcome was determined by culture and priming condition. A 2 (Culture: European American vs. Asian/Asian American) \times 2 (Priming Condition: religion vs. no-religion) \times 2 (Complaints: observed vs. not observed) log linear test⁶ on verbal complaints yielded no main effect of condition, $\chi^2(1, N = 85) = 0.06, p = .812, \Phi = 0.03$, and a marginal effect of culture on complaints, $\chi^2(1, N = 85) = 3.03, p = .082, \Phi = 0.19$, such that European Americans (6%) made verbal complaints slightly less frequently than Asians/Asian Americans (19%). The marginal effect of culture was qualified by a significant interaction between culture and condition, $\chi^2(1, N = 85) = 8.38, p = .004, \Phi = 0.31$. To investigate the nature of this interaction, we conducted chi-square analyses on condition and complaints split by culture. As predicted, European Americans were significantly less likely to ask for the correct prize when they were primed with religion (0%) versus when they were not primed with religion (18%), $\chi^2(1, N = 48) = 5.84, p = .016, \Phi = 0.35$. However, for Asians/Asian Americans, there was not a significant difference in complaints when primed with religion (28%) and not primed with religion (11%), $\chi^2(1, N = 37) = 1.79, p = .181, \Phi = 0.22$. (see Figure 2).

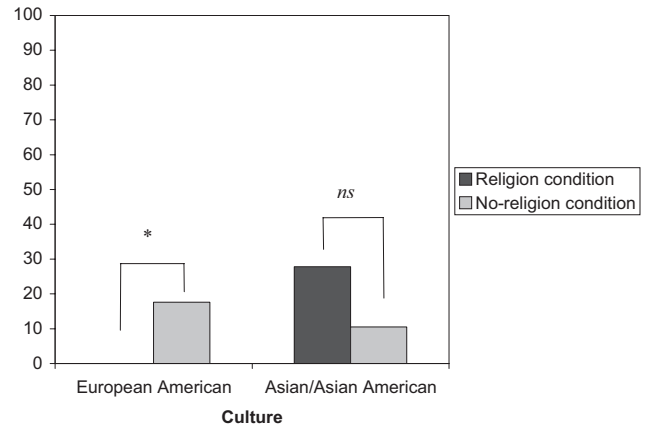


Figure 2. Effects of culture and religion on verbal complaints (i.e., asking for the correct prize) in Study 2. * $p < .05$.

For participants who did not ask for the correct prize ($N = 75$), we examined the effects of culture and condition on nonverbal behaviors indicating discontent. A 2 (Culture: European American vs. Asian/Asian American) \times 2 (Priming Condition: religion vs. no-religion) \times 2 (Nonverbal Behaviors: observed vs. not observed) log linear test on nonverbal behaviors revealed no effect of culture, $\chi^2(1, N = 75) = 0.59, p = .442, \Phi = 0.09$, or condition, $\chi^2(1, N = 75) = 0.86, p = .353, \Phi = 0.11$, but a significant interaction, $\chi^2(1, N = 75) = 5.23, p = .022, \Phi = 0.26$. A chi-square analysis on condition and nonverbal behaviors split by culture showed that significantly fewer European Americans displayed nonverbal indications of discontent when primed with religion (65%) than when not primed with religion (93%), $\chi^2(1, N = 45) = 3.96, p = .047, \Phi = 0.30$. However, there was no significant difference in nonverbal behaviors for Asians/Asian Americans whether they were primed with religion (92%) or not (76%), $\chi^2(1, N = 30) = 1.33, p = .249, \Phi = 0.21$.

Next, we examined the impact of culture and priming condition on expressed negative affect for all participants. A 2 (Culture: European American vs. Asian/Asian American) \times 2 (Priming Condition: religion vs. no-religion) analysis of variance on negative affect yielded no main effect of condition, $F(1, 85) = 1.22, p = .273, \eta_p^2 = .02$, but a significant main effect of culture, $F(1, 85) = 12.81, p = .001, \eta_p^2 = .14$, such that European Americans expressed less negative affect than Asians/Asian Americans overall. This main effect was qualified by a significant Culture \times Condition interaction, $F(1, 85) = 6.86, p = .011, \eta_p^2 = .08$. Specifically, planned contrasts revealed that European Americans expressed less negative affect when primed with religion ($M = 1.48, SD = 1.00$) than when not primed with religion ($M = 2.65, SD = 1.27$), $t(46) = -3.51, p = .001, d = 1.02$, but for Asians/Asian Americans, negative affect was not significantly different

⁶ One participant suspected that the study involved religion, and her reaction to receiving the wrong prize, and thus, her data were excluded from the analyses. Because three other participants were missing behavioral data (e.g., one participant verbally expressed her excitement about getting her first choice prize right before the lab assistant went to get the prize), the final sample for analyses was 85.

when they were primed with religion ($M = 3.42$, $SD = 1.92$) versus when they were not ($M = 2.95$, $SD = 1.51$), $t(36) = 0.85$, $p = .404$, $d = 0.27$. (see Figure 3).

Effects on self-reported prize evaluations. Last, we tested whether European American and Asian/Asian American participants had similar appraisals of the distressing situation by conducting a 2 (Culture: European American vs. Asian/Asian American) \times 2 (Condition: religion vs. no-religion) analysis of variance on prize evaluations for participants who did not complain that they received the wrong prize. A change score of prize evaluations was computed by subtracting the pre-task composite rating from the post-task composite rating of their last choice prize, and this change score was submitted as the dependent variable. Asians/Asian Americans ($M = -0.14$, $SD = 0.12$) did not differ from European Americans ($M = 0.12$, $SD = 0.11$) on change in prize evaluations, $F(1, 71) = 2.45$, $p = .122$, $\eta_p^2 = .03$. There was also no main effect of condition, $F(1, 71) = 2.05$, $p = .156$, $\eta_p^2 = .03$, and no interaction between culture and condition, $F(1, 71) = 0.20$, $p = .657$, $\eta_p^2 = .003$.

