
COMMENTARIES

Sex, Marriage, and Religion: What Adaptive Problems Do Religious Phenomena Solve?

David M. Buss

*Department of Psychology
University of Texas, Austin*

Religion is best regarded as an impressive array of diverse phenomena. As Pargament (this issue) noted, “religiousness is too rich and too complex to be captured by easy formulas or simple summaries.” Explanations for some religious phenomena, such as rituals and rites, may fail to account for other phenomena such as piousness or prayer. Kirkpatrick (1999) phrased this point succinctly: “‘Religion’ . . . refers to such a diverse and multifaceted constellation of beliefs and behaviors that it is highly unlikely to be the product of a unitary adaptation with a single identifiable function” (p. 926). An ultimate understanding of religion, therefore, will require careful analysis of the panoply of its components and their origins.

An evolutionary psychological analysis of religion poses these related questions: What adaptive problems, if any, are religious phenomena designed to solve? Have specific religious mechanisms evolved to solve these problems? Alternatively, are religious experiences by-products of evolved psychological mechanisms that were designed for other purposes?

It is important to note that successful solutions to adaptive problems in the evolutionary sense, be they religious or nonreligious solutions, do not always correspond to human intuitions about “desirable” or “beneficial” or “good.” Consider the finding that religious fundamentalism is linked with prejudice and outgroup discrimination (Altemeyer & Hunsberger, 1992). Our intuitions, informed by modern Western sensibilities, tell us that prejudice and discrimination are undesirable, and thus, they are from the perspective of those unfortunate enough to be at the wrong end of their hostile gun. However, evolution by selection operates by the ruthless currency of the relative reproductive success of competing “designs.” Inflicting costs on rival individuals or groups, therefore, can be and often is an effective solution to a suite of adaptive problems that are tributary to reproductive success, even if modern sensibilities judge these phenomena undesirable, bad, or evil.

The goal of this brief article is not to provide an exhaustive evolutionary analysis of all religious phe-

nomena. Interested readers are referred to Kirkpatrick (1999), who provided the most insightful evolutionary analysis to date of many varieties of religious experience, including spirits and other unseen forces, animism, priests, medicine men, and shamans, morality, ethics, mystical experiences, and beliefs about death. Rather, this article has a more delimited aim, seeking to illustrate how an evolutionary analysis might shed a modest light on just a few delimited components of religious phenomena as they relate to sex and marriage.

Regulating Sexual Conduct and Strengthening Marital Bonds

Few things lie closer to the engine of the evolutionary process than sexual behavior. It is not by chance that evolutionary processes have sculpted an elaborate suite of human sexual desires (Baumeister, Catanese, & Vohs, 2001; Symons, 1979), mate preferences (Buss & Schmitt, 1993; Kenrick & Keefe, 1992), mate attraction tactics (Tooke & Camire, 1991), mate poaching tactics (Schmitt & Buss, 2001), and mate retention tactics (Buss & Shackelford, 1997). It is a noteworthy fact that wherever written laws exist, sexual behavior is always a key target for regulation (Daly & Wilson, 1988).

Religious doctrines frequently target mating and sexual conduct as a prime locus of governance and regulation. Indeed, the one of the first directives from the Bible dictates that followers should “be fruitful and multiply” (Genesis 1:28), suggesting that religion and reproduction are closely linked.

Two of the ten commandments involve specific regulations of sexual thoughts and behaviors. One is “thou shalt not commit adultery,” and for good measure, another enjoins men not to covet their neighbor’s wives. Jesus is reported to have said this: “You have heard that it was said, ‘you shall not commit adultery.’ But I say to you that everyone who looks at a woman with lust has

already committed adultery with her in his heart” (Matthew 5:27–28).

Why would people seek to regulate other people’s sexual conduct? It is usually in a man’s reproductive interest to prevent his wife from committing adultery. Failures to deter her potential sexual unions with other men can and do result in loss of paternity certainty, genetic cuckoldry, and the diversion of his and his partner’s resources to a rival’s offspring (Buss, 2000). It is often in a woman’s interest to prevent her husband from sexually straying—men channel resources to women with whom they have sex. It is in both of their interests to deter mate poachers from encroaching (Schmitt & Buss, 2001). In these senses, some religious proscriptions can be regarded as manifestations of psychological mechanisms, the function of which is to regulate specific forms of the sexual conduct of others—in this case, spouses and rivals.

It is worth noting that these regulations encourage conduct that leads to what many people hold to be desirable ends. We know that sexual infidelity is one of the leading causes of divorce (Betzig, 1989; Buss, 2003). Thus, these religious injunctions, to the degree that they work, are likely to encourage marital fidelity, strengthen marital bonds, lead to greater stability of families, and reduce within-group discord that typically flows from sexual conflict.

Religious Leaders and Multiple Mates

Regulating the conduct of others, of course, is not the same as self-regulation. It will not come as a surprise that “religious hypocrisy” exists (e.g., Exline, this issue) or that there is a profound sex difference in its expression. Religious leaders, typically men, not infrequently use their power, like many men in secular positions of power, to gain preferential sexual access to young, attractive, fertile women.

Many heroes of the Bible lived in polygamy and had concubines. Abraham had a child with his wife and another with the servant of his wife (Genesis 16, 21). Jacob had 12 children who became the heads of the 12 Tribes of Israel. Some of them were born from his two wives, Leah and Rachel; others were born from his wife’s two servants (Genesis 29). King David had a large harem. Solomon boasted 700 wives and 300 concubines (1 Kings 11:3; 2 Samuel 3:2–7; 2 Samuel 5:13; 2 Samuel 15:16; 2 Samuel 16:21). Gideon, Saul, Caleb, and Manasseh were all reputed to be produced by concubines (Judges 8:31; 2 Samuel 3:12; 1 Chronicles 2:46, 48; 1 Chronicles 7:14).

No religions, whether mainstream or fringe, seem to be exempt. David Koresh used his power in the Branch Davidians to have sex with many women, some barely postpubescent. Jim Jones, of Guayana fame, went from woman to woman within his church, creating rivalry

and resentment among the women who felt sexually used and then cast off.

The association between male religious leaders and preferential sexual access to women, of course, does not always come in the form of religious hypocrisy. In many cases, it is formally sanctioned. Some religions formalize the leader’s sexual access to multiple women, as in certain segments of the Mormon population. Westermarck (1925), in his classic treatise, *The History of Human Marriage*, devoted an entire section to the topic of “why defloration is performed by the holy man.” In ancient India, for example, “the priest alone can purify the garment of the bride, just as he is the only one who is not polluted by contact with sacrificial blood” (p. 191). The blood, in this case, refers to bleeding from the breaking of the virgin hymen. Sexual intercourse with the holy man was thought to be highly beneficial. In native Greenland, women felt fortunate if the *Angekokk*, or prophet, proffered his sexual caresses. Among the *Tachtadshys* in Lycia, the “*dede*” was entitled to have sexual intercourse with any woman that struck his fancy at the yearly religious assemblies. The *Zikris* believed that virgins who had intercourse with the *Mulla* (high priest) were thereby cleansed by process—a purification from intercourse that resulted in the removal of danger. It should come as no surprise to discover who fostered these beliefs.

Westermarck (1925) noted

Defloration of a bride ... could never have come to be looked upon as a right unless the act had been attractive. It is not to be believed that the chief or priest slept with another man’s bride from unselfish motives alone; and there may be cases in which the right to do so was nothing but a consequence of might. (p. 194)

The fact that kings, chiefs, emperors, and despots throughout human recorded history have exercised similar “rights” is probably no coincidence (Buss, 2003). Men in positions of power often exploit their status to gain preferential sexual access to young, desirable women. Religious leaders, often powerful and revered, are apparently not exempt.

Many religious leaders abstain, of course, and this brief treatment in no way is meant to malign either religious leaders across the globe or the women who are sexually attracted to their powers. The key point is that these patterns of religious phenomena are sufficiently common that they require explanation.

In a certain sense, these phenomena are simply variants on an ancient theme. Women have evolved mate preferences for men in positions of power (Buss, 2003). Men have evolved powerful status-striving mechanisms, in part because men in status gain greater sexual access to more numerous and more desirable mates. It is therefore not by chance that men far outnumber women as religious leaders. It is not by chance

that women are sexually attracted to priests, rabbis, shamans, gurus, holy men—men who are, or who claim to be, closely linked with higher powers. It is not by chance that men sometimes take advantage of their positions to gain sexual access to the women who desire them, and it is not by chance that the excluded men sometimes become infuriated when they discover that their religious leaders have exploited their positions of power for personal sexual gain.

Conclusions

It is not inconceivable that many religious phenomena are closely linked with solutions to adaptive problems recurrently posed by survival and reproduction. As many have noted, religion can bring a bounty of benefits: “Religion offers [people] relatively accessible resources and compelling solutions to problems in living” (Pargament, this issue). Framed in terms of evolutionarily adaptive problems, religion can provide charity in times of trouble, aid through evolutionary bottlenecks, coalitional allies, defense against hostile outsiders, tools for regulating the sexual conduct of one’s spouse, means for dissuading intrasexual rivals from mate poaching, increased access to potential mates, the means to inflict costs on rivals, a justification for attacking out-groups, paths for ascension in a status hierarchy, and many others. Religion may offer one complex suite of solutions to many of the recurrent problems humans have faced over the long course of evolutionary history.

This does not imply that there are evolved mechanisms specifically designed for religious phenomena. There may or may not be. Religious phenomena may simply parasitize existing evolved mechanisms or represent byproducts of them. Indeed, Kirkpatrick (1999) made a compelling case that many religious experiences are by-products of mechanisms designed for intrasexual competition, kin favoritism, reciprocal altruism, coalitional psychology, and the attachment system. This analysis does not imply that all religious experiences and behaviors will yield to this mode of analysis. The psychology of specific beliefs, rituals, piety, spirituality, faith, confession, atonement, prayer, virtuous striving, and miracles—phenomena that many believe lie at the core of religious experience—may defy easy explanation by recourse to evolved psychological mechanisms.

Nonetheless, looking through the lens of evolutionary psychology provides one way to gain fresh insights into the ways in which certain religious phenomena may reflect effective solutions to human adaptive problems and thus serve well the interests of those who experience them.

Notes

I thank Ann Carr, Sean Conlan, Josh Duntley, and Lee Kirkpatrick for helpful comments on an earlier draft of this article.

David M. Buss, Department of Psychology, University of Texas, Austin, TX 78712. E-mail: dbuss@psy.utexas.edu

References

- Altemeyer, B., & Hunsberger, B. (1992). Authoritarianism, religious fundamentalism, quest, and prejudice. *International Journal for the Psychology of Religion*, 2, 113–133.
- Baumeister, R. F., Catanese, K. R., & Vohs, K. D. (2001). Is there a gender difference in strength of sex drive? Theoretical views, conceptual distinctions, and a review of the relevant evidence. *Personality and Social Psychology Review*, 5, 242–273.
- Betzig, L. (1989). Causes of conjugal dissolution. *Current Anthropology*, 30, 654–676.
- Buss, D. M. (2000). *The dangerous passion: Why jealousy is as necessary as love and sex*. New York: Free Press.
- Buss, D. M. (2003). *The evolution of desire: Strategies of human mating* (Rev. ed.). New York: Basic.
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, 100, 204–232.
- Buss, D. M., & Shackelford, T. K. (1997). From vigilance to violence: Mate retention tactics in married couples. *Journal of Personality and Social Psychology*, 72, 346–361.
- Daly, M., & Wilson, M. (1988). *Homicide*. Hawthorne, NY: Aldine.
- Kenrick, D. T., & Keefe, R. C. (1992). Age preferences in mates reflect sex differences in reproductive strategies. *Behavioral and Brain Sciences*, 15, 75–133.
- Kirkpatrick, L. A. (1999). Toward an evolutionary psychology of religion and personality. *Journal of Personality*, 67, 921–952.
- Schmitt, D. P., & Buss, D. M. (2001). Human mate poaching: Tactics and temptations for infiltrating existing relationships. *Journal of Personality and Social Psychology*, 80, 894–917.
- Symons, D. (1979). *The evolution of human sexuality*. New York: Oxford University Press.
- Tooke, W., & Camire, L. (1991). Patterns of deception in intersexual and intrasexual mating strategies. *Ethology and Sociobiology*, 12, 345–364.
- Westermarck, E. (1925). *The history of human marriage* (Vol. 1). London: Macmillan.

Religious Involvement and Health: Complex Determinism

John T. Cacioppo

*Department of Psychology
University of Chicago*

Mary E. Brandon

*Social Sciences Division
University of Chicago*

Individuals perceive other individuals, communicative displays, and social hierarchies; infer traits, intentions, and emotions; communicate and obfuscate their mental contents; form relationships, unions, and alliances; and search for meaning in events and patterns. Meaning making and sociality are such fundamental components of human nature that they are perceived in the movements of simple inanimate objects. Heider and Simmel (1944), for instance, produced a short film of the movement of a small triangle, a small circle, and a large triangle around and into a large rectangle. The animated film consisted of only these geometric shapes, yet everyone who viewed the film “saw” a social drama complete with intentions, plans, and emotions. Contemporary work in the neurosciences has clearly shown that the human brain is not simply an information-processing organ: It also infers animacy and causality (Scholl & Tremoulet, 2000). It constructs stories to make sense of the inexplicable (Gazzaniga & LeDoux, 1975), and it seeks nurturance and affirmation (cf. Cacioppo et al., in press; Maestripieri, in press). The stories that it constructs to make meaning of the world are not always rational, either as various biases in social cognition and judgment have been identified (e.g., see Kunda, 1999).

Given these features of the human brain, it is unsurprising that throughout human history scholars have identified groups who were in some sense religious (Parrish, 1941), and the vast majority of humans today identify formally with a religion. The articles by George, Ellison, and Larson; Exline; and Pargament (this issue) are a timely call to psychology to address the complex but deterministic social phenomenon called religion.

George et al. (this issue) reviewed evidence that religious involvement is associated with better physical and mental health, and they found that health practices, social support, psychosocial resources (e.g., self esteem, self efficacy), and beliefs such as a sense of meaning or coherence are not sufficient to account entirely for this effect. If religious involvement is timeless and beneficial, why is religious involvement not high for everyone? Pargament (this issue) and Exline (this issue) addressed this question. Pargament noted that some religions are more helpful than others. There are advantageous and disadvantageous aspects of reli-

gion. Religion can be especially helpful to those who society has marginalized, and religious involvement is more helpful when circumstances have exhausted a person’s resources and when it is well integrated into a person’s life. An important subtext of this work is that social scientists should expect interactions rather than main effects involving religion. Exline addressed why the same religion elicits high involvement by some and little or no involvement by others. She suggested that low religious involvement can be due to interpersonal tensions that can result from unshared beliefs and convictions; anger, disappointment, and mistrust toward God; intellectual or emotional strains and confusion that may emerge when trying to adopt a given religious belief system; and problems that arise from the unrealistic pursuit of virtue and perfection.

Although religion is a pervasive and timeless part of human history, these articles make clear that religion is far from a unitary concept. Religion to the layperson means a realm of influence and existence beyond an individual’s control or comprehension (mysticism, supernatural), faithful devotion to a deity, religious beliefs and observances, and a set of normative values and behaviors. British anthropologist Tylor (1871) viewed the essential element in all religion to be a belief in spiritual beings (i.e., “animism”). This belief, Tylor suggested, arose from the human experiences of birth, death, sleep, dreams, trances, and hallucinations—dissociated states that people sought to explain by reference to incorporeal in contrast to natural causal structures.

Attempts by scholars across the centuries to classify religions have met with difficulties because of the vast diversity of religions across history. Among the principles of classification that have been used are (a) normative—distinctions between true religions and false religions based on arbitrary or subjective criteria (e.g., Thomas Aquinas’ distinction between natural and revealed religions), (b) geographical—classifications based on physical locations and communities, (c) ethnographic—linguistic—classifications based on the descent from a common origin, (d) philosophical—distinctions based on speculative and abstract concepts (e.g., Hegel, 1832/1988), (e) morphological—classifications based on stages of development (e.g., Tylor, 1871), (f) phenomenological—classifications based on common elements of experience (e.g., Kristensen,

1960), and (g) attitude toward life (James, 1902). Perhaps the classification system that has had the greatest impact to date on the social sciences is that of the American sociologist Bellah (1970), whose system was organized around symbolization complexity and personal and societal freedom from the environment.

An immediate task of social scientists is to articulate and empirically test natural mechanisms that account for the effects of religious involvement on health. For instance, one can conceptualize religion in general as a multidimensional construct consisting of specifiable and deterministic component processes encompassing personality; values and beliefs (including placebo effects); convictions and certitude; coping and appraisal processes; a search for order, truth, and meaning in life; the development of self-control, self-discipline, and self-knowledge; normative and salubrious behaviors; interpersonal relationships, social networks, and social support; personal and social identities; self-affirmation, group affiliation, and cultural traditions; economic factors; and possibly much more (Hill & Hood, 1999).

If it is clear that these are some of the building blocks out of which the effects of religious involvement are built, the form and structure of the component processes are not. Social scientists, however, have considerable experience and expertise in specifying and measuring component processes, testing whether the measured dimensions capture the variance in religious involvement, and refining multidimensional representations to capture more fully a multifarious construct such as religion. In principle, the various religions that exist could be depicted within a multidimensional space based on the weighting of component processes. Research on religion is still young, however; thus, the component processes are not known, and much of the research is limited to face valid or easy to measure aspects of Euro-American religious practice (cf. Hill & Hood, 1999).

The articles in this volume speak to the potential effects of the various factors outlined previously here. In a remarkable study of one of these potential component processes on health—the power of beliefs—Phillips, Ruth, and Wagner (1993) compared the deaths of 28,169 adult Chinese Americans with those of 412,632 randomly selected, matched White controls. Chinese astrology specifies that a person's fate is influenced by the year of birth. When people who believe in Chinese astrology contract a disease that is associated with the phase of their birth year, they are more likely than others to feel helpless, hopeless, or stoic. Phillips et al. reasoned, therefore, that if these beliefs influenced biological processes and health, Chinese Americans who have a combination of a disease and a birth year that Chinese astrology regards as ill-fated should be more likely to die significantly earlier than matched Whites. Results confirmed this prediction and further revealed

that the more strongly a group is attached to Chinese traditions, the more years of life were lost. These effects were found for nearly all major causes of death.

Once the component processes of religion are specified in a statistically and theoretically rigorous fashion, inquiry needs to move from provocative epidemiological and correlational analyses to experimental analogs and population-based clinical trials to test the effects of each component, and the synergistic effects of multiple components, on individuals in various circumstances (e.g., times of strength, in times of need). Again, interactions rather than main effects are likely to be the rule, and in this light, findings that replicate within a context but fail to generalize across contexts (e.g., populations, extant circumstances) can be viewed as a theoretical challenge rather than a methodological problem (Cacioppo, Berntson, Sheridan, & McClintock, 2000). Fehring, Miller, and Shaw (1997), for instance, found that hope and religiosity were positively correlated with positive moods and were negatively correlated with depression in a sample of older cancer patients. An association between religiosity and depression is not uniformly found, however (Koenig, George, & Peterson, 1998; Strawbridge, Shema, Balfour, Higby, & Kaplan, 1998). A possible reason is suggested in a longitudinal study of 177 community residents in the Netherlands, which showed that religiosity did not predict the incidence of depression but rather predicted the recovery from depression (Braam, Beekman, Deeg, Smit, & van Tilburg, 1997)—an effect that was especially strong among people with poor physical health. As prior research has shown (e.g., Andersen, 1986), a cancer diagnosis typically induces dysphoric to depressive symptomatology, suggesting that the association between religiosity and depression reported by Fehring et al. (1997) may reflect a faster recovery from depression rather than the incidence of depression per se. The relationship, although complex, is intelligible.

