Toward a Sociological Theory of Religion and Health

EDITED BY

Anthony Blasi

RELIGION AND THE SOCIAL ORDER 19

BRILL

Toward a Sociological Theory of Religion and Health

Religion and the Social Order

An Official Publication of the
Association for the Sociology of Religion

General Editor
William H. Swatos, Jr.

VOLUME 19

Toward a Sociological Theory of Religion and Health

Edited by

Anthony J. Blasi

BRILL

LEIDEN • BOSTON
2011

This book is printed on acid-free paper.

Library of Congress Cataloging-in-Publication Data

Toward a sociological theory of religion and health / edited by Anthony Blasi.
p. cm. -- (Religion and the social order ; v. 19)
Includes bibliographical references.
ISBN 978-90-04-20597-0 (hardback : alk. paper)
1. Medicine--Religious aspects. 2. Health--Religious aspects. 3. Religion--Social aspects. I. Blasi, Anthony J.

BL65.M4T678 2011
201'.661--dc22

2011009686

ISSN 1061-5210
ISBN 978 90 04 20597 0

CONTENTS

PREFACE

"ILLTH" AND HEALTH

William H. Swatos, jr.

This volume of the Religion and the Social Order series is, to the best of my recollection, the first that was actually finished early. The major credit for this goes to Tony Blasi and the authors of the various chapters, who worked to meet deadlines. The latter part, however, is largely attributable to the coincidence that shortly after receiving the manuscript I became ill with some form of inner-ear dysfunction that made both moving around and abstract thinking difficult for me. By contrast, I was able to sit at the keyboard and do mechanical editorial tasks with relative ease. As a result I took about a week and simply worked daily doing the things I have to do to get the chapters ready to go to Brill. *Et voila!* The manuscript was done.

Being in that conjunction of conditions while reading a book about religion and health, however, also put me to thinking about health and "illth", which are not only contrasts of states but also in each case relative assessments. It brought me to think about David Sudnow's classic work on dying—particularly, that point when a patient in a hospital is defined as "dying." In fact, of course, we are all simultaneously living and dying, which is why we need our hair and our finger- and toenails cut from time to time. The things that we cut off are dead matter connected to a living organism. So the sociology of health and "illth" is both socially and environmentally relative. Like crime, health and "illth" are matters of definition up to a point—the smoking gun and the dead bleeding body could lead one to think someone has probably been up to no good, and a set of fingerprints is likely to tell us whether we have "murder" or "suicide" on our hands, though "accident" must also be considered. I go to my doctor with an ache or pain, and he tells me whether or not I'm "really" sick—which again is likely to depend on a series of physically based tests. If blood is actively running out of some body part and onto the floor, however, we may skip some of those tests for the moment.

The point, of course, is that much of health and "illth" have to do with perceptions and situations, and in some situations an "ill" person can be more work-productive than a "well" person who might tempted by other ways to spend his time. So here we have one of those wonderful sociological ironies from which Max Weber and many others since have drawn the stuff that makes sociology a fascinating science: definitions of the situation are in flux all the time. "Illth" can be productive and health counterproductive to a task at hand.

In any case, I am pleased to have had some days' "illth" redeemed by the opportunity to "massage" this volume to the point where it is ready to go to the press and also to have now recovered sufficiently that I am now "well" and ready to go, as it were, "back to work." I hope you will find these essays stimulating as steppingstones along the way toward a theoretical framework for the sociology of religion and health.

Reference

Sudnow, David. 1967. *Passing On: The Social Organization of Dying.* Englewood Cliffs, NJ: Prentice Hall.