Discussion

This study showed that culture and religion interacted to impact the degree of expressed discontent with the situation, which reflects a willingness to accept the situation. European Americans accepted the situation more, as evidenced by fewer verbal and nonverbal expressions of dissatisfaction and less negative affect, when primed with religion than when not primed with religion. It is important to note, however, that priming religion did not have significant effects on secondary control for Asians/Asian Americans. More specifically, thinking about the value of religion did not seem to influence their reactions to the undesirable situation.

These findings suggest that religion's role of increasing secondary control in a distress situation may be particularly important in cultures that focus on personal agency. These results are consistent with our findings from Study 1 showing that cultural products (i.e., church website mission statements) in mainstream American cul-

tural contexts emphasized themes of secondary control more frequently than in Korean cultural contexts. Whereas Study 1 examined solely Christian cultural products across two cultures, Study 2 included participants from various religious backgrounds, suggesting that cultural differences in the impact of religion on secondary control may not be bound to a particular religious tradition. Overall, the results for European Americans in Study 2 confirm previous theoretical predictions about the effects of religion on forms of control that involve acceptance of the situation (e.g., Weisz et al., 1984), providing the first experimental demonstration of how religion may impact behavioral expressions of control in the context of a mildly stressful situation.

The results showing that evaluations of the prize were unaffected by priming suggest that, for European Americans, religion may not impact appraisal of an undesirable situation, but rather, religion may influence their willingness to show their negative feelings and gain personal control by changing the situation. That is, they did not like their last choice prize when they received it any more than they had initially liked it, but religion seemed to impact how they *reacted*, such that they did not enact personal control over the situation and instead seemed to accept the situation more. The results for European Americans build on previous research suggesting that religion affirms a sense of external control (Kay, Gaucher, Napier, Callan, & Laurin, 2008), providing the first experimental demonstration of how religion dampens the assertion of personal control.

In this study, we investigated a behavioral indicator of control, as most research in the area of control uses self-report data. However, as is often the case with behavioral data, there is some ambiguity in interpreting the meaning of behaviors. It is possible that expressing less discontent indicates secondary control or being agreeable, motivated by the desire for social affiliation, or both. Thus, we conducted Study 3 using more precise measures. In addition, although Study 2 demonstrated that religion has particular impacts on individual psychology via experimental methods in the laboratory, the question of whether religion has consistent effects in the real world remains. Thus, to determine whether religion would have the same effects in everyday life as suggested by cultural artifacts in Study 1 and the controlled laboratory setting of Study 2, in Study 3, we investigate how people may actually use religion to cope with stressful events in their daily lives.

Study 3

Cultural differences in values and practices found at the collective level, as shown in Study 1's analysis of cultural products, and at the level of individuals' coping responses to the lab situation in Study 2, may also be reflected in coping with naturally occurring stressors in everyday life. Using daily diary methods in Study 3, we examined how people's use of religion as a way to cope with daily stressors would predict their spontaneous use of secondary control and social affiliation as coping strategies. We predicted that religious coping would be more strongly associated with the use of secondary control as a coping strategy for European Americans than for Koreans. We also predicted that religious coping would more strongly predict the use of social coping among Koreans than European Americans, although we expected that the relationship would be significant among European Americans as well, given the relationship found in past studies between religious

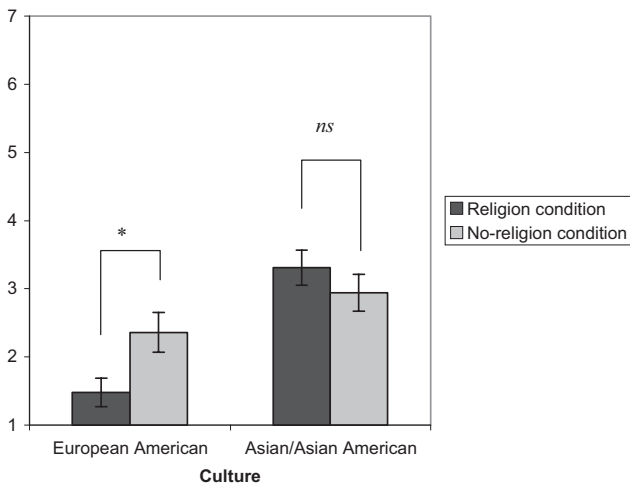


Figure 3. Effects of culture and religion on negative affect in Study 2. Error bars indicate standard error in continuous measure of negative affect. * $p < .05$.

coping and social affiliation with largely European American samples (e.g., George et al., 2002).

Method

Participants. The participants for this study were 77 undergraduate students recruited from the United States ($n = 37$) and Korea ($n = 40$). Although not all participants identified themselves as religious, an analysis of background measures showed that the mean level of general religiosity was comparable, $t(71) = -.39$, $p = .699$, between the European American sample ($M = 2.67$, $SD = 1.55$) and the Korean sample ($M = 2.83$, $SD = 1.83$). All participants who identified as religious were Christian (i.e., Catholic, Protestant, or nondenomination Christian).

Measures and procedure.