Religiosity is related to biological outcomes as well. For instance, Hixson, Gruchow, and Morgan (1998) found in their study of 112 female adults that religiosity predicted systolic and diastolic blood pressure even after controlling for body mass index and health behaviors (e.g., physical activity, smoking, diet, and alcohol consumption). Similar results have been reported for self-esteem, life satisfaction, and hopefulness (e.g., Molassiotis, Van Den Akker, Milligan, & Goldman, 1997). Until experimental paradigms are developed, however, it will be difficult to know what specifically are the causal factors and mechanisms through which religious involvement has its effects on health. As implied by Exline's (this issue) analysis, people whose activity levels (and health) are diminishing and who feel abandoned by God may lessen or terminate their religious involvement, an effect that could contribute spuriously to an association between religious involvement and health. Experimental studies of

the effects of component processes with a continuing eye toward construct validity and theoretical refinement may make it possible to identify better what components of religion are the most helpful to different individuals or to individuals in different circumstances.

In summary, throughout human history, religions have served to bring order, system, and intelligibility to the immeasurable range of human experience. The diversity and complexity of religions across human history and in practice today should serve as a warning when one finds religious involvement treated as a monolithic construct having general main effects. Although it may seem unholy to parse the component processes of religious involvement and test the effects of each (and of various combinations) in experimental paradigms where artifacts (e.g., participants selection) can be controlled, such an approach is essential if we are to move the study of the effects of religion from the unintelligible to the knowable.

Note

John T. Cacioppo, Department of Psychology, University of Chicago, 5848 South University Avenue, Chicago, IL 60637. E-mail: cacioppo@uchicago.edu

References

- Andersen, B. L. (1986). *Women with cancer: Psychological perspectives*. New York: Springer-Verlag.
- Bellah, R. (1970). *Beyond belief*. New York: Harper & Row.
- Braam, A. W., Beekman, A. T., Deeg, D. J., Smit, J. H., & van Tilburg, W. (1997). Religiosity as a protective or prognostic factor of depression in later life: Results from a community survey in The Netherlands. *Acta Psychiatrica Scandinavica*, *96*, 199–205.
- Cacioppo, J. T., Berntson, G. G., Adolphs, R., Carter, C. S., Davidson, R. J., McClintock, M. K., et al. (in press). *Foundations in social neuroscience*. Cambridge, MA: MIT Press.
- Cacioppo, J. T., Berntson, G. G., Sheridan, J. F., & McClintock, M. K. (2000). Multi-level integrative analyses of human behavior: Social neuroscience and the complementing nature of social and biological approaches. *Psychological Bulletin*, *126*, 829–843.
- Fehring, R. J., Miller, J. F., & Shaw, C. (1997). Spiritual well-being, religiosity, hope, depression, and other mood states in elderly people coping with cancer. *Oncology Nursing Forum*, *24*, 663–671.
- Gazzaniga, M. S., & LeDoux, J. E. (1975). *The integrated mind*. New York: Plenum.
- Hegel, G. W. F. (1988). *Lectures on the philosophy of religion*. Berkeley, CA: University of California Press. (Original work published 1832)
- Heider, F., & Simmel, M. (1944). An experimental study of apparent behavior. *American Journal of Psychology*, *57*, 243–249.
- Hill, P. C., & Hood, R. W. (1999). *Measures of religiosity*. Birmingham, AL: Religious Education Press.
- Hixson, K. A., Gruchow, H. W., & Morgan, D. W. (1998). The relation between religiosity, selected health behaviors, and blood pressure among adult females. *Preventive Medicine*, *27*, 545–552.
- James, W. (1902). *Varieties of religious experience*. New York: Longman, Green, & Co.
- Koenig, H. G., George, L. K., & Peterson, B. L. (1998). Religiosity and remission of depression in medically ill older patients. *American Journal of Psychiatry*, *155*, 536–542.
- Kristensen, W. B. (1960). *Meaning of religion: Lectures in the phenomenology of religion*. The Hague, The Netherlands: M. Nijhoff.
- Kunda, Z. (1999). *Social cognition: Making sense of people*. Cambridge, MA: MIT Press.
- Maestripieri, D. (in press). Biological bases of maternal attachment. *Current Directions in Psychological Science*.
- Molassiotis, A., Van Den Akker, O. B., Milligan, D. W., & Goldman, J. M. (1997). Symptom distress, coping style and biological variables as predictors of survival after bone marrow transplantation. *Journal of Psychosomatic Research*, *42*, 275–285.
- Parrish, F. L. (1941). *The classification of religions: Its relation to the history of religions*. Scottdale, PA: The Herald Press.
- Phillips, D. P., Ruth, T. E., & Wagner, L. M. (1993). Psychology and survival. *Lancet*, *342*, 1142–1145.
- Scholl, B. J., & Tremoulet, P. D. (2000). Perceptual causality and animacy. *Trends in Cognitive Sciences*, *4*, 299–309.
- Strawbridge, W. J., Shema, S. J., Balfour, J. L., Higby, H. R., & Kaplan, G. A. (1998). Antecedents of frailty over three decades in an older cohort. *Journal of Gerontology, Series B, Psychological Sciences & Social Sciences*, *53*, S9–S16.
- Tylor, E. B. (1871). *Primitive culture: Researches into the development of mythology, philosophy, religion, art, and custom*. London: J. Murray.

Life Satisfaction and Religiosity in Broad Probability Samples

Ed Diener

University of Illinois
and The Gallup Organization

Don Clifton

The Gallup Organization

Researchers studying the relationship between religiosity and subjective well-being (SWB) usually find that religious people are on average happier and more satisfied (e.g., see Diener, Suh, Lucas, & Smith, 1999,

for a review). In this study, our goal is to examine in broad and representative samples the levels of life satisfaction and happiness among those differing in levels of religiosity and to examine this relationship across

various groups. Other aims are to determine how these relationships compare in size to other predictor variables as well as to explore some potential moderating and mediating factors. For example, does religion have a greater influence on SWB among disadvantaged groups, and might it have a greater effect when measured by activities such as church attendance rather than by beliefs?

We explore two representative samples—one sample of individuals is drawn through random-digit dialing from St. Louis and the other survey is through the World Value Survey II (WVS) (WVS Group, 1994), with probability samples of 41 societies with complete data for our analyses. The polls from St. Louis and from most nations contained approximately 1,000 respondents each. The WVS II was a coordinated effort to obtain probability samples from a large number of nations (also see Inglehart & Klingemann, 2000). The Gallup survey contained respondents from ages of 18 to 92, and the WVS contained respondents across the full range of adulthood. By using these broad and representative samples, we hoped to determine the relationship between religiosity and SWB for groups that

are broadly representative of entire populations and are not simply convenience samples. Table 1 presents the correlations for the key variables (with items rescored so that high numbers always equal more of that variable). As can be seen, the correlations are quite small, but because of the large samples, the figures are statistically significant. For comparison purposes, the correlation of life satisfaction with satisfaction with relationships was .37 (income, $r = .22$; age, $r = .14$; education, $r = .11$). In the WVS, the correlation of life satisfaction with age was .01, with home satisfaction being .53. With relative income (income standardized within nations), it was .12. Thus, the correlations between religiosity and SWB are significant in our two samples, but not large in either a relative or absolute sense.

A closer analysis of the religiosity measures, however, reveals that a preponderance of individuals in both samples professed religious beliefs and practices; with such skewed distributions, the Pearson correlations mentioned here might be misleadingly small. Therefore, in Table 2, we show for the St. Louis sample the mean of life satisfaction for each level of belief (averaged across belief in God and belief in a soul). As can be seen, the high belief group reported the highest level of life satisfaction, but the means for the other groups are only slightly lower, except for the moderate disbelief group, which appears to have lower life satisfaction. The overall analysis of variance was nonsignificant, and no group differed significantly from any other group. Furthermore, the group differences accounted for only 0.5% of the variability in life satisfaction scores.

It can also be seen in Table 1 that the vast majority of respondents reported strong religious beliefs, with only a tiny minority professing strong disbelief. Fully 93% of the sample expressed a belief in God and a soul above the midpoint of the scale, and only 1% of the sample said they strongly believed that there is no soul or universal power, a God. The Gallup survey also revealed that religious belief is tied to gender: Men were virtually always those who disbelieved. Although the St. Louis sample was 41% men, they accounted for 92% of the individuals in the two lowest belief categories. Seventy-seven percent of men fell in the highest

Table 1. *Relation of Selected Variables to Religiosity*

	Gallup St. Louis Sample ^a Religious Belief ^b	World Value Survey II ^c Religiosity ^d
Satisfaction With Life	.07*	.08**
Range		-.10 to .15
Happiness		.06**
Range		-.13 to .17

Note. Range represents correlations computed within nations. ^a $N = 1,034$. ^bReligious belief was measured by belief in a higher power or God and belief that there is a soul (one item each, with a correlation or Cronbach's alpha of .72), and life satisfaction was assessed with the five-item Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), which had a Cronbach's alpha of .82 in this sample. In this sample, the life satisfaction items were answered on a scale of 1 to 5 so that mean scores are not comparable to those usually reported in the literature. ^c $N = 52,624$. ^dReligiosity was assessed by four items: importance of God, participation in prayer or meditation, attendance at church, and frequency of prayer ($\alpha = .77$); life satisfaction and happiness were each assessed with single items with 10-point response scales. * $p < .05$. ** $p < .001$.

Table 2. *Mean Levels of Life Satisfaction by Belief*

	Level of Belief					Total
	1	2	3	4	5	
Life Satisfaction						
<i>M</i>	17.4	15.8	17.5	17.4	17.9	17.8
<i>SD</i>	4.8	3.5	4.2	3.4	4.1	4.0
<i>n</i>	14	12	46	123	839	1,034

Note. The lowest belief level is 1; the highest is 5. Possible range of life satisfaction is 5 to 25, with 15 being the neutral point (neither satisfied nor dissatisfied).

Table 3. *Correlations of Life Satisfaction and Religious Belief by Group Membership*

	Age Group						
	18–29	30–39	40–49	50–59	60–69	70–79	80–92
Correlations	.01	.11	.00	.06	.11	.03	.50
<i>n</i>	211	216	224	162	108	73	33
	Low^a			Higher^b			
Income	.06			.05			
	Black^c			White^d			
Ethnic Group	.03			.07			

^aIncome under \$20,000; *n* = 157. ^bIncome \$20,000 and higher; *n* = 795. ^c*n* = 123. ^d*n* = 865.

belief group, whereas 84% of women did so. However, the relationship of religious belief to life satisfaction, as indexed by both correlations and the means across belief groups, was approximately the same for both genders.

An interesting question is whether the effects of religion on SWB vary by group. For example, it could be that religiosity is more helpful to the disadvantaged (e.g., ethnic minorities or poor people) because of the comfort and support it provides. In Table 3 we show the correlations for several groups separately. All of the correlations are again small, except for the group aged 80 and older, in which the correlation between life satisfaction and religious belief is high and significantly different from zero at $p < .01$. This might be a cohort effect or might indicate that religious beliefs are particularly comforting as people near the age of death. A closer examination of the data indicated that there were only two individuals in this age group with religious belief below 4, however, and that these individuals were very low in life satisfaction. Because in the 70s age group the three individuals low in religious belief were high in life satisfaction, these age group differences in correlations might be simply chance fluctuations because of a very few individuals. Therefore, the age trend for the older group should be replicated in other studies. The correlations for low income and African American individuals do not give support to the idea that religion will have a greater impact on the more disadvantaged members of a society.

Might religious activity (e.g., church attendance) be a stronger predictor of SWB than is belief? In the WVS, we separately correlated church attendance, frequency of prayer, and belief in the importance of God with SWB. The activity-related variables of church attendance and prayer did not show stronger correlations across both SWB-dependent variables. However, in the Gallup survey, having prayed in the last day did correlate more highly with life satisfaction ($r = .16$) than did belief in a soul ($r = .06$) or belief in God ($r = .06$), with the difference in correlations in both cases being sig-

nificant at $p < .01$. This result might arise in part because of the helpfulness of religious activities but could also be caused by a ceiling effect on the belief variables.

Perhaps the effects of religion on SWB depend on the type of society in which one lives. To analyze this issue, we can examine in the WVS the correlations within nations. For example, there were not significant differences in the correlations for Roman Catholic versus Protestant nations or for poor versus rich nations. There were, however, significant differences in the correlations between religiosity and happiness in the communist nations (including recently communist societies) (mean $r = -.02$) versus noncommunist countries (mean $r = .06$) and between religiosity and life satisfaction in the communist ($r = .01$) versus noncommunist nations (mean $r = .07$) (both $ps < .001$). This outcome might have occurred either because it was difficult to be religious in the communist nations or because religiosity was less culturally sanctioned in the communist nations. Although the differences in correlations were small, the pattern tended to be quite regular across nations. The finding of differences in correlations suggests that cultural and societal conditions do matter in terms of religions' impact on SWB.

In his excellent target article, Pargament (this issue) showed clearly that the benefits of religion are complex and depend on many factors such as the religion studied and the person's motives for being religious. The results reported here indicate that correlations between religiosity and SWB based on broad definitions of religion and on broad samples often are small. These tiny correlations should not surprise us when we realize the diverse motivations and outcomes that religion might serve. A person might become religious to conform, to cope with problems, or to become enlightened, and these varying motives might have very different concomitants in terms of SWB. Thus, Pargament's warning that one must look in more depth at the type of religion, the person involved, and the psychological mechanisms seems well founded. Research

on the general effects of religion on the average person seems disappointing in that such small relationships were found. Thus, we need more longitudinal research in which particular psychological processes are tracked over time in relationship to religious practices and beliefs.

One clear caution from these data is that researchers should not draw firm conclusions about religiosity and SWB from single, relatively small samples. Because of the size of these samples, substantial correlations were less likely to appear by chance. Thus, findings about the effects of religion, especially when they come from relatively small samples of convenience, should be replicated before they are taken seriously. Thus, conclusions such as that a certain type of religiosity correlates more strongly with SWB or that the correlations are stronger for a certain group ought to be replicated in large samples and across diverse cultures before firm conclusions are drawn.

The findings that correlations differ between communist and noncommunist nations indicate that the benefits of religion might differ depending on the cultural context. It appears that religiosity is not a strong

predictor of life satisfaction across broad samples; we need to now understand when and why it might be beneficial for certain individuals in certain circumstances and in certain cultures.

Note

Ed Diener, Department of Psychology, University of Illinois, 603 East Daniel Street, Champaign, IL 61821. E-mail: eddiener@s.psych.uiuc.edu

References

- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71–75.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302.
- Inglehart, R., & Klingemann, H.-D. (2000). Genes, culture, democracy, and happiness. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 65–183). Cambridge, MA: MIT Press.
- World Value Survey Group. (1994). *World Values Survey, 1981–1984 and 1990–1993*. Ann Arbor, MI: Institute for Social Research.

How Does Religion Benefit Health and Well-Being? Are Positive Emotions Active Ingredients?

Barbara L. Fredrickson

*Department of Psychology
University of Michigan*

Religious practices, the data suggest, foster health (George, Ellison, & Larson, this issue) and well-being (Levin & Chatters, 1998). The most beneficial practices appear to be public religious participation (George et al., this issue) and positive religious coping (Pargament, this issue). What accounts for these benefits? Thus far, the data have not yielded any clear answers to questions about mechanisms (George et al., this issue). As George et al. reminded us, however, the continued search for mechanisms is critical for two reasons: First, at a basic level, scientific scrutiny is not complete until understanding is complete. Second, at a practical level, if individuals and communities wish to promote health and well-being more efficiently, it would pay to know the active ingredients in the religion–health link. Perhaps those active ingredients could be cultivated more judiciously within religious practices, or perhaps they might also be cultivated outside religious contexts with comparable benefit. An important empirical question to pursue is whether positive emotions are among the active

ingredients that account for the benefits that religious practices have for physical and mental health.

Positive Emotions Broaden and Build

Why positive emotions? Typically we think of positive emotions as simple markers of well-being. Moments in which people are feeling positive emotions such as joy, serenity, awe, and love are moments in which they are not plagued by negative emotions such as fear, anxiety, and depression. Reflecting this intuition, researchers have found that the overall balance of people's positive to negative emotions predicts their subjective well-being (Diener, Sandvik, & Pavot, 1991). Building on this finding, Kahneman (1999) suggested that "objective happiness" can be measured by tracking (and later aggregating) people's momentary good and bad feelings (see Fredrickson, 2000b, for shortcomings of this approach). According to these perspectives, positive emotions merely signal well-be-

ing. However, this is not the entire story. Positive emotions also produce health and well-being (Fredrickson, 1998, 2000a, 2001), and they do so not simply within the present, pleasant moment, but over the long term as well.

My *broaden-and-build theory* of positive emotions (Fredrickson, 1998, 2001) explains a host of impressive long-range benefits of positive emotions and provides the rationale for the prediction that positive emotions are active ingredients in the observed religion–health link. Positive emotions are adaptive and essential experiences, the theory holds, because they both *broaden* people’s momentary thought–action repertoire and *build* their enduring personal resources.

I contrast this perspective on positive emotions to traditional models of emotion based on specific action tendencies. Specific action tendencies, in my view, work well to describe the form and function of negative emotions. Without a loss of theoretical nuance, a specific action tendency can be redescribed as the outcome of a psychological process that narrows a person’s momentary thought–action repertoire by calling to mind an urge to act in a particular way (e.g., escape in fear, attack in anger, expel in disgust). In a life-threatening situation, a narrowed thought–action repertoire promotes quick and decisive action that carries direct and immediate benefit. Specific action tendencies called forth by negative emotions represent the sort of actions that worked best to save our ancestors’ lives and limbs in similar situations.

However, positive emotions seldom occur in life-threatening situations. Most often, they are experienced when people feel safe and satiated (Fredrickson, 1998). As such, a psychological process that narrows a person’s momentary thought–action repertoire to promote quick and decisive action may not be needed. Instead, positive emotions have a complementary effect: They broaden people’s momentary thought–action repertoires, widening the array of the thoughts and actions that come to mind. Joy, for instance, creates the urge to play, push the limits, and be creative, urges evident not only in social and physical behavior but also in intellectual and artistic behavior. Interest, a phenomenologically distinct positive emotion, creates the urge to explore, take in new information and experiences, and expand the self in the process. Contentment, a third distinct positive emotion, creates the urge to take time to savor current life circumstances and integrate these circumstances into new views of self and of the world. Gratitude, a fourth distinct positive emotion, creates the urge to repay kindness creatively. These various thought–action tendencies—to play, to explore, to savor and integrate, and to repay kindness—each represent ways that positive emotions broaden habitual modes of thinking or acting. In general terms, then, positive emotions appear to “enlarge” the cognitive context (Isen, 1987), an effect recently linked to in-

creases in brain dopamine levels (Ashby, Isen, & Turken, 1999).

Whereas the narrowed mindsets of negative emotions carry direct and immediate adaptive benefits in situations that threaten survival, the broadened mindsets of positive emotions are beneficial in other ways. Specifically, these broadened mindsets carry indirect and long-term adaptive benefits because broadening builds enduring personal resources (Fredrickson, 1998).

Take play, the urge associated with joy, as an example. Animal research has found that specific forms of chasing play evident in juveniles of a species—like running into a flexible sapling or branch and catapulting oneself in an unexpected direction—are reenacted in adults of that species exclusively during predator avoidance (Dolhinow, 1987). Such correspondences between juvenile play maneuvers and adult survival maneuvers suggest that juvenile play builds enduring physical resources (Boulton & Smith, 1992; Caro, 1988). Play also builds enduring social resources. Social play, with its shared amusement and smiles, builds lasting social bonds and attachments (Aron, Norman, Aron, McKenna, & Heyman, 2000; Lee, 1983; Simons, McCluskey-Fawcett, & Papini, 1986), which can become the locus of subsequent social support. Childhood play also builds enduring intellectual resources by increasing levels of creativity (Sherrod & Singer, 1989), creating theory of mind (Leslie, 1987), and fueling brain development (Panksepp, 1998b).