INTRODUCTION: SOCIOLOGICAL THEORY ON RELIGION AND HEALTH

Anthony J. Blasi

Driven by funding agencies, empirical research in the social scientific study of health and medicine has grown in quantity and developed in quality. When it became evident, in what is now a tradition of inquiry, that people's religious activities had significant health consequences, a portion of that body of work began to focus more frequently on the relationship between health and religion. The field has reached a point where book-length summaries of empirical findings, especially those pertinent to older people, can identify independent, mediating, and dependent variables of interest (e.g., Koenig 2008, Krause 2008). Every mediating variable, even if considered as a statistical "control" variable, represents an explanation, a small theory of some kind. However, taken in granular form, as it were, the multiple theories do not comprise mid-level theory, let alone a general theoretical framework. It was the plan behind this volume to invite mid-level and more general theoretical development in the field. In that sense it is something of an experiment.

Theories have a matter, a topic toward which they offer avenues of understanding, conceptualization and explanation. When the topic has two centers of interest—health and religion—the potential paradigms begin to multiply because different aspects of one center can be related to different aspects of the other. Religion is cognitive, experiential, normative, ritualistic, inspirational, social, traditional, and the opposite of all of these. Health is subjective, physiological, culturally relative, individual, indicated by symptoms, and the opposite of all of these. A highly theologized religion can affect subjective health, physiological health, the cultural relativity of health, etc. A highly experiential religion can affect the various dimensions of health as well. One can easily create a theoretical matrix by lining the variable forms of religion across the top and the variable forms of health down the left margin, and filling each and every box in the matrix with a middle level-paradigm. The received body of empirical work provides but one pointer, albeit a good one, over what boxes represent the more important mid-level paradigms.

There is another range of good controls that come from the respective heritages of the scientific disciplines. The latter provide us with psychological, social psychological, sociological, and political criteria of what findings are "important." Here we are concerned with the sociologically important, and we can look to such general theoretical traditions as the structural functionalism of Talcott Parsons, the symbolic interactionism (to use Herbert Blumer's term) of George Herbert Mead, and the home-grown American radicalism of C. Wright Mills.[1] Parsons considered medicine and religion both as institutions that have been differentiating, with some difficulty, into distinct organizational structures (1951: 165, 429). He noted that modern western society had achieved a value-integration around instrumental activism and that the latter leads to a desire for "universalizing the essential conditions of effective performance through equalization of civil rights and of access to education and health" (1960: 311). Blumer insisted that variable analysis alone was not really science but that what was in the thinking of social actors, what they were indicating to themselves, was critical for science (see the essays in Blumer 1969 and his take on Mead's philosophy in his posthumous volume of 2004). Mills wanted to activate his readers, to induce them to translate their personal problems into public issues (see Mills 1959: 3–24). He analyzed social structure in terms of the relationship between powerful and marginal institutions (see Mills 1963), something of obvious relevance and potential in the study of religion and health, respectively a marginal institution in a relatively secular world and a central one. These three general approaches, and other general ones, lead to characteristic understandings, conceptualizations, and explanations of various relationships between religious and health phenomena that arise in the course of empirical research.

So we have two general ways of building theory in the study of religion and health: moving from collections of empirical findings toward theories of the middle range and moving from our disciplinary

[1] Naming these obviously does not exhaust the list of possible general sociological approaches. I personally find symbolic interactionism and Mills's institutional analysis, as well as the *sociologie en profondeur* of Georges Gurvitch (1958), to be the most useful approaches for my work. Elsewhere I have used the Mills-like focus on the relationship between powerful and marginal institutions (Blasi 1994, 2002) and the Gurvitch-like sociological depths (2009). In my contribution to this volume I have relied heavily on reference group theory, as approached largely in the symbolic interactionist perspective (though other perspectives use it as well). Much to my surprise, some formulations from the functionalist tradition also proved to be useful.

heritage of general theories toward middle range applications of theory to empirical findings. The two general ways are not mutually exclusive, though individual scholars tend to follow one or the other. Most of the contributions to this volume move from collecting empirical findings toward theories of the middle range. Following the second general method of building theory, my own contribution moves from the general orientations of sociology toward empirical inquiry. It is interesting to note that the studies of religion and health as represented by the essays in this volume have an almost consumer's perspective on the empirical side. That is, the empirical studies tend to take health outcomes as their dependent variable, the same thing that the medical consumer turns to the professional to obtain.