Orientation and background measures. Participants attended the study orientation, which provided detailed instructions on how to use the online survey system, at a university in the United States or Korea. Experimenters were native in respective cultures, and all materials and instructions for this study were given in the local language. Materials were translated from English to Korean by a bilingual research assistant and then back-translated by a separate bilingual research assistant. Following this orientation, consenting participants completed initial background measures in an online questionnaire. The background questionnaire included a 10-item reliable, validated scale to assess level of general religiosity (Worthington et al., 2003; $\alpha = .95$). Example items include "My religious beliefs lie behind my whole approach to life," and "I enjoy working in the activities of my religious organization." Demographic items on age, sex, ethnicity, birthplace, religious identification (i.e., dichotomous item: "Are you religious?" Yes or No), and religious affiliation were also included.

Daily measures. Participants were instructed to complete an online questionnaire⁷ at the end of each day for 7 consecutive days. The questionnaire for this study consisted of stressor descriptions and evaluations, as well as coping measures.

In an open-ended format, participants were first asked to describe their biggest stressor of the day and evaluate the seriousness and negativity of their stressor. Next, participants were asked to indicate how much they used religious coping, secondary control, and social coping to deal with their daily stressor. Religious coping was assessed with two items from the Brief COPE inventory (e.g., "I sought help from God or a higher power"; Carver, 1997; $\alpha = .95$). Secondary control, or adjustment of the self and acceptance of the situation, was measured using a four-item composite scale ($\alpha = .70$) that included two items from the Brief COPE (e.g., "I accepted the reality of this stressor") and two created items (i.e., "I changed my attitudes about the situation" and "I adjusted my expectations"). Social coping was measured with a five-item composite ($\alpha = .72$) of three items from the Brief COPE (e.g., "I talked to someone about the situation") and two created items (e.g., "I hung out with friends who did not know about the stressor") to measure overall use of various types of social support in a culturally balanced manner (see H. S. Kim, Sherman, & Taylor, 2008, for review of cultural differences in use and benefit of different types of social support). All items were assessed on a 5-point scale ranging from 1 (*not at all*) to 5 (*very much*).

At the end of the seven days, the experimenter debriefed participants in groups. Participants received monetary compensation

for attending the orientation session and for each day they completed the online questionnaire, and those who completed all seven daily questionnaires received a small additional amount as an incentive to participate each day.

Results

Data analysis strategy. The data for this study were hierarchical, with daily ratings nested within persons. Thus, hierarchical linear modeling (HLM) techniques (HLMwin, Version 5.02; Raudenbush, Bryk, & Congdon, 2000) were used. HLM allows analysis of each participant on each day, and then summarizes the results across participants, across days. To test the central research questions on cultural differences, we examined the cross-level interaction (Nezlek, 2001) of religious coping and culture. More specifically, we analyzed the within-person association of daily religious coping and outcome variables (i.e., secondary control and social coping) as a function of cultural (i.e., between-person) differences, with all within- and between-person random effects included in the analyses. All results controlled for stressor seriousness and negativity to test for cultural differences in the use of religious coping above and beyond specifics of the stressors. The following Level 1 (within-person) equation was used for each outcome variable:

$$Y_{ij} = b_{0j} + b_{1j} \times (\text{seriousness}) + b_{2j} \times (\text{negativity}) \\ + b_{3j} \times (\text{religious coping}) + r_{ij},$$

where Y_{ij} is the outcome (e.g., social affiliation) for person j on the i th day, b_{0j} is the intercept (e.g., the person's level of social affiliation on an average day), b_{1j} is the slope between the outcome variable and seriousness of the stressor, b_{2j} is the slope between the outcome variable and negativity of the stressor, b_{3j} is the slope between the outcome variable and the daily level of religious coping, and r_{ij} represents error. Because ratings of seriousness, negativity, and religious coping were centered around each participant's mean, the coefficients represent the deviations of ratings on the i th day from the person's average rating.

Cultural (i.e., between-person) differences in the average within-person relationship between the outcome variable and daily events were estimated using the following Level 2 model:

$$b_{0j} = g_{00} + g_{01} \times (\text{Culture Code } x) + u_{0j},$$

$$b_{1j} = g_{10} + u_{1j},$$

$$b_{2j} = g_{20} + u_{2j},$$

$$b_{3j} = g_{30} + g_{31} \times (\text{Culture Code } x) + u_{3j}.$$

Each analysis was run with European Americans coded as 0 and Koreans coded as 1 in the Culture Code. In the Level 2 model, g_{00} refers to the day-level intercept for European Americans, g_{01} refers to the difference in day-level intercepts between European Americans and Koreans, and g_{10} and g_{20} represent the day-level slopes for the entire sample; g_{30} refers to the strength of the within-person association between religious coping and the out-

⁷ Data were collected as part of a larger study dataset that also included items on daily social interactions.

come variable for European Americans; $g31$ is the difference in the within-person association of religious coping and the outcome between European Americans and Koreans; and $u0j$, $u1j$, $u2j$, and $u3j$ represent random effects of the intercept, stressor seriousness and negativity, and religious coping. The random effects of control variables (i.e., seriousness and negativity) were excluded from analyses because these were not the main variables of interest.

Cultural differences in daily effects of religious coping. In our first analysis, we tested our hypothesis that religious coping would predict secondary control differently depending on culture. Results showed that the average use of secondary control across days for European Americans was 2.70, and Koreans used significantly more secondary control to cope with daily stressors than did European Americans on average ($b = .47$, $p < .001$), replicating the general pattern of cultural difference in other research (e.g., Morling et al., 2002; addressed in the General Discussion). As predicted, religious coping was positively associated with secondary control for European Americans ($b = .39$, $p < .001$), such that the more they used religion to cope with a stressor, the more they also adjusted themselves and accepted the situation on a given day and across days. However, a significant Culture \times Religious Coping interaction indicated that the association between religious coping and secondary control for Koreans was significantly different from the association for European Americans ($b = -.30$, $p = .015$). In a follow-up analysis, Koreans were coded as 0 and European Americans were coded as 1 to determine the strength of the relationship between religious coping and secondary control for Koreans. The results revealed that the relationship for Koreans was not significantly different from zero ($p = .355$), suggesting that Koreans did not adjust themselves or accept the situation more as they used religion to cope. Thus, consistent with Studies 1 and 2, the effects of religious coping on secondary control were moderated by culture in the context of daily life. All intercepts and unstandardized regression coefficients relevant to our hypothesis on secondary control are reported in Table 2.