Like the play prompted by joy, the exploration prompted by the positive emotion of interest creates knowledge and intellectual complexity. Similarly, the savoring and integrating prompted by contentment produce self-insight and alter world views, and the creative efforts to repay kindness that accompany gratitude strengthen social bonds and develop prosocial skills. Each of these phenomenologically distinct positive emotions shares the feature of augmenting individuals’ personal resources, ranging from physical and social resources to intellectual and psychological resources (for more detailed reviews, see Fredrickson, 1998, 2000a; Fredrickson & Branigan, 2001).

Importantly, the personal resources accrued during states of positive emotions are durable. They outlast the transient emotional states that lead to their acquisition. By consequence, then, the often incidental effect of experiencing a positive emotion is an increase in one’s personal resources. These resources can be drawn on in subsequent moments and in different emotional states. Thus, the effects of positive emotions outlast their fleeting, momentary experience. Plus, these effects accumulate and compound over time, fueling an upward spiral toward improved health and well-being. The cognitive literature on depression has already documented how depression and the narrowed, pessimistic thinking that it inspires influence one another reciprocally, producing a downward spiral leading to ever-

worsening moods and even clinical levels of depression (Peterson & Seligman, 1984). The broaden-and-build theory predicts a contrasting upward spiral in which positive emotions and the broadened thinking that they inspire also influence one another reciprocally, producing appreciable gains in health and well-being (Fredrickson, 2002; Fredrickson & Joiner, 2002).

In summary, the broaden-and-build theory describes the form of positive emotions in terms of broadened thought–action repertoires and describes their function in terms of building enduring personal resources. In doing so, the theory provides a new perspective on the evolved adaptive significance of positive emotions. Those of our ancestors who succumbed to the urges sparked by positive emotions—to play, explore, and so on—would have by consequence accrued more personal resources. When these same ancestors later faced inevitable threats to life and limb, their greater personal resources would have translated into greater odds of survival and, in turn, greater odds of living long enough to reproduce. To the extent then that the capacity to experience positive emotions is genetically encoded, this capacity, through the process of natural selection, would have become part of our universal human nature.

Do Healthy Religious Practices Foster Positive Emotions?

The broaden-and-build theory suggests that positive emotions can transform individuals for the better, helping them to be more resilient, more creative and wise, more virtuous, more socially integrated, and on top of all this physically healthier (Fredrickson, 2000a). Existing data suggest a similar set of beneficial outcomes for certain forms of religious practices. Thus, it seems reasonable to speculate whether benefits to health and well-being accrue among religious believers because they, more than nonbelievers, experience meaningful positive emotions. This is a tractable empirical question worthy of pursuit. This is not to suggest that religion is an automatic fountain of positive emotions. As Exline (this issue) put it, God is not a “placid smiley face in the sky, advancing humanity’s ongoing quest to ‘have a nice day.’” Any close and realistic look at religious practices reveals that they can also readily foster negative emotions and unhealthy ways of coping (Exline, this issue; Pargament, this issue).

Notably, in sifting the good from the bad, one of Pargament’s (this issue) conclusions were that religious practices “built on a belief in a greater meaning in life” are the most beneficial. The focus on meaning—or what George et al. (this issue) called “sense of coherence”—is important. Finding positive meaning is perhaps the most reliable path to cultivating positive

emotions (Folkman, 1997; Fredrickson, 2000a; Ryff & Singer, 1998). To the extent that religions offer their believers worldviews that help them to find positive meaning both in ordinary daily events (e.g., a chance encounter with an acquaintance’s child), and in major life challenges (e.g., a diagnosis of cancer), they also cultivate positive emotions such as joy, serenity, awe, gratitude, and hope. According to the broaden-and-build theory, these positive emotions should in turn broaden people’s mindsets, making them more creative and integrative in their thinking, and build and replenish critical personal and social resources, such as resilience, optimism, and social support. These resources, a wide range of studies have shown, enhance health and well-being.

One critical implication of this analysis is that the search for mediators in the link between religious practices on one hand and health and well-being on the other should not be single focused. We should expect and test for multiple links in the causal chain. For instance, positive emotions are not the sole mediator to position between religious practices and improved health and well-being (e.g., religious practices → positive emotions → improved health and well-being). The broaden-and-build theory offers a more detailed causal model (e.g., religious practices → finding positive meaning → positive emotions → broadened mindsets → augmented personal resources → improved health and well-being). Positive emotions are worthy of the spotlight, however, because they are intrinsically motivating. People seek them out for their own sake, recreating circumstances that have made them feel good. In this sense, positive emotions provide the fuel in a self-sustaining system of continued growth and healthy development. They are, perhaps, the most potent active ingredients in the hypothesized causal chain.

In testing this causal model, researchers would be wise to heed the advice of George et al. (this issue). They noted that typical measures of social support from family and friends do not mediate the religion–health link as well as newly devised measures of “religious support” (i.e., support received from one’s congregation). Likewise, it would likely be most fruitful to distinguish conceptually and empirically secular positive emotions (i.e., positive emotions felt outside religious or sacred contexts) from one or more categories of religious or sacred positive emotions, which might include positive emotions felt in religious services, toward God, toward other believers, or otherwise connected to that which believers deem sacred. In addition, Pargament (this issue) reminded that religious practices are dynamic processes that change over time and circumstance. Likewise, emotions are dynamic, changing, and context sensitive. One implication of these observations is that survey research methods that conceptualize religious practices and emotions as static “person variables” may be inappropriate empiri-

cal tools (for a review of strategies for measuring emotions, see Larsen & Fredrickson, 1999).

More fine-grained empirical approaches promise to help scientists understand the richness of spiritual life more fully and perhaps lessen the possibility of reducing the benefits of religious practices solely to psychological processes. They can also uniquely address a number of compelling empirical questions: Do believers experience more frequent secular and sacred positive emotions than nonbelievers? If so, in what contexts? Are certain positive emotions, such as gratitude, experienced more frequently, or differently, by believers and nonbelievers (for reviews of beneficial repercussions of gratitude, see Fredrickson, in press; McCullough, Kilpatrick, Emmons, & Larson, 2001)? Are sacred positive emotions somehow more generative of upward spirals and improved health and well-being than secular positive emotions? If so, can this be traced to deeper underlying positive meanings, more sustained positive experiences, or both? What roles do public participation and positive religious coping play in generating and sustaining secular and sacred positive emotions? Are some religions more likely than others to generate sacred positive emotions? If so, can this account for denominational differences in the health benefits? These and other questions about the emotional lives of those who engage in religious practices warrant empirical attention.

Pargament (this issue) concluded by describing religion as perhaps “the most distinctively human of all phenomena.” Emotions, we know, are not distinctively human but are instead shared widely with other animals (Panksepp, 1998a). Even so, many still hold that the rich emotional lives of humans simply must surpass those of animals. Perhaps what is distinctively human about our emotional lives then is our ability to open our minds far enough to fathom or create a connection to God, or another Higher Power. This broadened mindset can in turn provide a wellspring of profoundly experienced emotions, many of them positive. Thus, religious practices may be distinctive human ways of proactively cultivating positive emotions with their attendant adaptive benefits.

Notes

My research on positive emotions is supported by grants from the National Institute of Mental Health (MH53971 and MH59615), a Rackham Faculty Grant and Fellowship from the University of Michigan, and an award from the John Templeton Foundation and the American Psychological Association (2000 Templeton Positive Psychology Prize).

Barbara L. Fredrickson, Department of Psychology, University of Michigan, 525 East University Avenue, Ann Arbor, MI 48109-1109. E-mail: blf@umich.edu

References

- Aron, A., Norman, C. C., Aron, E. N., McKenna, C., & Heyman, R. E. (2000). Couple's shared participation in novel and arousing activities and experienced relationship quality. *Journal of Personality and Social Psychology, 78*, 273–284.
- Ashby, F. G., Isen, A. M., & Turken, A. U. (1999). A neuro-psychological theory of positive affect and its influence on cognition. *Psychological Review, 106*, 529–550.
- Boulton, M. J., & Smith, P. K. (1992). The social nature of play fighting and play chasing: Mechanisms and strategies underlying cooperation and compromise. In J. H. Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture* (pp. 429–444). New York: Oxford University Press.
- Caro, T. M. (1988). Adaptive significance of play: Are we getting closer? *Tree, 3*, 50–54.
- Diener, E., Sandvik, E., & Pavot, W. (1991). Happiness is the frequency, not the intensity, of positive versus negative affect. In F. Strack (Ed.), *Subjective well-being: An interdisciplinary perspective* (pp. 119–139). Oxford, England: Pergamon.
- Dolhinow, P. J. (1987). At play in the fields. In H. Topoff (Ed.), *The natural history reader in animal behavior* (pp. 229–237). New York: Columbia University Press.
- Folkman, S. (1997). Positive psychological states and coping with severe stress. *Social Science Medicine, 45*, 1207–1221.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*, 300–319.
- Fredrickson, B. L. (2000a, March 7). Cultivating positive emotions to optimize health and well-being. *Prevention and Treatment, 3*, Article 0001a. Retrieved May 8, 2001, from <http://journals.apa.org/prevention/volume3/pre0030001a.html>
- Fredrickson, B. L. (2000b). Extracting meaning from past affective experiences: The importance of peaks, ends, and specific emotions. *Cognition and Emotion, 14*, 577–606.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*, 218–226.
- Fredrickson, B. L. (2002). Positive emotions. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 120–134). New York: Oxford University Press.
- Fredrickson, B. L. (in press). Gratitude and other positive emotions broaden and build. In R. A. Emmons (Ed.), *Kindling the science of gratitude*. New York: Oxford University Press.
- Fredrickson, B. L., & Branigan, C. (2001). Positive emotions. In T. J. Mayne & G. A. Bonnano (Eds.), *Emotion: Current issues and future directions* (pp. 123–151). New York: Guilford.
- Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science, 13*, 172–175.
- Isen, A. M. (1987). Positive affect, cognitive processes, and social behavior. *Advances in Experimental Social Psychology, 20*, 203–253.
- Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 3–25). New York: Sage.
- Larsen, R. J., & Fredrickson, B. L. (1999). Measurement issues in emotion research. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: Foundations of hedonic psychology* (pp. 40–60). New York: Sage.
- Lee, P. C. (1983). Play as a means for developing relationships. In R. A. Hinde (Ed.), *Primate social relationships* (pp. 82–89). Oxford: Blackwell.
- Leslie, A. M. (1987). Pretense and representation: The origins of “theory of mind.” *Psychological Review, 94*, 412–426.
- Levin, J. S., & Chatters, L. M. (1998). Research on religion and mental health: An overview of empirical findings and theoretical issues. In H. G. Koenig (Ed.), *Handbook of religion and mental health* (pp. 33–50). San Diego, CA: Academic.

- McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin*, *127*, 249–266.
- Panksepp, J. (1998a). *Affective neuroscience: The foundations of human and animal emotions*. New York: Oxford University Press.
- Panksepp, J. (1998b). Attention deficit hyperactivity disorders, psychostimulants, and intolerance of childhood playfulness: A tragedy in the making? *Current Directions in Psychological Science*, *7*, 91–98.
- Peterson, C., & Seligman, M. E. P. (1984). Causal explanations as a risk factor for depression: Theory and evidence. *Psychological Review*, *91*, 347–374.
- Ryff, C. D., & Singer, B. H. (1998). Contours of positive human health. *Psychological Inquiry*, *9*, 1–28.
- Sherrrod, L. R., & Singer, J. L. (1989). The development of make-believe play. In J. Goldstein (Ed.), *Sports, games and play* (pp. 1–38). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Simons, C. J. R., McCluskey-Fawcett, K. A., & Papini, D. R. (1986). Theoretical and functional perspective on the development of humor during infancy, childhood, and adolescence. In L. Nahemow, K. A. McCluskey-Fawcett, & P. E. McGhee (Eds.), *Humor and aging* (pp. 53–77). San Diego, CA: Academic.

Why Study Religion?

David C. Funder

Department of Psychology
University of California, Riverside

A psychologist unfamiliar with the modern psychology of religion might approach the target articles fearing to find dogma, ideological bias, or even a certain amount of flakiness. Thankfully, none of this is present. The sound of grinding axes is utterly absent from these articles, and the authors address the pros and cons of religious involvement and the psychological mechanisms that might mediate the effects of religion in a straightforward, open-minded, and objective manner. However, these articles and their inclusion in this issue of *Psychological Inquiry* clearly do have an underlying agenda: to justify the enterprise of the psychological study of religion. Every scientist is of course entitled to study whatever he or she wants, but the question still deserves to be considered: Of all the topics a psychologist could choose to examine, why religion?

There seem to be two kinds of answers. The first is that religious involvement, beliefs, and practices can be shown to have important consequences. Involvement in a religious community may offer the considerable benefits of social support and thus aid coping. Religious beliefs may organize one's comprehension of an otherwise chaotic world. Religious practices may provide a structure to one's life and guidelines for what to do and what not to do. In particular, religious practice (usually) leads to good health outcomes, apparently because some religions provide specific laws that promote good health, such as the Mormon proscription against smoking, and nearly all promote the idea that the body is a temple that deserves respect and care. This pragmatic justification for studying religion is implicit in all three target articles and is and fully explicit in George, Ellison, and Larson's (this issue) quest for the "active ingredients"—an excellent phrase—that underlie the effect of religion on health.

The idea that religion should be studied because of its effects on health and other important life outcomes

is reasonable but has a notable limitation. The mediators of religion's effects are not specific to religion. Involvement in a stamp club, encounter group, or Internet chat room may provide social support. Belief in a pervasive political ideology, such as Marxism, or in the immutability of the laws of physics, logic, or scientific methodology may structure one's comprehension of an otherwise chaotic world. Systems as diverse as English Common Law and subjective expected utility theory are available to provide direction for how we should act, and guidelines toward good health are at least as numerous in the *Consumer Reports on Health* as in the Bible, Koran, or Book of Mormon.

In other words, the active ingredients of religion in relationship to real-life outcomes are shared with many other possible sources, to say the least. To understand how these ingredients work, therefore, it may be a better strategy to focus on the ingredients rather than on one particular source, even religion. For example, psychologists interested in how (some) religions help people cope with stress might be well advised to study the many different variables that affect coping. Similarly, those interested in the role of religion in social support should consider the other sources and basic mechanisms of social support, and those interested in the religious promotion of behaviors that lead to good health should study health habits, and so forth. Religion can certainly be included in such studies as one among many possible independent variables; however, to promote a psychology of religion per se threatens to set up yet another isolated subfield, and psychology is too Balkanized already (Funder, 2001). Moreover, the effects of religion are so diverse depending on the specific religion, the specific outcome, and the context (as is well described in the target articles) that the psychol-

ogy of religion has a long way to go before it achieves internal coherence.

Balkanization and incoherence aside, the idea of a psychology of religion as envisioned in the target articles entails another, deeper problem. The search for the active ingredients of religion presupposes the nature of the desired end state: peace of mind, happiness, a sense of control, physical health, and so forth. However, the special role of religion is not to get a person to an end state but to define what that end state should be. For example, the target articles mention the possibility that some kinds of religious belief may cause a person to feel unsettled and perhaps may even be harmful to one's psychological or physical health. Some religions offer a route for avoiding feelings of guilt, whereas others lead their devotees to wallow in it. Some view humans as basically good and only accidentally corrupted on occasion; others view humans as basically evil and redeemable only through extraordinary efforts. And so forth. This observation leads to my final point.

I said previously that there are two answers for the question of why to study religion. The first answer, as we have seen, is pragmatic, but the second answer has nothing to do with the social, health, or psychological effects of religious belief or their psychological mediators. It has everything to do with questions of ultimate value and ultimate meaning. I suspect that a second reason that some psychologists choose to study religion is that, whether they admit it or not, they are motivated by an interest in these latter kinds of issue. I infer this because if one's interest is solely a pragmatic curiosity about religion's active ingredients, there is no need to focus on religion per se; as I mentioned previously, one can build a research career studying coping, social support, health habits, or any of the other potential mediators. According to attribution theory's principle of noncommon effects (Jones & Davis, 1965), choices must be based on attributes that the chosen option has and the nonchosen options do not. Therefore, the choice of religion as a focal topic of study must be

due to something it does not share with other topics. What is unique about religion is its concern with ultimate matters.

Here is the rub: Psychological research cannot address these ultimate matters. Just as no experiment or correlational study can ever confirm the existence or lack thereof of God (as the target articles noted), no empirical study will ever inform us about the difference between right and wrong, the nature of the good life, or even the end states that we should seek through proper imbibing of the active ingredients of psychological process.

In this sense, then, I fear that the psychology of religion is trapped in a double bind. The psychological processes by which religion affects subjective well-being and psychological and physical health are interesting and important, and research on them is easily justified; however, they have very little to do with religion per se, and there is nothing that necessarily leads from an interest in these processes to a focus on religion. What does have everything to do with religion per se is that the ultimate questions of value and meaning are inaccessible to psychological inquiry. People with a deep interest in these questions may be motivated to explore the psychology of religion but need to seek their answers elsewhere.

Notes

The author's research is supported by National Institute of Mental Health Grant R01-MH42427.

David C. Funder, Department of Psychology, University of California, Riverside, Riverside, CA 92521. E-mail: funder@citrus.ucr.edu

References

- Funder, D. C. (2001). Personality. *Annual Review of Psychology*, 52, 197-221.
- Jones, E. E., & Davis, K. E. (1965). A theory of correspondent inference. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 219-266). New York: Academic.

Playing Devil's Advocate: Why Not Conclude That the Relation of Religiosity to Mental Health Reduces to Mundane Mediators?

Thomas E. Joiner, Jr., Marisol Perez, and Rheedea L. Walker

*Department of Psychology
Florida State University*

Given that mental illnesses are painful, impairing, and potentially lethal, new and true information on protective, preventative, and therapeutic factors would be welcome indeed. In fact, new claims for some or other factor that relieves some or other condition are very common. The problem, however, is that many of these

claims are exaggerated, misleading, or flatly false, and some of them are iatrogenic. However, even when patients are not directly harmed, new and untested claims and procedures are potentially harmful because they blur distinctions between actual and ersatz therapeutics and dilute standards for what is true and what is effective.

Conceptually and empirically, how can we demonstrate that some factor is beneficial regarding some thing? Among others, Garber and Hollon (1991) summarized criteria for demonstrating, insofar as possible, whether one thing (e.g., religiosity) serves as a cause of some other thing (e.g., mental health) in nonexperimental research. The criteria are *covariation* (a cause and its outcome should correlate, at least to the extent predicted by theory), *temporal antecedence* (a cause should temporally precede its outcome), *nonspuriousness* (the relationship between cause and outcome should not be attributable to various third variables and other sources of contamination or confounding), and *theoretical plausibility* (the relationship between a cause and outcome should be compatible with established and replicated scientific knowledge; see Joiner & Metalsky, 2001, for recent application of these criteria).

The first two criteria—covariation and temporal antecedence—are often not difficult to satisfy, but notice something about the criteria of nonspuriousness and theoretical plausibility. Neither is formulaic, and both require highly skilled deliberation as to potential sources of spuriousness as well as a willingness to prove oneself wrong—what is required of the investigator is to rigorously and ruthlessly search for various ways to defeat his or her own work, especially empirically (compare the criterion of nonspuriousness) but also conceptually (compare the criterion of theoretical plausibility). All of this, of course, is very much in the spirit of Karl Popper's philosophy of science.