The chapters that seek to build theory by beginning with empirical studies and moving to a more general level of conceptualization inherit the general characteristics of the studies to be found in the received literature. What is to be found in that literature can be ascertained in a rough way by examining the entries under the relevant search terms in the online bibliography that can be accessed from the Web page of the Association for the Sociology of Religion.[2] The relevant search terms for the connection between religion and health are *health*, *healing*, and *medical*. *Healing* indexes studies of the phenomenon of people resorting to higher powers for cures in an instrumental way; traditionally scholars have termed that *magic*. There is some overlap between what comes under *healing* and *magic* on the one hand and what comes under *health* and *medical*. In the present context, we are interested in the overlap and not that which is peculiar to *healing* and *magic*; so we can set aside the latter. *Medical* pertains to health organizations and professions. These too overlap with *health*, and again we are concerned in the present context with the overlap and not what is peculiar to organizations and professions. So examining only the works that appear under *health*, we find that there are 36 total, two- thirds of which have individual persons' health as their dependent variable. Adding three

[2] This database is the result largely of my own work, though I hope that can be changed in the future. I say "largely" because Michael W. Cuneo contributed to it in the 1980s, resulting in the publication of two bibliographic volumes before the age of online searchable data bases. The coverage is generally limited to six languages (English, French, German, Italian, Portuguese, Spanish) and works dealing with religion that are either expressly sociological or are works in other disciplines that resemble sociological work. It cannot be claimed that the data base is exhaustive, but it is about as exhaustive a one as is available.

that have individual mortality or mortality rates as the dependent variable and one that has depression, we find that 28 of the 36 (77.8%) have individual-level outcomes as their matter of inquiry. The balance of eight studies concern individual medical practices, religious healing practices, risky behavior, health education, and the provision of health services by religious organizations—not nearly enough on any one phenomenon for purposes of building toward middle range theory. While individual health outcomes assuredly comprise an important focus, they do not include all phenomena that merit study. However, the chapters that seek to build up toward more generality have only the extant literature with which to work.

C. Wright Mills wrote of the "new practicality" in social science, wherein relatively untheorized social scientific research addresses problems not of "battered human beings" but of powerful bureaucracies (Mills 1959: 95ff). He was principally worried about sinister attempts of powerful bureaucrats in big business, big military, and big executive government to manipulate the public and legitimate themselves. Such a concern may be most relevant, with regard to health, in natural science; research on the safety and effectiveness of pharmaceuticals, the effects of tobacco, and the healthfulness of agricultural and food industry products is often controlled by contractual requirements that come with research grants. One can make the case that economists have been politicized to the point of being mere advocates, as with some of the forecasts made about the effects of the 2010 U.S. health insurance reform legislation.

How relevant is such a concern to research into the relationship between religion and health? There are certainly religious organizations that may have a vested interest in the research outcomes, but these have generally not been funding research. Funds have generally come from the health and mental health research apparatus of the federal government. There has been a general lack of interest in the theoretical frameworks of the several social sciences and a preference for interdisciplinary inquiry. The general model implicit behind the funding is epidemiological. There is no sinister motive behind that, no quest for the legitimation of bureaucratic power; however, what have been deemed "problems" to be addressed by research have been limited in general to the aims of the curing, prevention, and insuring occupations. Can worship buffer or inoculate against depression, can clergy efficiently refer depressed people to professionals, can spirituality reduce the need for high levels of treatment for depression?

Clearly these are important questions, but so are such questions as, What can be done about social structural contributors to depression, why are clergy not organizing their congregations to address such social structural contributors, is spirituality masking the extent to which social injustice affects the population? Without raising such "broader" issues, one can note that funded research has left non-medical variables somewhat neglected. "Religion," for example, has generally been "measured" with simplistic and global indicators.[3]

In Chapter 1, Christopher G. Ellison and Andrea K. Henderson provide an insightful review of American-based research into the relationship between religion and health outcomes through the lens of the process by which stressors lead to strain, the effects of stress. They limit their scope to American-based research because that is what dominates the literature, and the religion in America found in the literature is Judeo-Christian, especially the latter. They also identify a need for measures of particular dimensions of religion and spirituality rather than global measures. And because the literature focuses on the causes of health states ("outcomes"), they identify the need for more longitudinal study. By using a stress process model, they contribute an avenue to conceptualization and theorization. They also astutely note control variables that reflect the social structural context of respondents to the relevant surveys—gender, race and income—and the need to expand research into various under-researched ethnic and religious minorities.