The next analysis tested our hypothesis that there would be cultural differences in how religious coping predicted social coping. The results of this analysis showed that European Americans' average use of social coping in response to daily stressors was 2.09 across days, whereas Koreans' average use of social coping was significantly higher than that of European Americans ($b = .65$, $p < .001$). Religious coping predicted significantly more use of social coping on a day and across days for European Americans ($b = .19$, $p = .022$), consistent with our prediction, and the interaction between culture and religious coping was not signifi-

cant ($b = .09$, $p = .425$). Again we conducted a follow-up analysis with Koreans coded as 0 and European Americans coded as 1 to investigate the strength of the association between religious coping and social coping for Koreans. Results of this analysis showed that, for Koreans, religious coping significantly predicted social coping on a day and across days ($p = .002$). Thus, both European Americans and Koreans used social coping strategies more as they used religion to cope. Intercepts and unstandardized regression coefficients relevant to our hypothesis on social coping are also reported in Table 2.

Exploratory analysis on secondary control and social coping. In an exploratory analysis, we first examined whether secondary control was associated with social coping for European Americans and found that this relationship was significant ($b = .21$, $p = .002$). There was no interaction of culture and secondary control ($b = .11$, $p = .185$), and our follow-up analysis coding Koreans as 0 and European Americans as 1 showed that secondary control also predicted more social coping on a day and across days for Koreans ($b = .33$, $p < .001$). Given this finding, we next examined whether the association between religious coping and social coping would be reduced after controlling for use of secondary control. With Koreans coded as 0 and European Americans coded as 1, the results revealed that religious coping still significantly predicted social coping for Koreans, even after controlling for secondary control ($b = .23$, $p = .001$); however, with European Americans coded as 0 and Koreans coded as 1, the relationship between religious coping and secondary control for European Americans was no longer significant after accounting for the effects of secondary control ($b = .10$, $p = .313$).

Discussion

In Study 3, we first examined the hypotheses that religious coping would predict an increase in the use of secondary control as a way of coping with stressors for European Americans but not Koreans, and that religious coping would predict social coping for both groups, and particularly for Koreans. These hypotheses were confirmed, suggesting that the role of religion may indeed differ depending on culture. Consistent with previous research, the findings from this study indicate that Koreans used secondary control more overall (Lam & Zane, 2004; Morling et al., 2002; Weisz et al., 1984), and religious coping was associated with secondary control overall (Weisz et al., 1984). However, the interaction between religion and culture showed that European Americans increased their use of secondary control, or acceptance of the

Table 2
Hierarchical Linear Modeling Intercepts and Unstandardized Regression Coefficients for the Association Between Religious Coping and Outcome Variables by Culture

Culture	Intercept	Slope	Significance test of slope
Secondary control as outcome variable			
European American	2.70	.39	$p < .001$
Korean	3.17	.09	$p = .355$
Social coping as outcome variable			
European American	2.09	.19	$p = .022$
Korean	2.74	.28	$p = .002$

situation, as they used religion to cope, whereas this relationship was not significant for Koreans. These findings are in line with Study 1's results that collective representations of religious practices and values emphasize secondary control more in the United States than in Korea. The findings from this study also align with Study 2's results that religious salience leads to greater secondary control in a controlled laboratory setting.

The results of Study 3 also showed that, consistent with our predictions based on past research on interdependence and relational goals (e.g., Morling et al., 2002; Morling et al., 2003; Oishi & Diener, 2001), Koreans used more social coping in relation to religious coping. Building on past research suggesting that social support may be an important pathway of benefit for mainstream Americans (Chen & Contrada, 2007; George et al., 2002; Hill & Butter, 1995; Seeman et al., 1987), our results showed that social coping was also related to religious coping for European Americans. This relationship seemed to be stronger for Koreans than for European Americans, but not significantly so. In the exploratory analysis, we found that there was a significant relationship between secondary control and social coping. That is, for both cultural groups, the more they used secondary control to cope with their stressor, the more they also used social coping on a given day and across days. In our analysis of religious coping as a predictor of social coping, controlling for secondary control reduced the effect to nonsignificance for European Americans but not Koreans, suggesting an interesting possibility that is discussed further in the General Discussion.

General Discussion

Summary

Recent increases in psychological research on religion have begun to fill a long-standing void in the scientific understanding of this topic. The current investigation, however, differs from the majority of previous research on religion by demonstrating that religion is not always uniform in its effects and implications across groups of people. Just as psychological tendencies can differ based on the beliefs and practices of religious traditions (e.g., Cohen, Siegel, & Rozin, 2003; Sanchez-Burks, 2002; Tsai, Miao, & Sempala, 2007), even the same religion may have varying impacts depending on the larger cultural context. Moving from macro-level analyses of tangible cultural products to micro-level investigations of behavioral and psychological responses, we found a similar interaction between culture and religion throughout, demonstrating that institutional teachings of religion and the role of religion in shaping individuals' actions and daily lives may be moderated by culture. We do not claim that these effects would be clear and consistent across different psychological tendencies and social interactions. However, it is important to point out that there are detectable culture-specific patterns at many levels of analysis, thus highlighting the pervasive influence of cultural assumptions.