Researchers focusing on the link between religiosity and mental health are skilled with and aware of such concepts as nonspuriousness and theoretical plausibility. However, we suggest, researchers need to do a better job of addressing these issues because, as it stands, the relationship between religiosity and mental health, specifically with regard to these four criteria, is not necessarily robust.

As, George, Ellison, and Larson (this issue) documented, the link between religiosity and mental health appears to satisfy the first two criteria of covariation and temporal antecedence (although for the latter criterion, still more research would be reassuring). Potential problems arise, however, regarding the criterion of nonspuriousness, and we suggest that the problems take two main forms: (a) religiosity-specific mediators of the religiosity/mental health relationship have rarely been tested, and (b) potential mediators of the religiosity/mental health relationship have rarely been examined jointly. We examine each of these two problems in turn and then address some additional issues.

Religiosity-Specific Mediators

A clear candidate for a mediator of the religiosity/mental health relationship is social support; that is, those who are part of religious groups may thereby

gain social support and may be less prone to mental disorder symptoms. As one example, Early and Akers (1993) proposed that religious participation is a protective factor against suicidal behavior among certain ethnic groups in the United States (i.e., African Americans) because of such dimensions as support from the religious group as well as religious condemnation of suicidal behavior.

Why would someone who, for example, joins a church thereby gain social support at work or in the neighborhood? The gain in social support is likely to be relatively specific to the religious setting and people from this setting, and thus, a precise test of whether social support mediates the religiosity/mental health connection would examine social support from the religious setting, rather than social support in general. As George et al. (this issue) noted, it appears that only one study has taken this approach, and remarkably, this study found that the relationship between religiosity and mental health was fully accounted for by social support in the religious setting (Ellison, Musick, Levin, Taylor, & Chatters, 1997). We agree fully with George et al.'s statement that "studies that rely on measures of social support from the typical sources of friends and family may be inappropriate tests of the mediating effects of social support." Based on the facts that only one study has taken this more precise approach and that the one study found full mediation of the religiosity/mental health link, one of two conclusions is forced: (a) There is not enough research to say anything about this issue, and researchers in this area should be far more circumspect about claims that social support does not fully mediate the link, or (b) there is nothing special about religiosity's effects on mental health—it reduces to the well-known effects of social support, which humans generate in a multitude of ways (including but not limited to religiosity) and which nonhumans manage to generate in the complete absence of religiosity (Mehlman et al., 1995).

Simultaneous Examination of the Several Candidate Mediators

Even if potential mediators were limited to social support (and they are not), it is notable that few if any studies have examined the *joint* mediational role of social support dimensions. As George et al. noted (this issue), at least four dimensions of social support can be identified (i.e., network size, social interaction, instrumental assistance, and subjective social support). A comprehensive study on the mediational effects of social support should simultaneously examine each of these (especially as they are expressed in and from the religious setting specifically).

Of course, several other candidate mediators exist (e.g., health behaviors, feelings of mastery, and effi-

cacy), as well summarized by George et al. (this issue). A satisfying study on the mechanism of the religiosity/mental health link would simultaneously examine all of these.

Specificity and Severity of Outcome

Does religiosity buffer against the effects of negative emotionality, depressive symptoms, anxious symptoms, mood disorders, anxiety disorders, and so forth, or all of the above, and if not all of the above, why would it be that religiosity affects some and not the others (i.e., why would this be theoretically plausible)? This issue also deserves much more attention in this area of research.

Full Mediation Does Not Spuriousness Make

Imagine that our concerns had been rigorously addressed (e.g., many religiosity-specific mediators had been simultaneously examined within the same longitudinal study) and that the finding emerged that religiosity was not related to mental health beyond the several mediators. We would not conclude—and in this commentary, we are not suggesting—that the relationship between religiosity and mental health would be spurious in the same sense that a relationship between, say, summer ice cream consumption and heat stroke is. Rather, we would suggest that any claims of the *special* relationship of religiosity to mental health—beyond the mediators—would be exaggerated and misleading (and these claims appear to be relatively common). The emphasis should be on the mediators (e.g., social support) as well as on the many ways to accrue these mediators (religiosity being one of many).

Religion as Rich, Complex, and Various

Pargament (this issue) argued persuasively that the view of religion as global, undifferentiated, and stable is not textured enough. Context is crucial, as he argued. Although we agree, we also suggest that within these contexts, our points about specificity and simultaneity of mediators still hold and still should be addressed.

Is Religion Reducible?

Pargament (this issue) stated that “we should be careful of attempts to reduce religion into something exclusively psychological, social, or physical.” This may be true, as long as the issue is people’s personal and spiritual beliefs about the cosmos and their place in it (although even here psychological, social, or physi-

cal reductions could conceivably be illuminating). However, when the issue is mental health, we would reword Pargament’s statement as follows: “We should be careful of views that are *not* supported by—and that go beyond—the psychological, social, or physical sciences.”

Why Does It Matter?

An accurate view of the religiosity/mental health link matters for many of the reasons articulated by Exline (this issue). As she noted, although there clearly are religious sources of comfort, there also are religious sources of psychological distress (e.g., interpersonal strains associated with religious disagreements with loved ones). We add that there is potential for both comfort and distress in close interpersonal relationships in general (whether religious or not), as shown, for example, by research on the interpersonal complexities of depression (e.g., Joiner & Coyne, 1999). Of course, there are nonreligious sources of social support, problem solving, efficacy, mastery, and so forth. In scientifically supported psychotherapy for mental disorders, the goal of which is often to reduce interpersonal strains and enhance social support, problem-solving, and so forth, a global, undifferentiated, and rigid belief that religiosity leads to mental health may at times be obfuscatory or even iatrogenic.

Note

Thomas E. Joiner, 315b Psychology Building, Department of Psychology, Florida State University, One University Way, Tallahassee, FL 32306-1270. E-mail: joiner@psy.fsu.edu

References

- Early, K. E., & Akers, R. L. (1993). “It’s a white thing”: An exploration of beliefs about suicide in the African American community. *Deviant Behavior: An Interdisciplinary Journal*, *14*, 277–296.
- Ellison, C. G., Musick, M., Levin, J., Taylor, R., & Chatters, L. (1997, August). *The effects of religious attendance, guidance, and support on psychological distress: Longitudinal findings from the National Survey of Black Americans*. Paper presented at the annual meetings of the Society for the Scientific Study of Religion, San Diego, CA.
- Garber, J., & Hollon, S. D. (1991). What can specificity designs say about causality in psychopathology research? *Psychological Bulletin*, *110*, 129–136.
- Joiner, T., & Coyne, J. (Eds.). (1999). *The interactional nature of depression*. Washington, DC: American Psychological Association.
- Joiner, T., & Metalsky, G. (2001). Excessive reassurance-seeking: Delineating a risk factor involved in the development of depressive symptoms. *Psychological Science*, *12*, 371–378.
- Mehlman, P. T., Higley, J. D., Faucher, I., Lilly, A. A., Taub, D. M., Vickers, J., et al. (1995). Correlation of CSF 5-HIAA concentration with sociality and the timing of emigration in free-ranging primates. *American Journal of Psychiatry*, *152*, 907–913.

Some Institutional and Stress Process Perspectives on Religion and Health

Leonard Pearlin

*Department of Sociology
University of Maryland–College Park*

These three articles are excellent additions to what is truly a burgeoning field of inquiry that is concerned with the connections between religious beliefs and practices and various aspects of health and well-being. Done in the best spirit of objective inquiry, the articles are thoughtful, probing, and stimulating—everything one might expect from outstanding scholars—and they may be particularly instructive to researchers, such as myself, whose work looks at religiosity as only one of many psychosocial influences on health. However, as informative as they are, these articles should not be read with the expectation that they will bring closure to the many issues and quandaries surrounding the religion–health relationship. Their contribution lies more in bringing greater clarity to the identification and delineation of a number of these issues. The importance of this kind of contribution should not be underestimated. It is entirely consistent with what can be observed in many important fields of inquiry; namely, progress is not gauged solely by the number of questions that has been definitively answered but, as well, by the breadth and sophistication of the questions that we are able to ask. As assessed by these criteria, it is a field that has strikingly grown.

At this point, there is considerable evidence, albeit not consistent, that religious practices and beliefs have the potential to make a positive contribution to physical and mental health and to longevity. Because highly competent and objective scholars have gathered much of the evidence, it is something that needs to be taken seriously. As emphasized by each of the authors, however, entwined with the emerging string of evidence are several queries pointing out the complexities of the religion–health relationship. A summary of them is partially captured in the following set of interrelated queries: What beliefs and practices, accompanied by what covariates, in which populations, and under what conditions, have what kinds of health effects? I do not attempt to elaborate on what the expert authors have already said in their target articles about each of these queries. Such an attempt would quickly take me beyond the reach of my own work and knowledge. Although some of my comments unavoidably overlap their discussions, I address the relationship between religion and health from perspectives that are somewhat different from those reflected in the target articles. These perspectives are shaped by my sociological orientations and by my social–psychological research into the various components of the stress process.

As a macrosociologist, my attention is drawn to the institutional and organizational aspects of religion. There are certainly notable differences within as well as between religions, but there are also similarities that have had and continue to have profound consequences for the health and well-being of populations. I refer to the tendency of many religions to claim a special purchase on the truth, a special access to what is sacred, and a special route to salvation. Historically and currently in our pluralistic world, this has inevitably resulted in competition over the right of way, with religions vying with each other as they advance their respective claims. This competitive thrust, I submit, stems from their need to attract and hold members. It would be a threat to their stability and survival if religions professed that the particular beliefs and practices that they espouse are no better or worse than those of others. Such a profession, moreover, would obviate any claims to the exclusive right to socialize the young. Instead, of course, we more often find that one asserts superiority over others, an assertion that too often takes the form of militant action against and/or the derision of followers of other religions.

There is a paradox, then, between what some studies have observed about the benefits to health and longevity that individuals might enjoy as participating members of a religious body and the consequences of being placed in the path of imperative efforts by religions to assert their own ascendancy. As the authors are aware, one religion may be damaging to the psyches, limbs, and lives of the adherents of another. The threat of such damage may be compounded when religious differences are combined with economic and ethnic divisions. A number of studies consider longevity as a marker of benefits resulting from affiliation with and participation in religious bodies. These findings prompt the question as to whether we should also take into account the many lives that have been shortened by religious-based conflicts, some of them paradoxically driven by a mission to save souls. The relevance of this question is not confined to the past; unfortunately, there are presently many places on the map where people's lives and well-being are placed at risk by such conflict.

By no means do all religious-based conflicts result in overt competition or have as an aim the destruction or conversion of the adherents of other religions. Indeed, the wounds inflicted by religious institutions are less likely to be intended and mortal than to be unin-

tended, unrecognized, and psychological. Of particular interest in this regard are the contextual settings in which religious affiliations are set, probably an understudied issue in the search for the bitter as well as the sweet. For example, the consequences for well-being of being an observant Catholic in South Boston may be very different than being one in the Bible-belt South. Similarly, one can speculate that being the only Muslim or Jew or Buddhist in the midst of Christian school or among workmates might adversely color social acceptability, the development of self-esteem, and well-being. In addition, the composition of religious bodies tends to take on features of the larger system of stratification and inequality. Thus, some denominations attract the participation of the wealthier members of the community, and others are made up of less fortunate congregants; some are Black and some are White and some Hispanic and some Anglo, and so on. We know that social and economic inequalities are closely related to health and well-being, and we can ask whether the stratification of places of worship may have health consequences (including those that are protective) above and beyond those of the larger system. The same question, it can be noted, may be raised with regard to those religious institutions whose rules for women and men define a subordinate–superordinate relationship between the two.

Still considering its institutional aspects, it can be observed that religion does not stand apart from other societal institutions. In contrast, it is interconnected to virtually every other major institution, such as the family, politics and the state, and education. Religious institutions are not always content merely to coexist with other institutions; often they also seek to influence them. Nowhere does this show up more clearly than in the very sphere to which these articles are addressed: health. To the extent that religious institutions are successful in exerting influence on healthcare policies and practices, they may override choices that individuals claim as their own by regulating what and when and for what purposes various medical interventions can be employed. Indeed, such regulation extends to defining what biomedical scientists can be research. That religious imperatives are always in the interests of the health and longevity of members of society is certainly questionable. Perhaps, then, the inclusive study of religion and health might take into consideration the host of institutional aspects of religion that directly and indirectly have an impact on the well-being of populations.

These sorts of observations may seem to be a far cry from the kinds of religion–health inquiries social and behavioral researchers typically conduct. Because much of the empirical research does not consider overarching matters such as social organization and its institutional structures, the downsides of religion revealed from these vantage points are less likely to come into

view. The institutional and societal aspects of religion are further obscured by the heavy reliance by researchers (including myself) on surveys, a tool most suited to investigations at the analytic level of the individual. Research pitched at this level is a perfectly justified and acceptable strategy for exploring religion–health connections, but it is not a strategy that by itself can provide a complete or multisided understanding of how religious beliefs and practices affect the physical and mental health and longevity of populations.

I now remove my cap as a macrosociologist and replace it with one identifying me a researcher into the stress process. The stress process framework calls attention to health as a consequence of a process that unfolds over time and involves a number of conditions at multiple levels of social and psychological life. Because many of the inquiries into religion and health either explicitly or implicitly assume its relevance to stress, it may be useful to spell out some of the features of the stress process and the possible functions of religion within it. It begins with people's social and economic statuses, which often determine the eventful and chronic stressors to which people are exposed. The stressors that people initially face may lead to additional or secondary stressors in diverse life domains. For example, financial hardships may contribute to marital conflict, or the onset of illness may disrupt occupational careers. A constellation of primary and secondary stressors may develop over time that together impact on physical and mental health. However, people are not necessarily passive objects of stressors. Instead, they usually act as agents in their own behalf, mobilizing the social and personal capital or resources available to them in ways that cushion or avoid the deleterious health consequences of the stress process. Many material, social, and personal resources are potentially capable of blunting the effects of the stress on health. My comments, however, are largely limited to religion as a resource in the stress process, a salient concern of my own program of research.

There are three ways in which religious sentiments, practices, and beliefs can function as resources affecting health: as moderating, mediating, or independent conditions. Stress moderation occurs when the health and well-being of people exposed to a similar stressor or set of stressors vary with the extent to which they possess the condition presumed to have moderating capabilities. Thus, a test of the hypothesis that one or another dimension of religious life helps people to cope with the stressors that they confront requires a fairly specific analytic strategy. First, following from the recognition that religion in the lives of people is multidimensional, it would be necessary to identify and measure the particular aspect of religion presumed to be the moderating condition. Similarly and very important, the stressor condition and the extent to which people are exposed to it need to be clearly specified and as-

sessed. It cannot be assumed, for example, that all people who are critically ill are equally ill or that they confront the same secondary stressors resulting from the illness. This is more than nitpicking; before we can say that a putative coping behavior actually moderates the adverse health consequences of exposure to stress, it is necessary to ask with what they are coping. This requires that the extent and intensity of their exposure to primary and secondary stressors be determined with as much precision as possible. Only then is it possible to ask if the health of people similarly exposed to the stressors varies with differences in the observed dimension of coping. The functions of religion as a moderating condition thus entails an interaction between the selected measure of religiosity and the measure of the stressor. If there is a dimension of religion that functions as a coping response capable of moderating the impact of the stressor on health, it should be found that those most exposed to the stressor also benefit the most from the religious coping.

In distinction to its moderating functions, the exploration of mediating functions of religious coping is ascertained by a different analytic strategy. Here the question driving the analysis is whether the effect of the stressor condition on health is channeled through the presumed coping behavior. It asks, essentially, whether the stressor arouses the coping, such as when an atheist in the foxhole becomes an ardent believer when under fire. Thus aroused, the newly evoked beliefs and prayers reduce the effect of the threatening stressor on the health outcome. For the aspect of religiosity under observation to have this kind of mediating function, therefore, it must be positively related to the stressor and negatively related to ill health.

I detail these procedures not because others are unfamiliar with them but to highlight that much of what is written of religious coping seems to fall short of these analytic desiderata. Indeed, it seems to me that what is described as religious coping often pertains to the third or independent health function of religion in the stress process. This function is revealed when the religious affiliation, belief, or practice being considered is found to be associated with health and longevity regardless of the stressors or crises that are faced by the population under study. Here religion is shown neither as a coping strategy in response to a specific life exigency nor as a condition that serves as a mediator through which hardships are channeled. Instead, the stressors and the religious dimension may each have its separate and independent relationship to health. It would appear that the efficacy of what we call religious coping is at least occasionally confused with other phenomena. In any case, to assert that religion is used as a coping response to life problems requires a rigorous and specialized line of inquiry.

These statements are not meant to question whether religion contributes to well-being; they are intended to

underscore that within the stress process there are multiple connections between religion and health and that these connections should not be confused with one another. Indeed, the evidence that has been accumulated, however spotty it is, indicates that religion may be more relevant to health as an independent condition rather than through its putative coping functions within a stress process framework. In fact, a major contribution of the three articles is the attention that they give to the independent effects of religion on health. More to the point, they speculate about some of the psychosocial concomitants of religion that might help to explain its observed ability to bolster health and well-being. This entails a different causal paradigm than that described for the stress process. This one posits that health-promoting social, ideational, and personal capital is derived from religious affiliation and practice. It argues that regardless of the stressors people may or may not confront, religion is good for health because of the good capital that may accompany it. Among the hypothesized attendant capital of religion are social support, a sense of mastery or personal control, and coherent meaning. I single these out from those enumerated in the articles because they are conditions that consistently have been shown to be associated with physical and mental health. To the extent that these are among the possible social and personal capital derived from religion, they would help to account for the connection between religion and health.

However, the articles rightfully emphasize the inconsistency with which investigations report these health-supporting conditions to be concomitants of religion. Nevertheless, there is enough evidence along these lines to encourage further inquiry into whether and under what conditions religion carries with its resources promoting health and longevity. In these regards, it is reasonable to add to the cautions expressed by the authors by underscoring that a balanced understanding of the psychosocial concomitants of religion needs to address not only their potential benefits but also their potential harms. For example, does the social support and solidarity that may go with religious participation also create social distance from and aversion to other groups; is the sense of coherence obtained by looking through a lens that restricts vision, as with totalitarian ideologies, and is the sense of control illusory and separated from experiences of successful control?

Probably more than in other areas of inquiry with which I am familiar, a serious probing of the complex connections between religion and health forces the researcher to reconcile a number of seeming contradictions. Whereas we may be accustomed to seeing social life as having desirable or undesirable consequences, religion seems potentially to bear both in relationship to health. Which of these is likely to come into our line of vision somewhat depends on where we look, that is, whether we take into consideration the broad historical

and institutional aspects of religion or that part of it that is incorporated into the experiences and dispositions of individual practitioners. Even at an individual level, we are likely to end up with a rather skewed understanding of health consequences if we ignore those that are potentially negative, such as the effects of discrimination based on religious affiliation. It is obvious that to have a comprehensive understanding of the bearing of religion on well-being, our research must cast a wide net. It must also be prepared to integrate a mixed bag of findings containing the bitter along with the sweet.

At this stage of our efforts, the study of religion and health is a bit like fishing in a stream thought to be full of trout. However, the fish are elusive, and few are suc-

cessfully caught. When one is landed, the rest of us ponder the secrets of the stream and how the successful angler mastered them. It is good that researchers are as tenacious as fisherfolk. We will never know how bountiful the stream really is unless we keep trying to harvest it.