In Chapter 2, Scott Schieman and Alex Bierman continue the discussion within the context of the stress process model. They find fault with general scales of religiosity that sum up unlike kinds of religious dimensions. While their focus is religious *belief*, the scope of what they include under that term is not limited to doctrinal formulae to which one may assent but includes images of the divine and senses of how close the divine is to the human subject. They note that research finds these affecting well-being, sometimes through the mediation of self-forgiveness and the ability to forgive God. They therefore propose disaggregating measures of different aspects of belief: beliefs about the divine (involvement, intervention, control, meaning, presence, caring,

[3] When collaborating on funded research on the effects of religious activity on depression (Husaini, Blasi and Miller 1999) and on services to the elderly provided by churches (Blasi 1999), I found the measures of religiosity available for use in secondary analysis limiting and the constraints imposed on the interview schedule used with Nashville ministers inhibitory.

love etc.), devotional practices, and salience. The need to differentiate measures extends to the dependent variables as well: well-being, internalizing pathologies, externalizing pathologies. Impacts could be direct or could affect a resource such as self-esteem. Effects could occur either by lessening exposure to stressors or buffering the effects of the stressors.

One way to build theory is to focus on phenomena not usually dealt with. Chapter 3, "Transcendent Experience and Health: Concepts, Cases, and Sociological Themes," by Jeff Levin, does this by seeking to break the taboo in health-related scientific research against studying subjective affective religious states, especially experiences. While it is relatively routine to "bracket" people's beliefs as *theirs* and not those of the researchers, the tension between scientific autonomy and religious feelings has not been dealt with as routinely. Intellectually, many may grant that subjective states and experiences may have health benefits for those who experience them, but to note different *kinds* of transcendent or mystical experience and to entertain the possibility that the different kinds may have their own realms of psychological and biological relevance requires that the research take seriously what researchers typically do not want to engage. Beliefs, which are intellectual constructs, can be dealt with intellectually; but experiences and states seem to require a less distant involvement to be identified and understood (see Weber 1978: 5–6). Research on religious experience leads to both scientific and religious scandal: the scientist undergoes religious experience and the religious experience undergoes scientific analysis. The chapter observes two cases of scandalous religion empirically. In pointing to sociological approaches to science, it invites the reader to deal similarly with the scientific scandal.

Chapter 4 "Does Religion Protect against Psychological Distress among Chronically Ill and Poor Women?" by Barbara Kilbourne, Sherry Cummings and Robert S. Levine, examines physiological health as well as poverty as a stressor and looks at the effects of religion, given the stress condition, on depression. Grounding "religion" empirically, the authors use factor analysis to identify dimensions of religion that are peculiar to their population of respondents—poor chronically ill women in a Southern U.S. city. The five dimensions are religious reading, prayer, religious attendance, interiority, and social interactive religion. Each of the five dimensions of religion provides a reserve capacity of well-being that attenuates psychological distress,

independent of the severity of the physiological condition. In addition, the dimensions of religion exert a modest buffering effect against depressive effects.

It is perfectly possible to come to an arbitrary closure in an area of study by limiting inquiry to a single society or type of society. Any theory built under such a condition could become procrustean and of limited relevance. In order to prevent that, it is necessary to conduct research in varying societies. It is not valid, however, to compare a non-industrial tribal society with an industrial mass society and attribute differences to "culture." One rather should compare different non-industrial tribal societies with one another and different industrial ones with one another (Thomas and Znaniecki 1927:17ff.). In Chapter 5, "Religion and Health in Japan: Past Research, New Findings, and Future Directions," Michael Roemer turns our attention to the sociological study of religion and health in Japan. He draws important implications from the different social location, nature, and system of relevance of Japanese religion, compared to the American case. Similarly in Chapter 6, "Religion and Mental Health in China," Eric Liu goes as far as possible to replicate American findings in a mainland Chinese sample. He notes in particular the difference between Western fatalism and what superficially seems to be like it in the Chinese context but turns out to be quite different. This difference results in findings that would be unlikely in the West.