Using multiple levels of analysis, our studies show how religion may be differentially represented and psychologically experienced according to the cultural context. In Study 1, we showed that explicit statements of values in religious teachings differ on a collective level in different cultures. Study 2 demonstrated experimentally that religious salience influences responses to a social situation in a culturally specific way, and Study 3 showed that

culture impacts the way people use religion in daily life to cope with naturally occurring stressors. Taken together, the findings from these three studies suggest that the culturally shaped religious practices and values represented in cultural products may be internalized and experienced on an individual level. From Studies 1, 2, and 3, we can see that secondary control—an individual's spiritual growth in religion, acceptance of circumstances, and dampening of personal control—is particularly relevant in religion for European Americans, who tend to have a more independent self. Study 3 suggests that the use of social resources may be an important part of religious coping for both collectivistic and individualistic cultures, but Studies 1 and 3 together suggest that the value of social relationships—that is, social affiliation and maintaining relationships with others in church or other believers—are especially important for East Asians, who tend to foster the interdependent self.

In this research, we focused primarily on Christianity (except in Study 2) to examine how culture shapes the impact of the same religion. However, past research suggests that other non-Christian religions should also be connected to secondary control or social affiliation in some way (e.g., Weisz et al., 1984; Yeager et al., 2006). Future research should examine whether different non-Christian religious traditions may place more or less emphasis on secondary control or social affiliation. The fact that Study 2 in the present research includes non-Christians and shows results consistent with our theorizing suggests that the interaction between culture and religion may be found among non-Christians. Future research should also examine how different religious traditions may interact with culture to produce convergent and divergent effects given that Catholic and Presbyterian mission statements in Study 1 show slightly different results from each other.

In addition, the current research focuses primarily on how culture shapes religion, but that is not to say that religion has had no previous impact on the cultures included in these studies. It is undeniable that religion has contributed to the formation of both cultures. Protestant values live at the core of much of mainstream European American culture (Sanchez-Burks, 2002), just as Korean culture has many historical roots in Buddhist thought (Pratt, 1928). Yet these strands of historical religious influence have become so tight knit with the dominant American and East Asian cultures that they are inseparable. Culture, as a system of beliefs, traditions, and shared meanings, is maintained and changed by the people who exist with it in mutual constitution (Bruner, 1990; H. Kim & Markus, 1999; Kitayama et al., 1997; Shweder, 1995), and it inevitably includes religious or philosophical influences from its historical past (Markus & Kitayama, 1991). The present research addresses the issue of how current, active participation in religion, whether consistent with a culture's historical past or not, may differ according to the cultural context.

Universal and Culture-Specific Impacts of Religion

This research suggests that social affiliation may be relevant to religious groups everywhere, but particularly in cultures that strongly value maintaining close relationships. The notion of an all-seeing, all-powerful God who punishes deviant behavior may be a viable solution to the problem of large non-kin groups, encouraging prosociality when social reputations are at stake, and

giving religious groups some adaptive advantages over secular groups (Johnson & Bering, 2006; Norenzayan & Shariff, 2008; Sosis, 2004). Indeed, research on currently existing religious communities suggests that individuals in these groups are highly cooperative, compared to those in secular communities (e.g., Shapira & Madsen, 1974). Thus, religion may serve a social function across cultures, and certain cultural contexts may enhance or dampen this emphasis on relationships.

In contrast to social affiliation, secondary control may be a less universally relevant use of religion. Past research on culture and control has suggested that people from different cultures may emphasize different types of control. Whereas the European American (i.e., independent) cultural perspective tends to be more focused on primary control overall, the East Asian (i.e., interdependent) perspective tends to focus more on secondary control (e.g., Morling et al., 2002; Weisz et al., 1984; but also see Morling & Evered, 2006, for review and exceptions to this general cultural pattern). The results from Study 3 showed that, consistent with past research on culture and types of control (e.g., Morling et al., 2002), Koreans emphasize and use more secondary control than do European Americans overall. Yet secondary control was predicted by religious coping only among European Americans and not among Koreans, suggesting that religion's impact on secondary control may be less ubiquitous and uniform than once assumed. Thus, our findings across all three studies are consistent with the results from Morling et al. (2003) that European Americans preferred the secondary control coping strategy to the social coping strategy during pregnancy, whereas Japanese preferred social coping to secondary control. The authors of this study suggested that both primary and secondary control center on the individual, as primary control requires action from the self, and secondary control requires personal acceptance from within. Control, in any form, is in concert with the individualistic motivation for agency, and thus, gaining any form of personal control to cope may be a preference bounded by culture and the specific context.

However, because religious groups tend to strongly value interdependence (e.g., Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985), the independent tendency of North American culture may actually interfere with the demands of creating a cohesive religious community. Given that the social aspect of religion should be relevant in every culture to some degree (e.g., see Durkheim, 1912), the use and value of secondary control in individualistic cultures, such as in the United States, may facilitate social affiliation in religious communities. In line with this reasoning, our exploratory analysis in Study 3 showed that the relationship between religious coping and social coping was reduced to nonsignificance after controlling for the use of secondary control for European Americans (but not for Koreans). This finding raises the possibility that religion encourages secondary control for European Americans, who are ordinarily not as inclined to exercise secondary control, to ultimately allow them to affiliate with others more and become further integrated in a community.