Note

Leonard Pearlin, Department of Sociology, University of Maryland, College Park, MD 20742-1315. E-mail: lpearlin@socy.umd.edu

Religious Systems as “Emotionally Intelligent” Organizations

David Pizarro and Peter Salovey

*Department of Psychology
Yale University*

Since Freud's (1927/1989) dismissive statement that religion was merely neurosis exhibited at the cultural level, psychologists have been intrigued by the nature of the relationship between religion and well-being. The evidence is partially in, and it seems that Freud was again mistaken—if there is any relationship between religion and health, it is likely a positive one. The body of research in support of this conclusion, summarized by the articles in this issue, is an example of the systematic work of a handful of psychologists in search of an explanation for these links; whereas George, Ellison, and Larson focused on the mediators of the effects of religion on well-being, Pargament attended to the moderators of these effects, and Exline offered a useful warning for those who may be tempted by religion for the wrong reasons.

What are the implications of these findings for researchers interested in the psychology of health and well-being? In this response, we argue that although religion seems to be effective in fostering positive coping skills, to explain the link between religion and health fully, the level of analysis should shift away from religion per se and toward more fine-grained constructs. We then offer one possibility—the ability to regulate one's own emotional states—that may help to explain the observed connection between religion and well-being. Finally, we conclude that although we are interested in universal mechanisms, there is much to be learned by understanding religion as an effective source for the transmission of emotional skills. Indeed, religious participation may help in part because some

religious institutions are structured to be “emotionally intelligent” organizations.

Levels of Analysis: Is “Religion” Too Broad of a Construct?

Although there are promising findings and sufficient theoretical interest regarding the link between religion and health to warrant continued research and attention, a level of analysis that focuses on the construct of religion per se may be too unwieldy to make adequate scientific progress. We take this to be one of the conclusions to be drawn from Pargament's (this issue) analysis of the moderators of the religion–health relationship. Pargament argued that the link between religion and well-being holds for some people, within some religions, and across some situations. Indeed, this seems like a prediction that would be difficult to falsify. To be fair, the research on religion and health is fairly young, and the construct of religion is just beginning to be teased apart in a useful way. As research progresses, there are two approaches that one may take in unraveling the observed effects of religion on health. The first is to focus on individuals' specific beliefs about the nature of God and reality. Attempting to answer the question at the level of belief makes sense, as metaphysical beliefs may inoculate the believer by structuring schemas through which individuals can organize and bring meaning to their lives in the face of adverse events (e.g., by making them more hopeful or

optimistic; Scheier & Carver, 1992). This level of analysis, although maintaining a core component of religion (i.e., metaphysical beliefs), is still more manageable than religion broadly defined and has the added advantage of allowing the study of atheists, agnostics, humanists, and existentialists, for instance, and not just believers versus nonbelievers. This category would include Sense of Coherence (Antonovsky, 1980), mentioned by George et al. (this issue), or more simple constructs such as a belief in a higher power or in the willingness to believe truth without evidence.

A second possibility, and the one that best characterizes our approach, is to look for answers at the level of general psychological mechanisms that are, in principle, universally available (i.e., not tied to any specific set of metaphysical beliefs). This approach has the pragmatic advantage of increased applicability across populations (findings can be applied to believers and nonbelievers alike). In this category fall such generic mediators as social support, coping, and, our area of interest, emotional competence.

Either of these approaches can be used to explain the general associations between religious involvement and health, but in “dropping” a level of analysis, researchers can avoid drawing broad conclusions about religion proper (as Pargament warned in his target article). This approach would also protect against the misinterpretation of these findings by lay audiences, who may be tempted to conclude that all religious belief is healthy.

Emotional Skills and Religious Participation

The approach that we have taken has focused specifically on emotional competencies as general mechanisms that play an important role in physical and psychological well-being (Salovey, Bedell, Detweiler, & Mayer, 1999; Salovey, Detweiler, Steward, & Bedell, 2001). Elsewhere, we have argued that emotional skills can be organized into a four-branch framework (Mayer & Salovey, 1997; Salovey & Mayer, 1990): (a) the ability to appraise and express emotion, (b) the ability to use emotions to guide thinking, (c) the ability to understand and use emotional knowledge, and (d) the ability to manage emotions in oneself and in others. Although all of these skills and abilities likely come into play within the religious experience, here we focus on one—the ability to manage emotion—and the role affect regulation may play in mediating the influence of religious participation on well-being. We focus on this branch because of the increasing attention (both theoretical and empirical) that it has received in recent years from various areas within psychology (e.g., clinical, social, developmental) and because of the evidence that has consistently implicated this skill as

important to well-being (e.g., Salovey, Mayer, & Causo, 2002; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995).

Emotional Regulation and Health

There is evidence that mood states can affect the level of immune functioning in individuals. Positive moods encourage improved immune functioning, whereas negative moods are associated with poorer immune functioning (Labott, Ahleman, Wolever, & Martin, 1990; see Salovey, Rothman, Detweiler, & Steward, 2000, for a review). An ability to regulate one’s mood states, then, could play an important role in overall physical health. Individuals that are better able to improve their negative moods should show better overall health outcomes than those that are less able to regulate negative affect. Goldman, Kraemer, and Salovey (1996) measured individuals’ self-reported ability to repair and regulate negative moods and found that, in general, emotion management was associated with fewer reported illnesses in the face of increasing stress levels and fewer somatic symptoms than among those individuals who reported poorer emotional regulatory abilities.

Religion and Emotional Regulation

How might religious belief and participation affect the believer’s ability to regulate emotion? We argue that many religious systems are structured such that emotional skills are fostered and maintained in the individual through strategies that have been proven and refined over time. In other words, religious organizations are often inherently “emotionally intelligent” organizations. These organizations efficiently impart emotional skills to the believer and thus maintain the believer’s psychological and physical well-being.

There are at least three ways in which being a believer may increase one’s ability to engage in effective emotional regulation. First, a believer may have increased access to venues for emotional disclosure. Second, religions often promote exercises (prayer, rituals, meditation) that allow the believer to regulate their own emotions through time-tested procedures. Finally, religious believers may have greater access to “regulation experts” or individuals who are in their position partly because of the skills they have to regulate emotions in others.

The disclosure of emotion has been implicated in overall well-being across many studies (see Smyth, 1998). For instance, Pennebaker, Kiecolt-Glaser, and Glaser (1988) have found that the emotional disclosure of a traumatic experience can improve physical well-being (as measured by immune functioning). Believers

may have an advantage in that they are often encouraged to “lay down their burdens” by taking their troubles to a clergyman (priest, minister, pastor), a fellow believer, or God. Through structured venues like confession or pastoral counseling, believers have readily accessible outlets for the disclosure of emotion. This disclosure of emotions, both positive and negative, may be an effective tactic in reducing stress levels and in lowering negative affect in the long run.

Another advantage afforded believers is access to religious practices that involve a heavy dose of emotional regulation. These may be practices such as prayer, meditation, or other rituals that can serve to lessen the intensity and impact of negative emotions. For instance, believers who are encouraged to engage in structured rituals, such as quiet moments alone with God, Sabbath rests, or morning devotionals, are effectively reducing their stress, alleviating negative moods, and increasing positive moods.

Finally, believers are at an advantage when it comes to seeking out emotional regulation from others. We are all familiar with individuals who seem especially good at regulating the emotions of other people. Although at first thought this may seem manipulative (and indeed, con artists, salesmen, and cult leaders, for instance, may all use this skill in the service of manipulation), many of these individuals have more noble goals and are constantly sought out by friends and acquaintances whenever they are feeling down. These emotionally intelligent individuals often select careers or occupations that make use of these skills (e.g., therapist, counselor, teacher). Religious leaders may be among those with more refined abilities to regulate emotions in others. Believers may find themselves consistently turning to ministers or rabbis to provide assistance in alleviating their negative feelings. Weekly religious services may also serve this goal. An uplifting sermon can “reset” the emotional system by providing individuals a much needed dose of positive affect.

Religion and the Social Transmission of Emotional Skills

It seems clear that religion provides an effective vessel for the social transmission of emotional abilities, which in turn may positively affect the health and well-being of practitioners. One advantage to being a participant in religious activities is that religion is an efficient, culturally validated source for the transmission of these abilities. The effects of religion on health outcomes, then, may be at least partially mediated by the incidental emphasis that religions place on emotional regulation.

However, although religious organizations may be a very good source for learning emotional skills and abilities, it is unlikely that they are the only source. Other or-

ganizations such as support groups or social clubs may also be emotionally intelligent organizations. These organizations may be more viable alternatives for individuals that are not inclined to religious participation. However, given the nature and consistency of the findings, any organization attempting to shape the emotional abilities of its members may find it useful to turn to religious institutions as a powerful example.

Note

Peter Salovey, Department of Psychology, Yale University, P.O. Box 208205, New Haven, CT 06520-8205.
E-mail: peter.salovey@yale.edu

References

- Antonovsky, A. (1980). *Health, stress, and coping*. San Francisco: Jossey-Bass.
- Freud, S. (1927/1989). *The future of an illusion*. New York: Norton.
- Goldman, S. L., Kraemer, D. T., & Salovey, P. (1996). Beliefs about mood moderate the relationship of stress to illness and symptom reporting. *Journal of Psychosomatic Research, 41*, 115-128.
- Labott, S. M., Ahleman, S., Wolever, M. E., & Martin, R. B. (1990). The physiological and psychological effects of the expression and inhibition of emotion. *Behavioral Medicine, 16*, 182-189.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3-31). New York: Basic.
- Pennebaker, J. W., Kiecolt-Glaser, J. K., & Glaser, R. (1988). Disclosure of traumas and immune function: Health implications for psychotherapy. *Journal of Consulting and Clinical Psychology, 56*, 239-245.
- Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait-Meta-Mood Scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, and health* (pp. 125-154). Washington, DC: American Psychological Association.
- Salovey, P., Bedell, B. T., Detweiler, J. B., & Mayer, J. D. (1999). Coping intelligently: Emotional intelligence and the coping process. In C. R. Snyder (Ed.), *Coping: The psychology of what works* (pp. 141-164). New York: Oxford University Press.
- Salovey, P., Detweiler, J. B., Steward, W. T., & Bedell, B. T. (2001). Affect and health relevant cognition. In J. P. Forgas (Ed.), *Handbook of affect and social cognition* (pp. 344-368). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9*, 185-211.
- Salovey, P., Mayer, J. D., & Caruso, D. (2002). The positive psychology of emotional intelligence. In C. R. Snyder & S. J. Lopez (Eds.), *The handbook of positive psychology* (pp. 159-171). New York: Oxford University Press.
- Salovey, P., Rothman, A. J., Detweiler, J. B., & Steward, W. T. (2000). Emotional states and physical health. *American Psychologist, 55*, 110-121.
- Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research, 57*, 1024-1040.
- Smyth, J. M. (1998) Written emotional expression: Effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology, 66*, 174-184.

Synergies

Michael Ross and Sara H. Konrath

*Department of Psychology
University of Waterloo*

Is it helpful to be religious? The three target articles focused on this question. The favored answer, “it depends,” seems a foregone conclusion given the amorphous nature of both the “independent variable,” religion (the many different brands offer contrasting behavioral and spiritual advice), and the “dependent variable,” well-being (which is operationalized in a variety of ways, including ability to cope with stress, success in social relationships, physical and psychological health, and mortality), as well as the differing quality of the samples and measures.

The authors decried the lack of research on religion. What strikes us is not the dearth of relevant research—the literature reviewed in the target articles is far from negligible—but the focus on the costs and benefits of religion. Such research can help delineate which types of religious practices affect which outcomes, and all three articles have taken important steps in this direction. There are additional issues that could be explored profitably, however. Religion embodies the wisdom of the ages and has attracted the attention of some of the most gifted thinkers throughout history. As a result, religious texts and discussions provide a rich store of hypotheses about human behavior that could be subjected to scientific test by research psychologists.

Our own current research interest is in people’s views of themselves through time. We have developed a theory of temporal self-appraisal (Ross & Wilson, 2000; Wilson & Ross, 2001) that examines how people evaluate past selves and how those evaluations affect their current self-appraisals. We consider factors that lead people to perceive a unity with their earlier selves and those that lead people to embrace and exaggerate change.

Reading the target articles inspired an admittedly cursory look at writings and discussions on religion to see what they had to offer of relevance to our own research concerns. Not surprisingly, given our interest in perceived transformation and change, we discovered a vein well worth mining. In the next few pages, we provide some examples of what we found and connect them to our own work.

People’s stories of their lives are tales of continuity in the face of change. Across the lifespan, just about everything within and about us changes, including our bodies, knowledge, attitudes, family constellations, friendships, homes, and belongings. However, we often perceive a continuous self. Many authors have argued that this perception of self-continuity is both a philosophical (e.g., Flanagan, 1996) and psychological imperative (e.g., Ball & Chandler, 1989; Chandler, in

press). Philosophical discussions include intriguing analogies such as the ship of Theseus (Nozick, 1981). As the ship ages, its boards are gradually replaced until the entire vessel is rebuilt. When if ever, ask philosophers, is it a different ship? When the vessel is a person the preferred philosophical answer seems to be “never.” Imagine a society in which individuals are seen as unconnected to their earlier selves. Logically, crimes would go unpunished and achievements unrewarded because there would then be no basis for holding people responsible for previous actions or commitments (Chandler, in press; Harré, 1980). Why penalize or compensate someone who is now a different person from the perpetrator?

Religious passages deal with this very issue. For example, below is a section of a text probably written in the 1st century B.C. to dispel doubts about various tenets of Buddhism. It is written in the form of dialogue between King Melinda (the Greek King Menander) and Nagasena, a Buddhist monk:

The king said: “He who is born, Nagasena, does he remain the same or become another?”

“Neither the same nor another.”

“Give me an illustration.”

“Now what do you think, O king? You were once a baby, a tender thing, and small in size, lying flat on your back. Was that the same as you who are now grown up?”

“No. That child was one, I am another.”

“If you are not that child, it will follow that you have had neither mother nor father, no! nor teacher. You cannot have been taught either learning, or behaviour, or wisdom. What, great king! is the mother of the embryo in the second stage, or the third, or the fourth? Is the mother of the baby a different person from the mother of the grown-up man? Is the person who goes to school one, and the same when he has finished his schooling another? Is it one who commits a crime, another who is punished by having his hands and feet cut off?”

“Certainly not. But what would you, Sir, say to that?”

The Elder replied: “I should say that I am the same person, now I am grown up, as I was when I was a tender tiny baby, flat on my back. For all these states are included in one by means of this body.”

“Give me an illustration.”

“Suppose a man, O king, were to light a lamp, would it burn the night through?”

“Yes, it might do so.”

“Now, is it the same flame that burns in the first watch of the night, Sir, and in the second?”

“No.”

“Or the same that burns in the second watch and in the third?”

“No.”

“Then is there one lamp in the first watch, and another in the second, and another in the third?”

“No. The light comes from the same lamp all the night through.”

“Just so, O king, is the continuity of a person or thing maintained. One comes into being, another passes away; and the rebirth is, as it were, simultaneous. Thus neither as the same nor as another does a man go on to the last phase of his self-consciousness.”

“Give me a further illustration.”

“It is like milk, which when once taken from the cow, turns, after a lapse of time, first to curds, and then from curds to butter, and then from butter to ghee. Now would it be right to say that the milk was the same thing as the curds, or the butter, or the ghee?”

“Certainly not; but they are produced out of it.”

“Just so, O king, is the continuity of the person or thing maintained. One comes into being, another passes away; and the rebirth is, as it were, simultaneous. Thus neither as the same nor as another does a man go on to the last phase of his self-consciousness.”

“Well put, Nagasena!” (Davids, 1969, pp. 63–65)

The philosophical dilemma posed in this passage is echoed in debates appearing in the media today. In recent years, a number of murderers who have undergone religious conversion have requested clemency on the grounds that they are now different people from the perpetrators of the crimes. For example, Karla Faye Tucker was sentenced to die after she brutally murdered two people with a pickaxe in Texas in 1983. After becoming a born-again Christian in prison, she claimed that she was a different person than the one who committed the murders. Her impending execution created an international uproar. The Pope and other notables argued for mercy because Tucker was a changed person who was no longer a menace to society. The Governor of Texas at the time, George W. Bush, and the Texas parole board rejected the appeals. Tucker was sentenced to death by lethal injection.

On January 14, 1998, just 3 weeks before her execution, Karla Faye appeared on *Larry King Live* on CNN (King, 1998). In the interview, she dissociated her current self from her self at the time of the murders. The interview included the following exchanges:

King: Do you feel you're a different person?

Tucker: Yes, I am.

King: Is that part of your argument?

Tucker: That is definitely part of the argument on our writ, and part of my argument, or part of my appeal to them is that when you change from being a part of the problem to being a part of the solution, allow somebody that—if I was in here still messing up, still hurting

people or trying to kill people, I know that the parole board would strike that against me in a major way. So if there is a change for the positive, and it's proven, and it's factual, why can't that be considered?

Later in the interview Karla Faye continued to appeal for a pardon based on her transformation:

King: So you're asking for a commutation because “I have changed, I am not the person I was, I believe in the Lord, I am a good person, I can help people, I don't deserve to die.” Is that, in essence, the summation of what you're asking the state of Texas?

Tucker: That's, yes, that's pretty good, to say that I am no longer a continual threat to society, which is one of the things, in order to give a death sentence, ... a question has to be answered: Would this person be a continual threat to society and do bodily harm to somebody? No, I won't.

The international protest and the interview with King raise intriguing social psychological questions concerning perceptions of self-continuity, personal responsibility, and justice that could be probed in experimental research. When do we see ourselves or other people as genuinely transformed? If a person is apparently transformed, are we willing to accept a kind of statute of limitations such that the current individual is not held responsible for the actions of his or her earlier selves? When and why might we be unwilling to agree to such limitations? The theorizing of Dweck (1991) and Ross and Wilson (2000) is relevant to these questions, but we are not aware of psychological research that directly addresses the issues.

Researchers have examined other questions related to self-continuity. In particular, Michael Chandler and his colleagues have studied the psychological implications of denying self-continuity during adolescence (Ball & Chandler, 1989; Chandler, in press). These researchers find that a perception of self-continuity may be critical to subjective well-being. How do people manage to maintain a belief in self-continuity in the face of all of the changes that they experience? When do they prefer to emphasize change rather than continuity? These questions are under investigation in our own lab as well as by Chandler's group.

When people experience religious conversions, they regard themselves as new and improved models of their former selves. Ullman (1989) proposed that converts arrive at this conclusion in part by exaggerating their preconversion sinfulness: “This tendency to denounce the old life as an abomination is evident in some accounts of religious conversions in which relatively innocent transgressions of youth are elevated to the status of major crimes and deplored by a repentant

convert” (p. 14). Ullman used Tolstoy’s autobiography to illustrate her thesis. After experiencing a religious conversion, Tolstoy was highly critical of his youthful self. According to Ullman, Tolstoy

describes the average life of a young man of society but, in his description, the vain, purposeless aspects of this life are painted with such extremity and force as to single him and his companions out as intentional, corrupt villains. (p. 178)

Ross and Conway (1986) and Conway and Ross (1984) discovered a similar type of retrospective bias while researching self-improvement programs such as study skills courses. Although participants tend to regard such programs favorably, researchers suggest that the programs are generally ineffective. If the researchers are correct, why do participants see the programs as successful? Ross and Conway obtained experimental evidence that, after engaging in a self-improvement program, participants exaggerate how deficient they were before they began the program. This retrospective bias allows them to claim improvement when little or none occurs. The recall bias also provides a means of perceiving progress without unduly enhancing one’s current abilities or qualities. Participants do not necessarily view themselves as terrific now, but they do see improvement. A highly unrealistic judgment of the present self could get people into trouble: They might undertake actions and responsibilities that they are poorly equipped to perform. In contrast, the past is past: There is often little harm in misconstruing how one used to be, as well as little objective evidence to discredit one’s recall.