Chapter 7, "Religious Involvement and Latino Immigrant Health," by Ephraim Shapiro, focuses on church attendance and physical health. This is, of course, one very specific kind of religiosity and a less specific kind of health. In addition, healthy behaviors are considered as potential mediators between church participation and health, but their explanatory power proves to be limited. Interestingly, there are threshold effects in the relationship. The author suggests that this reflects something other than social capital effects because there is no reason for the latter to support health only at particular thresholds. As suggested by the title, the study aimed at Latino immigrants to the United States; religious participation in the U.S. proved to be relevant while that in the three lands of origin (Mexico, El Salvador, Guatemala) did not.

In Chapter 8, "Stress, Religious-based Coping, and Physical Health," Neal Krause takes, as the title suggests, physical health as an outcome and traces the various ways religion affects it. He identifies four general

stressors: daily hassles, stressful life events, chronic strain, and lifetime trauma–which vary in intensity and duration. Theoretically, religion would be most relevant where no practical action could remove the stressor; stressful life events cannot be avoided and could have effects persisting a year or more. Chronic strain, such as living in a troublesome neighborhood or having a chronic illness, similarly cannot be readily alleviated. Lifetime trauma can issue in a continuing state of debilitation. Which aspects of religion can address the effects of these and how is the matter of research. Religious resources include church-based social support, religious coping responses, prayer, religiously-oriented feelings of control, and a religious sense of meaning in life. The author develops a systematic review of findings and hypotheses from such distinctions and suggests avenues of improving future inquiry as well as indicating potentially fruitful topics.

Chapter 9, "Religious Involvement, Religious Struggles, and Mortality Risk," by Terrence D. Hill and Ryon J. Cobb, complements Krause's Chapter 8. However, this chapter highlights longevity as an outcome, religious struggles as a stressor, and biological markers as distinct from general physical health, while focusing less on kinds of stressor. It presents models rather than theories, indicating that it can only point to a more comprehensive approach.

As noted above, my own contribution, Chapter 10, "The Recondite Religious Life of Health," works from general sociological theory toward formulations that are empirically researchable. The workings of religion, apart from norms about behaviors that have health consequences, are recondite. Much variation in humans' health is related to stress resident in people's states of mind (I prefer the term mental *strain* in order to distinguish it from stressors). While in the Orient religion is frequently concerned with psychological (and in the folk traditions physical as well) well-being, in the Occident it is about God. In the latter setting, therefore, the health outcomes derived from religiosity are byproducts, not goals in themselves. In the Orient, the folk traditions correspond to what westerners term *magic*; scientifically there is no reason to expect rituals and recitations of prayers to have the intended results of prosperity and health. Consequently, certainly in the West but also in certain respects in the East, it is worthwhile examining the effects of religion on health that come about through indirection. The chapter articulates some theoretical conceptualizations for the purpose.

References

Blasi, Anthony J. 1994. "Power, Class, Law: The Complementarity of *Realpolitik* and Soft Sociologies." *Sociologia Inetrnationalis* 32: 47–54.

_____. 1999. *Organized Religion and Seniors' Mental Health*. Lanham, MD: University Press of America.

_____. 2002. "Marginality as a Societal Position of Religion." *Sociology of Religion* 63: 267–89.

_____. 2009. "The Meaning of Conversion: Redirection of Foundational Trust." Pp. 11–31 in *Conversion in the Age of Pluralism*, edited by G. Giordan. Leiden: Brill.