This explanation may also apply to our Study 2 findings that European Americans primed with religion expressed less discontent in a distressing situation. It is noteworthy that the act of accepting the situation led to behavior that is more agreeable and socially affiliative. The seeming ambiguity in the meaning of the expressing less discontent might also be by design for European Americans, as was the case in Study 3. These findings from the

present research suggest that increased acceptance and adjustment from secondary control may be one pathway through which independent individuals can begin to affiliate more with others and maintain close relationships.

Implications for Existing Theoretical Models and Practical Benefits of Religion

Although the impact of religion on control seems to be different in individualistic versus collectivist cultural contexts, our findings on people from mainstream American culture may be integrated into existing models of control. Past research has demonstrated that a lack of personal control can lead people to increase belief in a controlling God (Kay et al., 2008; Laurin, Kay, & Moscovitch, 2008). Under their model of compensatory control, Kay et al. (2008) argued that people may maintain a relatively stable level of control overall by using external forms of control, such as God, to compensate for a lack of personal control. Our findings that European Americans were more likely to accept the situation in response to an experimental manipulation of religious salience (Study 2) and when using religion to cope with naturally occurring daily stressors (Study 3) seem to support their model. In addition, collective representations of religious teachings related to secondary control were strongly emphasized in the U.S. (Study 1). If, as this compensatory model of control suggests, people increase their belief in a controlling God because it offers them a sense of external control, then it should follow that religious teachings, religious salience, or religious coping increase a sense of external control, encouraging people to use secondary control, or adjust the self and accept their circumstances.

However, our studies suggest a different pattern of data for East Asians. As Kay et al. (2008) noted, people from East Asian cultures also have a need for control, and one possibility they suggest is that people from different cultures may have a similar need to perceive order, but the way they achieve this sense of order varies. Another possibility is that the need for control is lower overall for people from East Asian cultures, allowing them a higher tolerance for a lack of control. Future research may directly address these possibilities by incorporating external versus personal/internal dimensions of control, as well as primary versus secondary control. Drawing on the present research, we suggest that although religion may fulfill a sense of control for people from Western cultures, the function and use of religion for people from East Asian cultures may be much less tied to issues of control.

The current research has important implications for understanding the process by which people may benefit from religion. A recent review by McCullough and Willoughby (2009) concluded that self-control may be a "general feature of religion itself" (p. 87) and one important pathway through which religion impacts health outcomes. The use of self-control is distinct from secondary control in that people can assert secondary control without necessarily exerting self-control, or overriding an initial response. However, in cases when an increase in secondary control may also reflect the act of self-control (as arguably can be the case in Study 2), the current investigation suggests that religion's effect on self-control may be moderated by culture. People from different cultures tend to be motivated toward different goals, and thus, *how* they use religion to achieve these goals may differ systematically by culture. In working toward an understanding of the theoretical pro-

cesses surrounding religion and its practical consequences, it is important to consider how cultural factors may constrain or support pathways of religious influence.

Concluding Remarks

Although religious beliefs and traditions may travel across various communities, people from different cultures may experience even the same religion quite differently. Prior to this research, it was largely unknown how culture and religion may interact to create different experiences and thus different outcomes. For people from individualistic cultures, who are driven by goals of personal agency, the sense of control they gain from religion may help them withstand hardships. Conversely, for those from collectivistic cultures, who are motivated to maintain strong relational ties, religion may be more centered on promoting affiliation with others in community. For people at an American evangelical outreach and in a Korean mega-church, the roles of religion may indeed differ. However, people from both cultures may use religion in a way that ultimately affirms their culturally construed sense of self.