Criticism of distant past selves occurs even in the absence of religious conversions or self-improvement programs (Wilson & Ross, 2001). Psychological research suggests that people are highly motivated to perceive themselves as improving on dimensions that matter to them. According to Ross and Wilson’s (2000) temporal self-appraisal theory, people often derogate distant past selves to perceive such improvement. When an earlier self is sufficiently distant, the current self can deny responsibility for its actions and outcomes (“that was the old me”). Consequently, criticism of a distant self tends not to taint the present self and allows individuals to perceive themselves as improving on important dimensions. Wilson and Ross (2001) documented the tendency to criticize distant past selves and show that a perception of improvement can be illusory.

Following a religious conversion, people tend to dissociate themselves from their previous selves by emphasizing growth and change. Even in the absence of a formal conversion, however, people tend to separate themselves from past outcomes and actions that could have unfavorable implications for their current self-regard. Cameron, Ross, and Holmes (2002) had

members of dating couples report an earlier transgression that was committed by one partner against the other. Transgressors perceived themselves as having changed and improved more since the time of the transgression than did their victims (Cameron et al., 2002). In other research, individuals reported that their failures feel further away than do their successes, even when the actual temporal distance of the two outcomes is the same (Ross & Wilson, 2002). By distancing failures, individuals can reduce the culpability of the present self for these negative outcomes.

In summary, the target articles have led us to recognize a possible synergy between our own work and psychological analyses offered in religious writings and discussions. From our perspective, these analyses provide potentially interesting insights into human behavior. There are a lot of testable hypotheses waiting to be discovered, as well as stirring quotes that can be used to enliven journal articles. We propose to neither extol nor debunk religion, but to use it as a valuable resource.

Note

Michael Ross, Department of Psychology, University of Waterloo, 200 University Avenue West, Waterloo, Ontario, Canada, N2L 3G1. E-mail: mross@watarts.uwaterloo.ca

References

- Ball, L., & Chandler, M. J. (1989). Identity formation in suicidal and non-suicidal youth: The role of self-continuity. *Development and Psychopathology, 1*, 257–275.
- Cameron, J. J., Ross, M., & Holmes, J. G. (2002). Loving the one you hurt: Positive effects of recounting a transgression against an intimate partner. *Journal of Experimental Social Psychology, 38*, 307–314.
- Chandler, M. J. (in press). The time of our lives: Self continuity in native and non-native youth. *Advances in Child Development and Behavior*.
- Conway, M., & Ross, M. (1984). Getting what you want by revising what you had. *Journal of Personality and Social Psychology, 47*, 738–748.
- Davids, T. W. (Trans.). (1969). The questions of King Milinda. In F. M. Muller (Ed.), *The sacred books of the east* (Vol. 35, Part I). India: Motilal Banarsidass.
- Dweck, C. S. (1991). Self theories and goals: Their role in motivation, personality, and development. In R. Dienstbier (Ed.), *Nebraska Symposium on Motivation: Vol. 38. Perspectives on motivation, 1990* (pp. 199–235). Lincoln: University of Nebraska Press.
- Flanagan, O. (1996). *Self-expressions: Mind, morals, and meaning of life*. New York: Oxford University Press.
- Harré, R. (1980). *Social being: A theory for social psychology*. Lanham, NJ: Littlefield Adams.
- King, L. (1998, January 14). *Larry King live* [Television broadcast]. New York: Cable News Network. Retrieved from

- <http://www.cnn.com/SPECIALS/1998/tucker.execution/transcripts/trans.1.14.html>
- Nozick, R. (1981). *Philosophical explanations*. Cambridge, MA: Harvard University Press.
- Ross, M., & Conway, M. (1986). Remembering one's own past: The construction of personal histories. In R. M. Sorrentino & E. T. Higgins (Eds.), *The handbook of motivation and cognition: Foundations of social behavior* (pp. 122–144). New York: Guilford.
- Ross, M., & Wilson, A. (2000). Construing and appraising past selves. In D. L. Schacter & E. Scarry (Eds.), *Memory, brain and belief* (pp. 231–258). Cambridge, MA: Harvard University Press.
- Ross, M., & Wilson, A. (2002). It feels like yesterday: Self-esteem, valence of personal past experiences, and judgements of subjective distance. *Journal of Personality and Social Psychology*, *82*, 792–803.
- Ullman, C. (1989). *The transformed self: The psychology of religious conversion*. New York: Plenum.
- Wilson, A., & Ross, M. (in press). From chump to champ: People's appraisals of their earlier and present selves. *Journal of Personality and Social Psychology*, *80*, 572–584.

The Ultimate Elixir?

Jeffrey A. Simpson

*Department of Psychology
Texas A&M University*

As the authors of these target articles lamented, psychologists have been remarkably adept at avoiding the scientific study of religion. They have done this despite the fact that matters of “ultimate concern” (Tillich, 1951) apparently do have important psychological and health-related implications, at least for certain people holding certain religious views in certain social contexts.

Why has psychology historically turned a blind eye to matters of religion? Some researchers may have been daunted by the myriad methodological, ethical, and logistical problems associated with “scientizing” the study of religion. Others may have wanted to avoid being associated with a “soft” and seemingly unscientific area of inquiry. However, psychologists have neglected the topic of religion for two additional reasons. Until recently, relatively little attention has been devoted to understanding factors that *promote* health and subjective well-being; the lion's share of attention has traditionally focused on factors that promote negative outcomes. Furthermore, few major psychological theories or models have been directly applied to the psychology of religion. Without having overarching theories to stimulate critical questions and organize research findings, the psychology of religion has not generated much in the way of cumulative knowledge.

In this commentary, I first discuss how attachment theory has recently been applied to extend our understanding of both normative and individual difference facets of religious experiences (Kirkpatrick, 1999). I then suggest how recent research testing the uncertainty reduction model (Murray, 1999) might be conceptually extended to broaden our understanding of what sustains religious conviction in the face of doubts and uncertainty. Based on the target articles, I conclude by briefly discussing a general mediation model that suggests how certain fundamental dimensions underlying religious

experience might be related to various markers of well-being through specific mediating variables.

Attachment Theory and Religion

As the authors of these target articles noted, the study of religion is starting to be anchored in major psychological theories, including broad theories of attachment (Kirkpatrick, 1999), motivation and personality (Emmons, 1999), attribution (Spilka, Shaver, & Kirkpatrick, 1997), and development (Reich, 1997). Although multiple perspectives are needed to understand fully how and why religion affects the lives of some people positively and others negatively, attachment theory offers one coherent perspective. It does so by explaining why so many people believe in “stronger/wiser” deities and why people with different personal histories and experiences have starkly different religious views and experiences.

According to Bowlby (1969), the attachment behavioral system evolved because it promoted close physical proximity between vulnerable infants and their stronger/wiser caregivers. Because of the strong selection pressures associated with predation and other factors that increased infant mortality in evolutionary environments, infants who sought close proximity to their caregivers and protested vehemently when left alone should have been more likely to survive and pass these genetically based attachment propensities on to their ancestors. As individuals develop, the desire for close physical proximity is transformed into a desire to maintain a sense of “felt security,” which occurs when individuals feel confident that their attachment figures are (or will be) available to provide safety, comfort, and support in times of need (Sroufe & Waters, 1977).

According to attachment theory, therefore, the propensity to seek solace in stronger/wiser others is a remnant of our evolutionary/biological heritage.

Kirkpatrick (1999) argued that perceived relationships with God (or God-like figures) can meet all of the criteria of true attachment relationships—proximity maintenance, safe haven, and secure base. Although relationships with God differ from those with humans in a few major ways (e.g., relationships with people involve reciprocity and, in the case of adult romantic relationships, sexuality), Kirkpatrick reviewed an array of evidence suggesting that (a) perceived relationships with God are systematically related to the particular religious beliefs that individuals hold; (b) emotional bonds with God are similar to the type of love experienced in mother–infant relationships; and (c) for most (but not all) people, God tends to be seen as a secure attachment figure.

Most empirical research to date has examined how people with different attachment styles view God and how these conceptualizations are associated with different religious beliefs and practices. Two robust dimensions are known to underlie self-report adult attachment scales: views of the self as a relationship partner and views of others as relationship partners (Brennan, Clark, & Shaver, 1998). Securely attached people tend to have positive views of both themselves and others, whereas insecurely attached people harbor negative views on one or both attachment dimensions. Recently, Kirkpatrick (1998) documented that the self and others dimensions are associated with different kinds of perceptions of God. Specifically, beliefs about what God is like (e.g., loving vs. vengeful) are related to self-views, such that people who view themselves as worthy of being loved envision God as more loving, whereas those who see themselves as unworthy of love imagine God as more wrathful. In contrast, beliefs about whether a personal relationship can be formed with God are linked with views of others (i.e., the degree to which attachment relationships are valued and attachment figures are assumed to be trustworthy and well intentioned). People who view attachment figures as trustworthy tend to believe that a personal relationship with God can be formed; those who view attachment figures with distrust and cynicism do not. This research represents a significant theoretical advance in how God is represented and construed in the minds of different people. Images of God are clearly not monolithic.

Although the views of self and others that individuals harbor are associated with both familial factors (i.e., an individual's perceptions of how affectionate and controlling his or her parents were during childhood) as well as cultural factors (i.e., the degree to which a given culture socializes children to believe in loving vs. malevolent religious figures), Kirkpatrick (1998) contended that God can serve as a “substitute” attachment figure, sometimes to remediate the absence

or shortcomings of human attachment figures. He proposed that God is most likely to become a substitute attachment figure in times of severe stress or crisis, when human attachment figures have been lost or are unavailable, when an individual had an insecure attachment history in childhood, or when an individual is (or becomes) insecure in adulthood. In summary, the attachment perspective can explain why many people are drawn to stronger/wiser others (including religious figures) in the first place and why certain images (reflected in views of self and others) may lead to different beliefs and expectancies about God's attributes.

Uncertainty Reduction Processes

Believing in a higher power and devoting one's life to religious principles and practices require an ultimate leap of faith. Inevitably, doubts about cherished religious beliefs are bound to arise, even among the most devout believers. What psychological process might reduce or quell these uncertainties and sustain religious convictions in the face of contradictory information? Some tentative ideas might be gleaned from recent research on uncertainty reduction processes (see Murray, 1999). According to the uncertainty reduction model (Holmes & Rempel, 1989), high levels of dependence on others (including, perhaps, religious figures) should instill feelings of vulnerability. To counteract this anxiety-inducing state, many people may use psychological tactics that allow them to restore (and perhaps bolster) personal confidence that their attachment figures will be responsive and available when needed.

Several well-studied psychological processes tend to reduce uncertainty. In romantic relationships, for example, uncertainties can be reduced and convictions sustained if individuals make benevolent (relationship or partner-enhancing) attributions for the actions of their attachment figures (Bradbury & Fincham, 1990), if they typically view their attachment figures in the best possible light (Murray, Holmes, & Griffin, 1996), or if they believe they and their attachment figures have an optimistic future together (Helgeson, 1994). Uncertainties might also be assuaged if individuals feel that they have resolved difficult problems with the collaborative help of their attachment figures (Simpson & Rholes, 1994) or if they change their “ideal” standards for attachment figures to match more closely their current perceptions of their attachment figure, given current life circumstances (cf. Fletcher, Simpson, & Thomas, 2000). At a more global level, uncertainties tend to wane when individuals elevate the importance of their attachment figure's greatest virtues, downplay their most serious faults, and “excuse” and then dismiss their faults by tying them to stellar virtues (Murray & Holmes, 1993).

This type of complex, integrative thinking—where an attachment figure’s faults are linked through associative networks in memory to their most laudatory virtues so that apparent faults automatically activate redeeming virtues—could be one of the primary cognitive mechanisms that sustains religious convictions over time. If an attachment figure’s faults become too glaring, however, the most severe faults might be compartmentalized and “sealed off” from an attachment figure’s other attributes (cf. Showers, 1992). If the seal eventually breaks, people may experience sharp declines in conviction, especially if severe faults erode previously “undefended” and unquestioned virtues. Future research needs to explore how different uncertainty reduction tactics are associated with stability and change in religious commitment across time.

A Model of Religion and Well-Being

Viewed together, the target articles imply a general mediation model linking various dimensions of religion with different markers of well-being. This implicit model involves a small set of core predictor variables, a set of possible mediators, and measures assessing two major domains of well-being.

At present, the most pressing need is to identify and test the core dimensions that form the major theoretical joints of religious experiences. Precisely what (or where) these joints are is not entirely clear. The target articles, however, highlight four major predictor variables worthy of further study: (a) the source of religious motivation (intrinsic vs. extrinsic), (b) the degree to which God is viewed as a secure versus an insecure attachment figure, (c) the level of commitment/devotion to religious beliefs, and (d) the degree to which religion provides coherence and meaning regarding “ultimate-level” questions about life and death. In addition, four potential mediators were identified: (a) health practices, (b) quality of social support (e.g., instrumental, emotional), (c) psychosocial factors (e.g., self-esteem, self-efficacy), and (d) coping strategies (e.g., problem-focused, emotion-focused). Finally, at least two general domains of well-being were discussed: (a) subjective well-being and (b) health.

Recent evidence suggests that religious beliefs that are internalized, are intrinsically motivated, offer meaningful coherence, and are grounded in a “secure” relationship with God tend to predict greater positive well-being. However, we still know very little about (a) how these predictor variables are interrelated, (b) whether they predict particular forms of positive versus negative well-being additively or interactively, and (c) the specific mediation pathways through which certain predictor variables (or certain interactive sets of predictors) predict certain forms of positive versus negative well-being.

Perhaps more important, we do not know whether portions this model might be qualified by external fac-

tors. For instance, the model might predict both positive and negative well-being outcomes most strongly for people who feel marginalized by society, lack education or financial resources, have weak social support networks, are terminally ill, have recently lost a loved one, or are experiencing chronic life stressors. The most positive effects on long-term well-being may be witnessed in people who could benefit the most from the “buffering” effects that certain religious orientations might provide (e.g., the marginalized, the poor, the socially isolated, and those dealing with death), especially if they have an intrinsic orientation to religion, have a secure image of God, are devoutly committed to their religious beliefs, and believe that religion gives them a deeper sense of meaning and purpose in life. These four predictor variables might promote enhanced well-being over time, either individually (additively) or interactively. Conversely, the most negative effects on well-being may occur for people who need the potential buffering effects of religion yet have an extrinsic orientation, view God as an insecure attachment figure, are not highly committed to their religious beliefs, or have not found coherence and deeper purpose. In this case, the four predictor variables actually might contribute to the deterioration of long-term well-being, either individually or interactively.

The processes that mediate links between certain predictors (or certain combinations of predictors) and different facets of well-being may also have sequential effects. For example, having an intrinsic orientation, a secure view of God, greater religious commitment, and a strong sense of purpose/meaning may promote the use of collaborative, problem-focused coping strategies when personal problems arise, which may in turn increase social network size, social interaction, instrumental assistance, and subjective impressions of emotional support. Within limits, heightened social support may increase self-efficacy and motivate people to take better care of their health. A different pattern may emerge for people with an extrinsic orientation, an insecure view of God, less religious commitment, or a more limited sense of coherence, especially if these attributes foster deferential, emotion-focused, or avoid forms of coping.

Needless to say, it will be difficult to disentangle putative causal links between the major variables in this model. In the end, however, such detailed knowledge is needed to understand why certain people who profess certain religious views in certain social contexts experience improved versus deteriorated well-being across time.

Note

Jeffrey A. Simpson, Department of Psychology, Texas A&M University, College Station, TX 77843-4235. E-mail: jas@psyc.tamu.edu

References

- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic.
- Bradbury, T. N., & Fincham, F. D. (1990). Attributions in marriage: Review and critique. *Psychological Bulletin*, *107*, 3–23.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York: Guilford.
- Emmons, R. A. (1999). *The psychology of ultimate concerns: Motivation and spirituality in personality*. New York: Guilford.
- Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000). Ideals, perceptions, and evaluations in early relationship development. *Journal of Personality and Social Psychology*, *79*, 933–940.
- Helgeson, V. S. (1994). The effects of self-beliefs and relationship beliefs on adjustment to a relationship stressor. *Personal Relationships*, *1*, 241–258.
- Holmes, J. G., & Rempel, J. K. (1989). Trust in close relationships. In C. Hendrick (Ed.), *Review of personality and social psychology: Close relationships* (Vol. 10, pp. 187–219). Newbury Park, CA: Sage.
- Kirkpatrick, L. A. (1998). God as a substitute attachment figure: A longitudinal study of adult attachment style and religious change in college students. *Personality and Social Psychology Bulletin*, *24*, 961–973.
- Kirkpatrick, L. A. (1999). Attachment and religious representations and behavior. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 803–822). New York: Guilford.
- Murray, S. L. (1999). The quest for conviction: Motivated cognition in romantic relationships. *Psychological Inquiry*, *10*, 23–34.
- Murray, S. L., & Holmes, J. G. (1993). Seeing virtues in faults: Negativity and the transformation of interpersonal narratives in close relationships. *Journal of Personality and Social Psychology*, *65*, 707–772.
- Murray, S. L., Holmes, J. G., & Griffin, D. (1996). The benefits of positive illusions: Idealization and the construction of satisfaction in close relationships. *Journal of Personality and Social Psychology*, *70*, 79–98.
- Reich, K. H. (1997). Integrating differing theories: The case of religious development. In B. Spilka & D. N. McIntosh (Eds.), *The psychology of religion: Theoretical approaches* (pp. 105–113). Boulder, CO: Westview.
- Showers, C. J. (1992). Compartmentalization of positive and negative self-knowledge: Keeping bad apples out of the bunch. *Journal of Personality and Social Psychology*, *62*, 1036–1049.
- Simpson, J. A., & Rholes, W. S. (1994). Stress and secure base relationships in adulthood. In K. Bartholomew & D. Perlman (Eds.), *Attachment processes in adulthood* (pp. 181–204). London: Kingsley.
- Spilka, B., Shaver, P. R., & Kirkpatrick, L. A. (1997). A general attribution theory for the psychology of religion. In B. Spilka & D. N. McIntosh (Eds.), *The psychology of religion: Theoretical approaches* (pp. 153–170). Boulder, CO: Westview.
- Sroufe, L. A., & Waters, E. (1977). Attachment as an organizational construct. *Child Development*, *48*, 1184–1199.
- Tillich, P. (1951). *Systematic theology* (Vol. 1). Chicago: University of Chicago Press.

The Psychology of Religion and the Religion of Psychology

Alana Conner Snibbe and Hazel Rose Markus

Department of Psychology
Stanford University

When and why is religion good or bad for the individual? This seems like a fairly straightforward question to ask regarding the relationship between religion and well-being; however, built into this question are three additional queries: What kind of thing is religion? What kind of thing is the individual? What is good? The target article authors seemed to answer these questions in the following ways: Religion is an attribute of the individual that can be freely chosen, tailored to the individual's unique experiences and needs, or even rejected outright. Like an elixir or tonic, it has health-promoting "active ingredients" that can and should be isolated, so that we may even be able to "provide them in ways that are acceptable to people unwilling to participate in religion" (George, Ellison, & Larson, this issue). The individual, in turn, is understood to be an entity that freely chooses, tailors, manipulates, and rejects. Good is the maximization of the individual's subjective experience of goodness as he or she defines it (which usually correlates highly with the larger cultural definition of *good* as longevity and the absence of

suffering). In short, the authors tended to represent religion as an attribute of the independent, autonomous person who can assume or discard this attribute as his or her own personally chosen values dictate.