Blumer, Herbert. 1969. *Symbolic Interactionism. Perspective and Method*. Englewood Cliffs, NJ: Prentice-Hall.

_____. 2004. *George Herbert Mead and Human Conduct*, edited by T.J. Morrione. Walnut Creek, CA: AltaMira/Rowman & Littlefield.

Gurvitch, Georges. 1958. "Sociologie en profondeur." Pp. 157–71 in Georges Gurvitch *Traité de Sociologie*, vol. 1. Paris: Presses Universitaires de France.

Husaini, Baqar A., Anthony J. Blasi and Oscar Miller. 1999. "Does Public and Private Religiosity Have a Moderating Effect on Depression? A Bi-racial Study of Elders in the American South." *International Journal of Aging and Human Development* 48: 63–72.

Koenig, Harold G. 2008. *Medicine, Religion, and Health: Where Science and Spirituality Meet*. West Conshohocken, PA: Templeton Foundation Press.

Krause, Neal M. 2008. *Aging in the Church: How Social Relationships Affect Health*. West Conshohocken, PA: Templeton Foundation Press.

Mills, C. Wright. 1959. *The Sociological Imagination*. New York: Oxford University Press.

_____. 1963 [1958]. "The Structure of Power in American Society." Pp. 23–38 in *Power, Politics and People: The Collected Essays of C. Wright Mills,* edited by I.L. Horowitz. New York: Oxford University Press, pp. 23–38.

Parsons, Talcott. 1951. *The Social System*. New York: Free Press.

_____. 1960. *Structure and Process in Modern Societies*. Glencoe, IL: Free Press.

Thomas, William I. and Florian Znaniecki. 1927. *The Polish Peasant in Europe and America*. New York: Knopf.

Weber, Max. 1978. *Economy and Society: An Outline of Interpretive Sociology*. Berkeley: University of California Press.

CHAPTER ONE

RELIGION AND MENTAL HEALTH: THROUGH THE LENS OF THE STRESS PROCESS

Christopher G. Ellison and Andrea K. Henderson

Over the past two decades a burgeoning research literature has examined the relationships between religious involvement (and its close cousin, spirituality) and mental health outcomes. Although studies in this area have explored many facets of mental health, there has been significant concentration on affective outcomes. To be sure, a long tradition of theory and research in psychology has taken a dim view of the role of religion in shaping mental health. Scholars from Sigmund Freud (1928) to Albert Ellis (1962, 1983), as well as many other prominent figures, have maintained that religious belief is either an expression or a cause of emotional disturbance in many people. In sharp contrast to these critical claims, many more recent studies report that religiousness, measured in various ways, tends to be inversely associated with symptoms of depression, anxiety, or psychological distress (Koenig, Larson and McCullough 2001, Smith et al. 2003, Koenig 2009, 2011). Our chapter has four overarching objectives: (1) to review key findings from this contemporary literature; (2) to set forth the *stress process* perspective as one potential unifying framework for the vast body of work on religion-mental health, and to identify several conceptual models for research in this area; (3) to review the available evidence linking religious factors with the various components of the stress process model; and (4) to discuss several promising directions for future research on religion and mental health.

We should note several caveats with respect to this chapter. First, we are restricting our focus mainly to the United States, where much of the relevant research has been conducted. Further, because the United States remains primarily Judeo-Christian in culture (if not always in practice), and most studies continue to use concepts and measures that are rooted in the Judeo-Christian tradition, we shall have little to say about religion and mental health in other faith traditions. Second, in keeping with the thrust of the literature in this area, our review will

center on depression, anxiety, and generalized distress. Other mental health outcomes, ranging from substance abuse to schizophrenia to personality disorders, and many more, will necessarily be omitted from the discussion. Third, we note that a wealth of research on religion and mental health is based on clinical samples, *i.e.*, persons selected because of specific health problems or stressful conditions, and the main interest of those studies lies in the treatment and prognosis of subjects. By contrast, we focus primarily on community-dwelling or population-based samples.