References

- Atran, S., & Norenzayan, A. (2004). Religion's evolutionary landscape: Counterintuition, commitment, compassion, communion. *Behavioral and Brain Sciences*, 27, 713–730. doi:10.1017/S0140525X04000172
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in American life*. Berkeley, CA: University of California Press.
- Boyer, P. (2003). Religious thought and behaviour as by-products of brain function. *Trends in Cognitive Sciences*, 7, 119–124. doi:10.1016/S1364-6613(03)00031-7
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Carver, C. S. (1997). You want to measure coping but your protocols too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4, 92–100. doi:10.1207/s15327558ijbm0401_6
- Chen, Y. Y., & Contrada, R. J. (2007). Religious involvement and perceived social support: Interactive effects on cardiovascular reactivity to laboratory stressors. *Journal of Applied Biobehavioral Research*, 12, 1–12. doi:10.1111/j.1751-9861.2007.00010.x
- Cohen, A. B. (2009). Many forms of culture. *American Psychologist*, 64, 194–204. doi:10.1037/a0015308
- Cohen, A. B., & Rozin, P. (2001). Religion and the morality of mentality. *Journal of Personality and Social Psychology*, 81, 697–710. doi:10.1037/0022-3514.81.4.697
- Cohen, A. B., Siegel, J. I., & Rozin, P. (2003). Faith versus practice: Different bases for religiosity judgments by Jews and Protestants. *European Journal of Social Psychology*, 33, 287–295. doi:10.1002/ejsp.148
- Durkheim, E. (1912). *The elementary forms of the religious life*. New York, NY: The Free Press.
- George, L. K., Ellison, C. G., & Larson, D. B. (2002). Explaining the relationships between religious involvement and health. *Psychological Inquiry*, 13, 190–200. doi:10.1207/S15327965PLI1303_04
- Hill, P. C., & Butter, E. M. (1995). The role of religion in promoting physical health. *Journal of Psychology and Christianity*, 14, 141–155.
- Hwang, J. (2007). A new confession of faith with an eco-theology and a father-centred trinitarianism: A critical study of the 21st century confession of faith of the Presbyterian Church of Korea. *International Review of Mission*, 96, 128–141. doi:10.1111/j.1758-6631.2007.tb00597.x
- Iyengar, S. S., & Lepper, M. R. (1999). Rethinking the value of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology*, 76, 349–366. doi:10.1037/0022-3514.76.3.349
- James, W. (1963). *The varieties of religious experience*. New Hyde Park, NY: University Books. (Original work published 1902)
- Johnson, D., & Bering, J. (2006). Hand of God, mind of man: Punishment and cognition in the evolution of cooperation. *Evolutionary Psychology*, 4, 219–233.
- Kay, A. C., Gaucher, D., Napier, J. L., Callan, M. J., & Laurin, K. (2008). God and the government: Testing a compensatory control mechanism for the support of external systems. *Journal of Personality and Social Psychology*, 95, 18–35. doi:10.1037/0022-3514.95.1.18
- Kim, H., & Markus, H. R. (1999). Deviance or uniqueness, harmony or conformity? A cultural analysis. *Journal of Personality and Social Psychology*, 77, 785–800. doi:10.1037/0022-3514.77.4.785
- Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support. *American Psychologist*, 63, 518–526. doi:10.1037/0003-066X
- Kim, K. (2007). Ethereal Christianity: Reading Korean mega-church websites. *Studies in World Christianity*, 13, 208–224. doi:10.3366/swc.2007.13.3.208
- Kim, P. (2006). Is Korea a strong Internet nation? *The Information Society*, 22, 41–44. doi:10.1080/01972240500388206
- Kitayama, S. (2002). Culture and basic psychological processes: Toward a system view of culture: Comment on Oyserman et al. (2002). *Psychological Bulletin*, 128, 89–96. doi:10.1037/0033-2909.128.1.89
- Kitayama, S., Markus, H. R., Matsumoto, H., & Norasakkunit, V. (1997). Individual and collective processes in the construction of the self: Self-enhancement in the United States and self-criticism in Japan. *Journal of Personality and Social Psychology*, 72, 1245–1267. doi:10.1037/0022-3514.72.6.1245
- Krause, N. (1992). Stress, religiosity, and psychological well-being among older Blacks. *Journal of Aging and Health*, 4, 412–439. doi:10.1177/089826439200400305
- Lam, A. G., & Zane, N. W. S. (2004). Ethnic differences in coping with interpersonal stressors: A test of self-construals as cultural mediators. *Journal of Cross-Cultural Psychology*, 35, 446–459. doi:10.1177/0022022104266108
- Laurin, K., Kay, A. C., & Moscovitch, D. A. (2008). On the belief in God: Towards an understanding of the emotional substrates of compensatory control. *Journal of Experimental Social Psychology*, 44, 1559–1562. doi:10.1016/j.jesp.2008.07.007
- Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253. doi:10.1037/0033-295X.98.2.224
- Markus, H. R., & Kitayama, S. (2003). Models of agency: Sociocultural diversity in the construction of action. In V. Murphy-Berman & J. Berman (Eds.), *Cross-cultural differences in perspectives on the self* (Vol. 49, pp. 18–74). Lincoln, NE: University of Nebraska Press.
- Martin, J. A. (1987). Religious experience. In M. Eliade (Ed.), *The encyclopedia of religion* (12th ed., pp. 323–330). New York, NY: Macmillan.
- McCullough, M. E., & Willoughby, B. L. (2009). Religion, self-regulation, and self-control: Associations, explanations, and implications. *Psychological Bulletin*, 135, 69–93. doi:10.1037/a0014213
- McFarlin, D. B., & Blascovich, J. (1984). On the Remote Associates Test (RAT) as an alternative to illusory performance feedback: A methodological note. *Basic and Applied Social Psychology*, 5, 223–229. doi:10.1207/s15324834baspp0503_5
- Miller, J. G., Bersoff, D. M., & Harwood, R. L. (1990). Perceptions of social responsibilities in India and in the United States: Moral imperatives or personal decisions? *Journal of Personality and Social Psychology*, 58, 33–47. doi:10.1037/0022-3514.58.1.33
- Morling, B., & Evered, S. (2006). Secondary control reviewed and defined. *Psychological Bulletin*, 132, 269–296. doi:10.1037/0033-2909.132.2.269
- Morling, B., Kitayama, S., & Miyamoto, Y. (2002). Cultural practices