At the same time, the authors acknowledged the powerful role that religions play in shaping the meanings, practices, and understandings of the environments with which we engage. This acknowledgment reveals an understanding of religions as more than just attributes that individuals can adopt or ignore, exploit or abandon. Religions define what it means to be a person and what is good. Thus, to the extent that religions differ from each other—within and between social, cultural, and historical contexts—understandings of the person and of the good should also differ. Research on the psychology of religion, therefore, compels us to pay closer attention to the social, cultural, and historical contexts of behavior.

Indeed, the authors recognized, to greater and lesser degrees, that the answers to the question "when and why is religion good or bad for the individual" vary across contexts. Pargament (this issue) even went so far

as to reformulate the question to reflect the contextual variability of its answers: “How helpful or harmful are particular forms of religious expression for particular people dealing with particular situations in particular social contexts according to particular criteria of helpfulness or harmfulness?” Despite such circumspection, he and the other authors presented many of their conclusions as general and universal. After closer examination, a few of these conclusions would seem to be limited to the Protestant Christian contexts in which this research was conducted. Two of these conclusions are (a) that a secure relationship with a personal God leads to well-being, whereas a tenuous relationship with God leads to less positive outcomes, and (b) that intrinsically motivated participation in a personally chosen religion leads to better outcomes, whereas “imposed” or “unexamined” religious participation has negative effects on individual well-being.

Psychological research and findings often reflect participants’ sociocultural and historical positioning, but they can also incorporate the positioning of the researchers. As a predominately European American undertaking with European American practitioners, modern psychology—especially social psychology, on which the psychology of religion extensively draws—reflects and projects European American understandings about the individual and human nature. Protestant Christianity is the source of many of these understandings. As a result, the beliefs, meanings, and practices of Protestant Christianity affect not only participants’ responses and researchers’ subsequent interpretations thereof, but also the problems that researchers identify and the questions that they ask in the first place. Consequently, psychologists (including those who identify themselves as Jewish, Catholic, or atheist) must be aware of the assumptions that we have inherited from our Protestant Christian heritage and that pervade the theories, models, and practices of our field. If left unexamined, these assumptions may not only limit the generalizability of findings to other cultural and religious contexts, but may also obscure some of the causes of behavior. More egregiously, assuming that the ways and mores of Protestant Christians are somehow natural and inevitable could also result in the stigmatization or “othering” of non-Protestant groups and cultural contexts.

Cultural Limitations of the Current Research

It is a sign of psychology’s growing awareness of the sociocultural situating of behavior that all of the researchers in this symposium mentioned that their subjects were overwhelmingly Protestant Christians. However, like most other psychologists, they are not of one mind as to whether and why this matters. For example, after acknowledging that most of her examples are based in Protestant Christianity, Exline (this issue) con-

cluded that “the basic principles raised here should be common to many religions.” Conversely, George et al. (this issue) concluded that “there simply are not enough [non-Christians] to know if the effects of religion on health are similar for Christians and non-Christians.”

We believe that the relative homogeneity of these participant populations matters a great deal. As we move away from the American cultural context, the importance of a personal relationship with God and individually chosen, “intrinsically motivated” religious participation seem to fade. Most of the world’s religions do not understand divine beings as entities with which one has a direct, personal relationship. Even among Christians, the notion of a highly individualized divinity became emphasized only after the Protestant Reformation (Giorgi & Marsh, 1990; Kitayama & Markus, 1999; Markus, Mullally, & Kitayama, 1997; Sampson, 2000).

Recent research suggests that the European American emphasis on personal choice and intrinsic motivation may also turn out to be a relatively localized and newly arrived peculiarity. In their research on culture and motivation, for example, Iyengar and Lepper (1999) found that the provision of personal choice enhanced the intrinsic motivation of European American children (as measured by their persistence in, liking of, and performance on a task), but not of Asian American children. Asian American children proved most intrinsically motivated when choices were made for them by significant others, such as parents or in-group peers.

Iyengar and Lepper (1999) explained their findings in terms of the different construals of self that are fostered in European American and Asian American contexts. In European American cultural contexts, the self—although requiring others for appraisal, comparison, and connection—is understood as an independent, autonomous entity, made up of unique, internal attributes, which behaves primarily as a consequence of those internal attributes (Markus & Kitayama, 1991). Choice is vitally important for the construction of the European American self because choice is a primary medium through which individuals both express their unique, internal attributes and also influence and control their environments. In East Asian cultural contexts, on the other hand, the construal of self is more explicitly interdependent. Individuals are understood to be centers of dynamic social relationships, and behavior is understood to result from actively referencing and adjusting to these relationships. For members of cultures fostering this more explicitly interdependent mode of being, choices do not index the stuff of which the individual is made.

Subsequent cultural psychological research supports the notion that the links between personal choice, the expression of internal attributes, and control of the environment may be strongest for members of cultures that emphasize an independent mode of self-making (e.g., Kitayama & Markus, 2000). In cultural contexts

where a more interdependent sense of self is fostered, the act of making a personal choice may be more routinely viewed as an opportunity to conform to and be like significant others (Kim & Markus, 1999) or to calibrate one's attitudes with reference to others (Kitayama, Snibbe, Suzuki, & Markus, 2002). In other words, exercising choice in these contexts may not be understood as asserting individuality or, more generally, expressing internal, individual goodness.

Markus, Kitayama, and Heiman (1997) speculated that in many of the world's cultural settings, including some within the United States, being and agency are framed in terms of relationality, and that it is primarily in middle-class European American contexts that they are constructed in seemingly individualistic and atomistic ways. Thus, it may be the case that for most of the world's people, individuals' outcomes are optimized when they feel like trusted others have "chosen" for them. By that token, it may also be the case that for most of the world's people, the benefits of religious participation accrue to those who feel that they have not personally chosen their own religion. Rather, in cultural contexts stressing an interdependent construal of self, well-being may accompany a sense of inheriting a religion from one's ancestors or of following an explicitly mandated, well-worn path. These predictions are not just in contrast to the conclusions drawn by the authors in this symposium, they are also paradoxical to both European American lay theory and empirical psychology. The reasons for this seeming paradox may be traced to the common religious root of both European American culture and European American psychology: Protestant Christianity.

Protestant Christianity, Researchers, and the Researched

Why might European Americans thrive when given free choice or assured of a personal relationship with a benevolent God, and why might psychologists assume these tendencies to be universal? Observers have long tied Americans' individualism, emphasis on self-sufficiency, and ambivalence toward authority to our collective Protestant upbringing (Dumont, 1985; Sampson, 1977, 1988, 2000; Weber, 1906/1958). Protestants were born of rebellion, arising to protest the Roman Catholic Church and its belief that the teachings of the Christian god must be interpreted and mediated by priests, popes, and councils. With his 95 theses, Martin Luther cut out the middleman imposed by the Roman Catholic Church, anointing each person his own priest and confessor, more capable than anyone else to interpret religious doctrine and to hew a relationship with a personal god. Thus, a cornerstone of Protestantism is not only that the individual *can* have an unmediated,

personal relationship with a god, but that the individual *should* have such a relationship.

John Calvin ushered in the second generation of Protestants with his version of the doctrine of predestination. Although there are many varieties of Protestantism, Calvin's arguably had the greatest influence on modern Western European and American cultural contexts (Weber, 1906/1958). Calvin's doctrine of predestination teaches that the fates of individuals are sealed at birth so that one's performance of good or evil deeds in life has no effect on whether one is saved or damned at death. This is in contrast to Catholicism, which teaches that salvation and damnation are the results of an individuals' actions.

Rather than letting individuals "off the hook," behaviorally, Calvin's doctrine of predestination also teaches that the spiritual elect tend to act virtuously—that is, by soberly and diligently pursuing a "calling"—whereas the damned tend to act sinfully. Because individuals can never know for certain whether they are among the spiritual elect, they attempt to infer from their behavior the status of their souls. Weber recounts how this doctrine leads to Protestants' fiendish work ethic, readiness for capitalism, and collective preference for subdued accoutrements (Weber, 1906/1958). Less explored corollaries to this doctrine are the beliefs that our external behaviors not only *do* reveal our internal states and traits, but also *should* reveal our internal states and traits. The former is related to our culture's predilection for making the fundamental attribution error (Ross, 1977; Ross & Nisbett, 1991), which is the tendency to overemphasize traits and underestimate situations and relationships in explaining behavior (see Choi, Nisbett, & Norenzayan, 1999; Miller, 1984, for cultural variability in the fundamental attribution error). The latter belief is related to our preference for self-determined, intrinsically motivated behaviors instead of externally imposed, extrinsically motivated behaviors (cf. deCharms, 1968; Deci & Ryan, 1985; Festinger & Carlsmith, 1959; Lepper, Greene, & Nisbett, 1973).

Theorists have attributed these tendencies to a wide variety of factors in European American culture, including Aristotelian logic (Choi et al., 1999), the Cartesian passion/reason split, industrial capitalism (Marx, 1857–1858/1973), a free-market economy (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Baumeister, 1987; Gergen, 1973), modernization (e.g., Inkeles, 1974), the development of the American dream and other ideologies of equality (Hochschild, 1995), and notions of natural, individual rights (cf. Guisinger & Blatt, 1994; Jahoda, 1986; Markus, Kitayama, et al., 1997; Shweder & Bourne, 1984; Taylor, 1989, for further discussions of the material and philosophical sources of individualism). Certainly all of these factors have played some role. However, in this commentary, we want to highlight the influence of Protestant Christianity in the

European American view of individuals, their composition, and their behaviors.

Not only may the tendencies of research participants be traced to our culture's Protestant past and present, but we may also perceive the same ancestry in the interpretations and research interests of psychologists. Sampson (2000) and Dumont (1985) suggested that psychology's focus on the individual as the proper unit of psychological analysis stems, in large part, from its Christian heritage, with its emphasis on self-sufficiency and individual perception. Sampson (2000) contended that

if the Western world had been constituted in terms of Eastern religious values and beliefs (e.g., Taoism), the kind of psychological science that is currently familiar would not have taken the shape that it has: Some other kind of object or some very differently understood type of person would have become the central feature of psychological inquiry. (p. 1426)

He further argued that, to Christianity's emphasis on the individual, Protestant Christianity added a sharpened person–other distinction, in which others are often viewed in opposition to and impinging on the individual. This sharpening occurred, in part, because of Protestant Christianity's opposition to the Roman Catholic Church and, in part, because of its opposition to rabbinical Judaism, which embodies a more dialogical, formative (as opposed to instrumental) understanding of the self–other relationship.

Markus and Kitayama (1994) charted this antagonistic characterization of the self–other relationship within social psychology. In our predominantly European American field, conformity, groupthink, deindividuation, and the inconsistency between attitudes and behaviors are characterized as processes by which situations and other people can sap the mind right out of the individual and, therefore, have been researched with an eye towards prevention. Although social psychologists have had little to say about gods, the influence of mere mortals on the individual is often portrayed as insidious and therefore viewed with "theoretical consternation" (Markus & Kitayama, 1994, p. 576).

How is it that we, as scientists, are not aware of the extent to which religion is shaping science? One answer is that culture is designed to be transparent, leaving its traces on and exerting its influence through the thousand mindless or automatic practices and unconscious assumptions with which people daily engage. Because of their part in the fabric of the everyday, the assumptions of one's own cultural contexts are often not revealed, unless one happens to engage with more than one cultural context.

In the case of the religious commitments within our cultural settings, there are two additional forces that

may conceal the extent to which our religious commitments influence our secular undertakings. The first of these is the separation of church and state, on which Martin Luther himself insisted and the U.S. constitution delivered. Because religion and our secular undertakings are not supposed to intermix, we may be loath to recognize when they do. The second is what could be called the religion of science. Science professes to represent an objective "view from nowhere" (Geertz, 1983), dispassionately reporting on the world as it is, rather than observing how the world is constructed by our culturally shaped subjectivities. In psychology's attempt to emulate the physical sciences, it has likewise attempted to distill basic, individual psychological processes from the structure of the immediate situations in which they arise. This fundamental belief that psychological processes may be understood without reference to larger contexts, or to particular contents, may have exonerated psychology from examining its own sociocultural grounding.

Furthermore, as psychology moved toward science, it moved away from metaphysics and philosophy. To the extent that psychology has distanced itself from religion, then, psychologists may be less cognizant of our sociocultural milieu's Protestant bedrock. Thus, although many psychologists may not personally endorse Protestant values, it is important to realize that we all engage in a world whose institutions and practices have been built according to them.

Why Worry About the Cultural Foundations of Our Findings?

Having diagnosed many strains of the Protestant perspective in this symposium, the question arises: Does this particularization really matter? Just because a research finding embodies a particular cultural perspective does not mean that it is not valid. Alternatively, we suggest that the data presented in this symposium may only show that having a secure relationship with a personal God and individually chosen, intrinsically motivated religious participation characterizes the best outcomes in all cultural contexts. Perhaps some religious values are better for people than others, and it just so happens that Protestant Christianity happens to include two values that are especially good for people.

Perhaps espousing Protestant values in a predominantly Protestant culture predicts the best outcomes on measures of individual psychological and physical health (which, themselves, reflect Protestant values). Although this conclusion is considerably more cautious than more general pronouncements about the effects of religion on well-being, we believe that the additional caution is merited for two reasons. The first reason is that it is a more appropriate hypothesis, given

the subjects used, the results obtained, and the authors' other conclusions concerning macro-level factors affecting well-being. Indeed, both Pargament and George et al. (this issue) themselves suggested this alternative hypothesis. In his general conclusion, Pargament (this issue) offered that

those who benefit most from their religion are more likely to ... be part of a larger social context that supports their faith. ... On the other hand, well-being is more likely to suffer when ... religious identity is not supported by the social environment.

Similarly, George et al. (this issue) speculated that "if there are differences based on the cultural centrality of religious denominations, with members of mainstream religions benefiting most, this would provide a clue to one of the possible explanations for the links between religion and health."

Neither Pargament, nor George et al. in their citation of Pargament, saw this conclusion as qualifying their more general statements that a secure relationship with a personal god and freely chosen, intrinsically motivated religious participation predict good health outcomes. One explanation for this oversight is that macrolevel explanations are usually reserved for explaining why members of minority religions do not thrive in "religiously dissonant" contexts (e.g., Rosenberg, 1962). Yet the same explanation may also account for why those who adhere to Protestant ideals *do* thrive in mainstream American cultural contexts.

A second reason to qualify these two findings as limited to mainstream Protestant cultural contexts, until proven otherwise, is that not doing so implicitly pathologizes those religions that do not emphasize these beliefs. Many religious worldviews, such as Hinduism, view negativity as inherent in positivity and, therefore, view the intervention of wrathful deities as equally necessary as the intervention of positive deities. On the other hand, some religious worldviews, such as some forms of Buddhism, do not even posit that deities exist. Among the world's religions are countless other configurations of gods, their proclivities, and their relations with humans. The risk here is implying that embracing these conceptions and their associated orientations may be biologically bad for people. Without conducting studies on the people who have these beliefs, in the contexts in which they believe them, this can be inadvertently damning of both these people and their cultures. Given the authority that psychologists can have in shaping public policy and opinion, it is important to limit the potential for such pathologizing.

Conclusions

Both of psychology's religions—Protestant Christianity and science—may sometimes insist that

psychologists pay no attention to the religious beliefs and commitments that pervade every aspect of mainstream American cultural contexts. Rather, religion should be viewed as a pill that people can choose or reject. Depending on how it is ingested or incorporated into an otherwise nonreligious life, it can either be good or bad for the individual.

Religions do not merely exist in minds; they are written on the world. Our questions, theories, methods, and findings regarding these minds are necessarily cultural products that arise from engaging with this world. The study of religion and well-being is welcome because it places the cultural grounding of psychological findings and generalizations in high relief. Such an awareness need not lead to a mire of relativism. Instead, it can support the appreciation of a basic, empirically verifiable psychological principle—psychological functioning requires engaging with culture-specific ideas and practices, including understandings of what is real, what is good, what is self, and what is the nature of the relation between self and other—and lead to a recognition of the systematic and specific ways in which the psychological is cultural.

Note

Alana Conner Snibbe, Department of Psychology, Jordan Hall, Building 420, Room 244, Stanford, CA 94305. E-mail: alacoon@psych.stanford.edu

References

- Baumeister, R. F. (1987). How the self became a problem: A psychological review of historical research. *Journal of Personality and Social Psychology*, 52, 163–176.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in American life*. New York: Harper & Row.
- Choi, I., Nisbett, R. E., & Norenzayan, A. (1999). Causal attribution across cultures: Variation and universality. *Psychological Bulletin*, 125, 47–63.
- deCharms, R. (1968). *Personal causation*. New York: Academic.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Dumont, L. (1985). A modified view of our origins: The Christian beginnings of modern individualism. In M. Carrithers, S. Collins, & S. Lukes (Eds.), *The category of the person* (pp. 93–122). Cambridge, England: Cambridge University Press.
- Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal & Social Psychology*, 58, 203–210.
- Geertz, C. (1983). *Local knowledge: Further essays in interpretive anthropology* (pp. 55–70). New York: Basic.
- Gergen, K. J. (1973). Social psychology as history. *Journal of Personality and Social Psychology*, 26, 309–320.
- Giorgi, L., & Marsh, C. (1990). The Protestant work ethic as cultural phenomenon. *European Journal of Social Psychology*, 20, 499–517.
- Guisinger, S., & Blatt, S. J. (1994). Individuality and relatedness: Evolution of a fundamental dialectic. *American Psychologist*, 49, 104–111.

- Hochschild, J. L. (1995). *Facing up to the American Dream*. Princeton, NJ: Princeton University Press.
- Inkeles, A. (1974). *Becoming modern*. Cambridge, MA: Harvard University Press.
- 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.
- Jahoda, G. (1986). Nature, culture, and social psychology. *European Journal of Social Psychology*, 16, 17–30.
- Kim, H., & Markus, H. R. (1999). Deviance or uniqueness, harmony or conformity? A cultural analysis. *Journal of Personality and Social Psychology*, 77, 785–800.
- Kitayama, S., & Markus, H. R. (1999). Yin and yang of the Japanese self: The cultural psychology of personality coherence. In D. Cervone & Y. Shoda (Eds.), *The coherence of personality: Social cognitive bases of personality consistency, variability, and organization* (pp. 242–302). New York: Guilford.
- Kitayama, S., & Markus, H. R. (2000). The pursuit of happiness and the realization of sympathy: Cultural patterns of self, social relations, and well-being. In E. Diener & E. M. Suh (Eds.), *Subjective well being across cultures* (pp. 113–161). Cambridge, MA: MIT Press.
- Kitayama, S., Snibbe, A. C., Suzuki, T., & Markus, H. R. (2002). *Is there any "free" choice? Cognitive dissonance in two cultures*. Manuscript submitted for publication.
- Lepper, M. R., Greene, D., & Nisbett, R. E. (1973). Undermining children's intrinsic interest with extrinsic reward: A test of the "overjustification" hypothesis. *Journal of Personality & Social Psychology*, 28, 129–137.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253.
- Markus, H. R., & Kitayama, S. (1994). A collective fear of the collective: Implications for selves and theories of selves. *Personality and Social Psychology Bulletin*, 20, 568–579.
- Markus, H. R., Kitayama, S., & Heiman, R. (1997). Culture and "basic" psychological principles. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 857–913). New York: Guilford.
- Markus, H. R., Mullally, P., & Kitayama, S. (1997). Selfways: Diversity in modes of cultural participation. In U. Neisser & D. Jopling (Eds.), *The conceptual self in context: Culture, experience, self-understanding* (pp. 13–61). Cambridge, England: Cambridge University Press.
- Marx, K. (1973). *Grundrisse: Foundations of the critique of political economy* (M. Nicolaus, Trans.). New York: Random House. (Original work published 1857–1858)
- Miller, J. G. (1984). Culture and the development of everyday social explanation. *Journal of Personality & Social Psychology*, 46, 961–978.
- Rosenberg, M. (1962). The dissonant religious context and emotional disturbance. *American Journal of Sociology*, 68, 1–10.
- Ross, L. (1977). The intuitive scientist and his shortcomings. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 174–220). New York: Academic.
- Ross, L., & Nisbett, R. E. (1991). *The person and the situation: Perspectives of social psychology*. New York: McGraw-Hill.
- Sampson, E. E. (1977). Psychology and the American ideal. *Journal of Personality and Social Psychology*, 35, 767–782.
- Sampson, E. E. (1988). The debate on individualism: Indigenous psychologies of the individual and their role in personal and societal functioning. *American Psychologist*, 43, 15–22.
- Sampson, E. E. (2000). Reinterpreting individualism and collectivism: Their religious roots and monologic versus dialogic person-other relationship. *American Psychologist*, 55, 1425–1432.
- Shweder, R. A., & Bourne, E. J. (1984). Does the concept of the person vary cross-culturally? In R. A. Shweder & R. A. LeVine (Eds.), *Culture theory: Essays on mind, self, and emotion* (pp. 1–46). Cambridge, England: Cambridge University Press.
- Taylor, C. (1989). *Sources of the self: The making of modern identities*. Cambridge, MA: Harvard University Press.
- Weber, M. (1958). *The Protestant ethic and the spirit of capitalism* (T. Parsons, Trans.). New York: Scribner. (Original work published 1906)

Hope for The Sacred and Vice Versa: Positive Goal-Directed Thinking and Religion

C. R. Snyder, David R. Sigmon, and David B. Feldman

Department of Psychology
University of Kansas, Lawrence

Pargament (this issue) began his article by observing that psychologists are every bit as passionate about religious issues as the general public. Some believe religion to be beneficial, even central to what it means to be a complete human being (Jung, 1938/1969), whereas others view it as a kind of mass neurosis (Freud, 1927/1964) that is inherently damaging to the goals of mental health (Ellis, 1986). Virtually all agree, however, that religion as a psychological phenomenon is, in principle, as explainable and predictable as all other human behaviors and mental processes. It is a mistake, of course, to conclude that these predictable psychological elements are all there is to religion; the

possible existence of "supernatural" forces is not logically excluded even if scientists demonstrate that all human religious phenomena can be understood via psychological principles. Is it our belief, however, that the day-to-day effects of religion on mental health and well-being are largely the result of *normal* psychological processes and constructs. To understand religion's role in psychology, we must first understand psychology's role in religion. Much of what is presented in the three target articles can be understood through the lens of one such normal psychological construct: hope. In this regard, we draw heavily on a particular theory of goal-directed hope developed in our laboratory.

Hope Theory

Slightly over a decade ago, the members of our laboratory proposed a theory in which hope was conceptualized as a goal-directed cognitive process involving both the planning and motivation to reach goals (Snyder, 1989; Snyder et al., 1991). Working within this framework, goals have been defined as the targets of mental action sequences; that is, they serve as anchor points for purposive behavior (Snyder, 1994, 2000; Snyder, Cheavens, & Michael, 1999). Such goals are not limited in their size, abstractness, or probability of attainment. Goals may be extremely large, requiring months or even years to achieve, or they may be extremely small, taking only minutes or seconds to accomplish. Moreover, goals may range from a virtual certainty of not being accomplished (e.g., achieving spiritual perfection) to a virtual certainty of being accomplished (e.g., reading the bible from cover to cover). Perhaps most applicable to the topic of religion, however, is the notion that goals may vary in abstractness. Certain goals may be highly concrete, enabling one to determine easily when they have been accomplished (e.g., praying for 10 min daily about a specified topic); conversely, other goals may be maximally abstract and extremely difficult to determine whether they have been met (e.g., striving for deep spirituality). It should be emphasized, however, that hope consists of cognitions involved in the pursuit of all goals.

Hopeful cognitions fall into the two broad categories of agency and pathways thinking. Pathways thought reflects the individual's perceived capacity to generate cognitive routes to desired goals. Such routes are instantiated in plans or strategies to reach specific desired goals. It is important to note, however, that central to hope theory (and to an understanding of religion) is the assertion that the subjective experience of hopefulness does not depend on the actual existence or reality of such pathways. Rather, it depends on the perception that they could be generated and used if so desired (Snyder, Michael, & Cheavens, 1999). The second category of cognition that is central to hope theory is agency thinking, which is the perceived capacity and motivation to use one's conjured routes to goals. According to hope theory, it is through such thoughts that people find the necessary energy to initiate and sustain movement along pathways toward goals. By combining agency and pathways thoughts, people think and act so as to reach their goals. If either of these cognitive components is lacking, however, people are unlikely to seek actively and achieve their desires. Furthermore, in the context of hope theory, perceptions of successful goal pursuits are posited to drive positive emotions, and perceptions of unsuccessful goal pursuits are said to

drive negative emotions (for empirical support, see Snyder et al., 1996).

In research to date, higher hope consistently has related to beneficial outcomes (for reviews of how hope is related to positive outcomes in academics, athletics, health, psychological adjustment, and psychotherapy, see Snyder, in press; Snyder, Feldman, Taylor, Schroeder, & Adams, 2000; Snyder, Ilardi, Michael, & Cheavens, 2000). We now discuss how hope is also involved in the salubrious effects of many religious beliefs and practices.

Religion Through Hopeful Eyes

Pargament defined religion as a human search for significance that is related to the sacred. Using the language of hope theory, Pargament's definition would be that religion is the goal pursuit of significance using sacred pathways. Because not all religious goals pertain to life's significance, however, even this definition may not be broad enough to encompass all that is religion. Our view is that every religion offers a prepackaged matrix of goals, pathways for accomplishing those goals, and agency thoughts for applying those pathways. In examining the effects of religion on mental and physical well-being, one must understand how these three elements work together to the benefit or detriment of the individual. In this section, we examine the practice of religion within this hope-theory framework.

Goal Thoughts

Goals are central to a person's hopeful thinking. This is equally true of people who are and are not religious. For religious individuals, however, spiritual beliefs may dictate many of their most valued goals. As Exline (this issue) noted, "Religion ... tends to be prescriptive, telling us how we should live our lives." On this point, we believe that Western religious traditions share the following six general classes of prescriptive goals: (a) unity, harmony, or relationship with the divine; (b) supernatural assistance in establishing a peaceful, happy life; (c) a place in heaven or equivalent afterlife; (d) social support; (e) an understanding of truth; and (f) an increased comprehension of one's purpose in life. Almost all of these goals are extremely wide in scope and require a lifetime of pursuit; moreover, they may never be accomplished in their fullest sense. To cloud this issue further, these goals also are highly abstract, rendering it difficult to determine when they have been attained.

Goals dictated by most religions, however, do not remain at this abstract level. Rather, for each of the previously mentioned "ultimate" goals, there exist count-

less “subgoals” in their service. According to hope theory, subgoals are concrete, smaller objectives that, when accomplished, are perceived as bringing one closer to the achievement of larger goals (Snyder, 1994). Because subgoals are more likely to be achieved on a daily basis than more abstract goals, they tend to be of greater concern in the quotidian existence of the religious observer. Examples of religious subgoals might include reading the holy writ, performing rites or rituals at appropriate times, and practicing virtues. In addition, religious subgoals may include such seemingly secular objectives as remaining drug free, exercising regularly, helping a friend with a problem, and giving to charity. What makes these goals religious is not their content per se, but the fact that they are cognitively linked to larger, more abstract religious goals. Pargament (this issue) suggested that objects, people, and events are perceived as sacred in the extent to which they are associated with or represent the holy. Our perspective is that goals can take on sacredness as well.

If the concept of holiness is to be extended to goals, however, it should be acknowledged that some sacred goals may not be healthy. Just as not all goals are equal in scope, level of abstractness, and probability of attainment, so too may goals differ in their helpful or harmful effects. The goal of running two miles daily, for example, is probably a healthier one than trying a new fried food every day. Similarly, some religious goals also may be inherently unhealthy.

In all three articles, the authors asked this question: Is religion healthy? Although noting that the majority of extant research studies answer this question in the affirmative, they warn that a small portion of people may be hurt by their religious involvements. It might have been through observing these individuals (who also may be more likely to bring religious issues into therapy) that many writers have deduced that religion is harmful to mental health (Ellis, 1986; Freud, 1927/1964; Skinner, 1956). It probably is not religion in general that is harmful to particular persons, however, but rather the specific goals derived from certain religious beliefs.

One category of harmful goals may involve those requiring perfection through self-control. Perfectionism and perfectionist strivings within the secular realm have been related to lower self-esteem (Stumpf & Parker, 2000), lower psychological well-being (Mitchelson & Burns, 1998), and higher depression (Enns & Cox, 1997; Rice, Ashby, & Slaney, 1998). Some religions, however, consider perfectionist goals to be of utmost importance. Exline (this issue) mentioned one such goal: maintaining a pure mind. According to some Christian sects, misdeeds committed in thought are nearly as sinful as those committed in action. Because of its perfectionist nature, however, the goal of maintaining purity in thought can never fully be accomplished. How much time must pass

without a sinful thought before this goal is successfully met? For most devout believers, the answer is probably “a lifetime.” Although only one successful outcome is possible with such a goal (and this, only after death), opportunities for failure appear daily whenever impure thoughts arise. Thus, to the extent that one’s religion (or interpretation of religion) leads one to set this type of goal, it will be associated with negative mental-health outcomes. As Exline noted, some religions view perfection not as a goal in itself, but as the “result of salvation and a person’s subsequent *cooperation* [italics added] with Holy Spirit’s ongoing work.” Other religions encourage the setting of perfectionist goals but emphasize that perfection is achieved through a process of gradual self-improvement. As such, errors and setbacks are expected and allowed as a normal part of this process. Often, such religions couple repentance with strivings for perfection as a strategy for coping with these setbacks. By replacing perfection goals with strivings for cooperation with the Divine’s work and gradual self-improvement, therefore, such religions may circumvent the problems related to these goals.

In addition to the specific harmful or helpful content of religious goals, another aspect of goal pursuit that is important for understanding the effects of religion on well-being is goal integration. Goal integration reflects the degree to which an individual’s goals are consonant with or facilitate one another. Goals that are not consonant are said to be in conflict. According to Emmons (1999), “Goal conflicts are part of the human experience. Whenever there are choices to be made or decisions to be reached, competing desires are frequently involved” (p. 67). However, certain religious goals, especially those requiring virtuous behavior, may conflict with many secular goals and desires. As Exline (this issue) wrote, “The pursuit of virtue may also entail giving up some favorite indulgences, which might range from overeating and sleeping in on Sundays to darker pleasures, such as revenge fantasies and slanderous gossip.” Given research demonstrating a link between goal conflict and lower psychological well-being (Emmons & King, 1988), it would seem important to consider the degree to which the individual’s religious strivings are compatible and integrated with other important goals. In this vein, Emmons, Cheung, and Tehrani (1998) found that the presence of spiritual or theistic goals in one’s repertoire is negatively associated with goal conflict. Although this is encouraging, it does not exclude the possibility that some particular religious goals may be associated with greater overall goal conflict. The question of which goals fit this description remains open for empirical investigation.

Pathways Thoughts

To the religious practitioner who is high in hope, many pathways are perceived as being available for

reaching one's goals (both secular and religious). High hoppers are confident that they will be able to generate many alternative strategies should obstacles (goal blockages) be encountered. Potential pathways believed to aid in obtaining divine assistance in reaching one's goals are prayer, rites, and rituals. Routes available for gaining an understanding of life include studying holy writ, pondering the words of religious leaders, and discussing ideas with others in the religious community. The "good life" is believed to be available to those who live by sacred codes of conduct, develop virtues, and seek help among the resources of the community.

Religion's costs and benefits may be due, in large part, to variations in practitioners' use of pathways to reach their goals. Pathways may vary according to the number produced, their effectiveness and health correlates, and their suitability for particular goals.

To understand better the positive and negative effects of religion on mental health, Pargament (this issue) distinguished between three religious approaches for gaining a sense of control in coping. He found that the self-directing and collaborative approaches were associated with higher self-esteem and a greater sense of personal control. The deferring approach, however, was linked to lower self-esteem and decreased perceived personal control. These findings may relate to the fact that higher hoppers produce more pathways to their goals and experience higher self-esteem and a greater sense of personal control than low hoppers (who do not produce as many pathways). Similar to high hoppers, people who use the self-directing and collaborative approaches rely more on their own resources and thus create more pathways to their goals than those who defer to God and thereby have fewer pathways. Thus, the benefits of higher self-esteem and a greater sense of personal control in certain religious coping styles may be related to the greater numbers of pathways produced by individuals who use those styles.

In addition, some pathways may be healthier than others. Pargament (this issue) also reported finding that people who used positive religious coping methods experienced less depression, a better quality of life, and increased stress-related growth relative to those persons who use negative religious coping. These relationships might reflect the healthier pathways of those who use positive religious coping methods. George, Ellison, and Larson (this issue) proposed that one of the mediators of religion's beneficial effects on physical health is religious promotion of good health habits. In hope terms, these habits represent effective pathways for achieving the beneficial goal of good health. Therefore, one of the mediators of religion's effect on physical health is the pathway of good health habits that many religions promote.

Some pathways may be better suited for some problems than others. Park, Cohen, and Herb (1990), for ex-

ample, hypothesized that it was Protestants' emphasis on faith that particularly enabled them to deal with uncontrollable events and Catholics' emphasis on reconciliation, confession, and atonement that equipped them to cope with controllable events. Thus, the type of pathway used and the circumstance in which it is used may be of importance when researching the effectiveness of religion.

Agency Thoughts

Religion often instills confidence in believers that they can accomplish their goals or the divine's commands. These agency thoughts are a result of both specific religious beliefs and the supportive resources inherent in most religious communities. The more agency thoughts, the higher the person's psychological well-being. As such, differences in the impact of religion on physical and mental health may be due in part to the agency-increasing effects of positive religious coping style and availability of resources.

Individuals who use self-directing and collaborative religious coping styles believe that they can act so as to affect their situations positively. Pargament (this issue) found that those who use a collaborative approach to coping have a higher sense of personal control (similar to agency) and a lower sense of chance control. This may be due to a belief that God will help them in their goal pursuits. The New Testament illustrates this point well in the verse, "I can do all things through Christ who strengthens me" (Philippians 4:13, KJV). People who use a deferring approach, on the other hand, have lower perceptions of personal control and, as stated earlier, lower self-esteem.

Finally, Pargament (this issue) suggested that religion might be particularly beneficial among marginalized groups and those who are facing problems that push them to the limits of their own personal and social resources. Both of these groups find themselves with few or no resources to cope with their problems. Religion offers social support, doctrines, and divine aid, thus increasing the available pathways and one's sense of agency.

Conclusions

Many of the costs and benefits of religion may be explained by hope theory. Things to consider when assessing the effect of religion on well-being are the abstractness, attainability, and content of religious goals, as well as the degree to which these goals are integrated into the person's life. Researchers may also want to study the number of pathways the religious person generates, as well as the health correlates associated with those pathways and their suitability for the partic-

ular goal. Furthermore, religion's effects on health may be affected by the individual's sense of agency, which is mediated by coping style, goal integration, and availability of resources. If studies looking at these issues are consistent with our hypotheses, then hope theory may be useful in understanding religion's effects on health. Of course, this leaves the other fascinating side of this issue— religion's effects on hope. As such, the application of religious principles to psychology should yield many important insights about hope. Although to date this has been a road less traveled, there is good reason to increase our traffic.

Note

C. R. Snyder, 1425 Jayhawk Boulevard, 305 Fraser Hall, Graduate Training Program in Clinical Psychology, Department of Psychology, University of Kansas, Lawrence, KS 66045-2462. E-mail: crsnyder@ku.edu

References

- Ellis, A. (1986). *The case against religion: A psychotherapist's view and the case against religiosity*. Austin, TX: American Atheist Press.
- Emmons, R. A. (1999). *The psychology of ultimate concerns: Motivation and spirituality in personality*. New York: Guilford.
- Emmons, R. A., Cheung, C., & Tehrani, K. (1998). Assessing spirituality through personal goals: Implications for research on religion and subjective well-being. *Social Indicators Research*, *45*, 391-422.
- Emmons, R. A., & King, L. A. (1988). Conflict among personal strivings: Immediate and long-term implications for psychological and physical well-being. *Journal of Personality and Social Psychology*, *54*, 1040-1048.
- Enns, M. W., & Cox, B. J. (1997). Personality dimensions and depression: Review and commentary. *Canadian Journal of Psychiatry*, *42*, 274-284.
- Freud, S. (1964). *The future of an illusion*. Garden City: Doubleday. (Original work published 1927)
- Jung, C. G. (1969). Psychology and religion. In *Collected works* (Vol. 11, 2nd ed., pp. 3-105). New Haven, CT: Yale University Press. (Original work published 1938)
- Mitchelson, J. K., & Burns, L. R. (1998). Career mothers and perfectionism: Stress at work and at home. *Personality and Individual Differences*, *25*, 477-485.
- Park, C., Cohen, L. H., & Herb, L. (1990). Intrinsic religiousness and religious coping as life stress moderators for Catholics versus Protestants. *Journal of Personality and Social Psychology*, *54*, 551-577.
- Rice, K. G., Ashby, J. S., Slaney, R. B. (1998). Self-esteem as a mediator between perfectionism and depression: A structural equations analysis. *Journal of Counseling Psychology*, *45*, 304-314.
- Skinner, B. F. (1956). *Science and human behavior*. New York: Macmillan.
- Snyder, C. R. (1989). Reality negotiation: From excuses to hope and beyond. *Journal of Social and Clinical Psychology*, *8*, 130-157.
- Snyder, C. R. (1994). *The psychology of hope: You can get there from here*. New York: Free Press.
- Snyder, C. R. (2000). Hypothesis: There is hope. In C. R. Snyder (Ed.), *Handbook of hope: Theory, research, and applications* (pp. 3-21). Orlando, FL: Academic.
- Snyder, C. R. (in press). Hope theory: Rainbows in the mind. *Psychological Inquiry*.
- Snyder, C. R., Cheavens, J., & Michael, S. T. (1999). Hoping. In C. R. Snyder (Ed.), *Coping: The psychology of what works* (pp. 205-231). New York: Oxford University Press.
- Snyder, C. R., Feldman, D. B., Taylor, J. D., Schroeder, L. L., & Adams, V., III. (2000). The roles of hopeful thinking in preventing problems and enhancing strengths. *Applied and Preventive Psychology*, *15*, 262-295.
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., et al. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, *60*, 570-585.
- Snyder, C. R., Ilardi, S., Michael, S. T., & Cheavens, J. (2000). Hope theory: Updating a common process for psychological change. In C. R. Snyder & R. E. Ingram (Eds.), *Handbook of psychological change: Psychotherapy processes and practices for the 21st century* (pp. 128-153). New York: Wiley.
- Snyder, C. R., Michael, S. T., & Cheavens, J. S. (1999). Hope as a psychotherapeutic foundation of nonspecific factors, placebos, and expectancies. In M. A. Hubble, B. Duncan, & S. Miller (Eds.), *Heart and soul of change* (pp. 205-230). Washington, DC: American Psychological Association.
- Snyder, C. R., Sympson, S. C., Ybasco, F. C., & Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the State Hope Scale. *Journal of Personality and Social Psychology*, *70*, 321-335.
- Stumpf, H., & Parker, W. D. (2000). A hierarchical structural analysis of perfectionism and its relation to other personality characteristics. *Personality and Individual Differences*, *28*, 837-852.