- emphasize influence in the United States and adjustment in Japan. *Personality and Social Psychology Bulletin*, 28, 311–323. doi:10.1177/0146167202286003
- Morling, B., Kitayama, S., & Miyamoto, Y. (2003). American and Japanese women use different coping strategies during normal pregnancy. *Personality and Social Psychology Bulletin*, 29, 1533–1546. doi:10.1177/0146167203256878
- Morling, B., & Lamoreaux, M. (2008). Measuring culture outside the head: A meta-analysis of individualism-collectivism in cultural products. *Personality and Social Psychology Review*, 12, 199–221. doi:10.1177/1088868308318260
- Nezlek, J. B. (2001). Multilevel random coefficient analyses of event- and interval-contingent data in social and personality psychology research. *Personality and Social Psychology Bulletin*, 27, 771–785. doi:10.1177/0146167201277001
- Norenzayan, A., & Shariff, A. F. (2008). The origin and evolution of religious prosociality. *Science*, 322, 58–62. doi:10.1126/science.1158757
- Oerter, R., Oerter, R., Agostiani, H., Kim, H., & Wibowo, S. (1996). The concept of human nature in East Asia: Etic and emic characteristics. *Culture & Psychology*, 2, 9–51. doi:10.1177/1354067X9621002
- Oishi, S., & Diener, E. (2001). Goals, culture, and subjective well-being. *Personality and Social Psychology Bulletin*, 27, 1674–1682. doi:10.1177/01461672012712010
- Pargament, K. (2002). The bitter and the sweet: An evaluation of the costs and benefits of religiousness. *Psychological Inquiry*, 13, 168–181. doi:10.1207/S15327965PLI1303_02
- Pargament, K. I., Cole, B., VandeCreek, L., Behavich, T., Brant, C., & Perez, L. (1999). The vigil: Religion and the search for control in the hospital waiting room. *Journal of Health Psychology*, 4, 327–341. doi:10.1177/135910539900400303
- Pew Forum on Religion and Public Life. (2008). The religious composition of the United States. In Pew Research Center, *U.S. Religious Landscape Survey*. Retrieved from <http://www.pewforum.org>
- Pratt, J. B. (1928). *The pilgrimage of Buddhism*. Oxford, England: Macmillan.
- Pyysiäinen, I. (2001). Cognition, emotion, and religious experience. In J. Andresen (Ed.), *Religion in mind: Cognitive perspectives on religious belief, ritual, and experience* (pp. 70–93). New York, NY: Cambridge University Press. doi:10.1017/CBO9780511586330.003
- Raudenbush, S., Bryk, A., & Congdon, R. (2000). *Hierarchical linear and nonlinear modeling* (Version 5.0) [Computer software]. Lincolnwood, IL: Scientific Software International.
- Rhee, K. Y., & Kim, W. (2006). The adoption and use of the Internet in South Korea. *Journal of Computer-Mediated Communication*, 9. Retrieved from <http://jcmc.indiana.edu/vol9/issue4/rhee.html>
- Rogers, R. G. (1996). The effects of family composition, health, and social support linkages on mortality. *Journal of Health and Social Behavior*, 37, 326–338. doi:10.2307/2137260
- Sanchez-Burks, J. (2002). Protestant relational ideology and (in)attention to relational cues in work settings. *Journal of Personality and Social Psychology*, 83, 919–929. doi:10.1037/0022-3514.83.4.919
- Savani, K., Markus, H. R., & Conner, A. L. (2008). Let your preference be your guide? Preferences and choices are more tightly linked for North Americans than for Indians. *Journal of Personality and Social Psychology*, 95, 861–876. doi:10.1037/a0011618
- Seeman, T. E., Kaplan, G. A., Knudsen, L., Cohen, R., & Guralnik, J. (1987). Social network ties and mortality among the elderly in the Alameda County Study. *American Journal of Epidemiology*, 126, 714–723.
- Seybold, K. S., & Hill, P. C. (2001). The role of religion and spirituality in mental and physical health. *Current Directions in Psychological Science*, 10, 21–24. doi:10.1111/1467-8721.00106
- Shapira, A., & Madsen, M. C. (1974). Between- and within-group cooperation and competition among kibbutz and nonkibbutz children. *Developmental Psychology*, 10, 140–145. doi:10.1037/h0035550
- Shweder, R. (1991). *Thinking through cultures: Expeditions in cultural psychology*. Cambridge, MA: Harvard University Press.
- Shweder, R. (1995). Cultural psychology: What is it? In N. R. Goldberger & J. B. Veroff (Eds.), *The culture and psychology reader* (pp. 41–86). New York, NY: New York University Press.
- Snibbe, A. C., & Markus, H. R. (2005). You can't always get what you want: Educational attainment, agency, and choice. *Journal of Personality and Social Psychology*, 88, 703–720. doi:10.1037/0022-3514.88.4.703
- Sosis, R. (2004). The adaptive value of religious ritual: Rituals promote group cohesion by requiring members to engage in behavior that is too costly to fake. *American Scientist*, 92, 166–172. doi:10.1511/2004.2.166
- Spilka, B., Hood, R. W., Hunsberger, B., & Gorsuch, R. (2003). *The psychology of religion*. New York, NY: Guilford Press.
- Stevens, R. E., Dunn, P., Loudon, D. L., & Cole, H. S. (2002). A study of church/ministry Internet usage. *Journal of Ministry Marketing & Management*, 7, 23–32. doi:10.1300/J093v07n01_03
- Sturgill, A. (2004). Scope and purposes of church web sites. *Journal of Media and Religion*, 3, 165–176. doi:10.1207/s15328415jmr0303_3
- Tsai, J. L., Miao, F. F., & Seppala, E. (2007). Good feelings in Christianity and Buddhism: Religious differences in ideal affect. *Personality and Social Psychology Bulletin*, 33, 409–421. doi:10.1177/0146167206296107
- Weber, M. (1930). *Protestant ethic & the spirit of capitalism*. Winchester, MA: Allen & Unwin. (Original work published 1904)
- Weisz, J. R., Rothbaum, F. M., & Blackburn, T. C. (1984). Standing out and standing in: The psychology of control in America and Japan. *American Psychologist*, 39, 955–969. doi:10.1037/0003-066X.39.9.955
- Wolfe, A. (2005). *The transformation of American religion*. Chicago, IL: University of Chicago Press.
- Worthington, E. L., Wade, N. G., Hight, T. L., Ripley, J. S., McCullough, M. E., Berry, J. W., . . . O'Connor, L. (2003). The Religious Commitment Inventory—10: Development, refinement, and validation of a brief scale for research and counseling. *Journal of Counseling Psychology*, 50, 84–96. doi:10.1037/0022-0167.50.1.84
- Yeager, D. M., Gleit, D. A., Au, M., Lin, H.-S., Sloan, R. P., & Weinstein, M. (2006). Religious involvement and health outcomes among older persons in Taiwan. *Social Science & Medicine*, 63, 2228–2241. doi:10.1016/j.socscimed.2006.05.007

Received February 28, 2010

Revision received August 25, 2010

Accepted October 14, 2010 ■