Religion and Mental Health: Reviewing the Evidence

In recent years several researchers have attempted to review, synthesize, and take stock of the literature in this broad, multidisciplinary field, with varying degrees of success. These assessments have varied in a number of important ways: (a) they concentrated on very different slices of the literature, from divergent academic disciplines; (b) they employed divergent criteria for inclusion in the review; (c) they embraced different standards for evaluating the strengths and weaknesses of research studies and for assessing religious or spiritual effects on mental health. Thus, despite the best efforts of many talented scholars, consensus on where the field stands and how to proceed remains on the far horizon (Koenig et al. 2001, Hackney and Sanders 2003, Smith, McCullough and Poll 2003, Koenig 2009, 2011). Nevertheless, we offer several broad generalizations about the state of the field, at least with respect to community- or population-based research on religion and mental health.

First, much of the work in this area has been plagued by inadequate conceptualization and measurement of religion and related constructs (Hill and Pargament 2003, Idler et al. 2003). This problem has been exacerbated by the use of large-scale secondary data sources, which, despite their considerable virtues, often lack sophisticated items gauging health-related aspects of religiousness. Thus, many studies have relied mainly on measures of religious behaviors, most prominently the self-reported frequency of attendance at religious services, along with the frequency of prayer or meditation, as well as vague items tapping (a) religious identity, or how religious one considers oneself, and (b) religious salience, or the self-reported importance of religion in one's daily life. Among psychologists, the study of religious

orientations or motivations has been extremely popular. Here researchers typically distinguish between (a) intrinsic orientation, or the tendency to value religion for its one sake and to attempt to carry over the precepts of the faith into other areas of one's life, and (b) extrinsic orientation, or the inclination to use religion (e.g., congregation, personal spirituality) as a means to an end—social connections, psychic strength in coping, access to services, and so on. For these individuals, religious faith and teachings typically do not occupy a particularly prominent place in their daily thinking or decision-making. With the advent of recent conceptual and measurement advances, investigators increasingly focus on specific causal mechanisms or pathways through which religion may influence mental health. This has led growing numbers of researchers to employ measures of religious support, coping, and other health-relevant religious and spiritual domains (Pargament 1997, Idler et al. 2003, Krause 2008).

Second, many studies in the religion-mental health area are based on clinical samples, or samples of groups experiencing specific types of challenges or problems (e.g., bereaved persons). These samples are typically small convenience samples, not representative of and hence not generalizable to a broader population. Moreover, the patterns detected in such samples may be quite different from those found in community-dwelling, largely healthy samples. The failure to distinguish cleanly between clinical vs. population-based studies is a common source of confusion among researchers, critics and skeptics, and the general public alike.

Third, the vast majority of empirical studies continue to rely on cross-sectional data. Although these works can offer valuable snapshots of associations between religion and mental health outcomes, it is impossible to establish temporal ordering among variables, a key requirement for any assessment of causality. Koenig (2011) has conducted an exhaustive review of studies that probe the links between religion and depression and anxiety. His review includes non-US studies, clinical trials, and other *genres* that are not the focus of our chapter. He reports that of 342 studies on religion and depression located by online search, only 13% utilized a longitudinal design. Of the 237 studies addressing links between religion and anxiety (which included fear and post-traumatic stress disorder), only 5% employed longitudinal data.

These limitations notwithstanding, a growing body of work suggests that aspects of religiousness have salutary implications for affective

outcomes, particularly depression. In perhaps the most compelling meta-analytic assessment to date, Smith and colleagues (2003) analyzed data from 147 studies with a total of 98,975 subjects. Their pool of studies contains a range of *genres*, including studies using convenience samples of students and special populations (e.g., homeless, caregivers), but they focus on non-clinical studies. Overall, they concluded that religiousness bears a modest inverse association with depression (weighted $r = -.09$, $p<.0001$). Although this overall effect size seems small, it masks two important further findings: First, religiousness appeared to convey particular benefits for persons experiencing high levels of stress, although the overall effect persisted in direction and significance, and at somewhat lower magnitude, for persons under no stress at all. Second, the association between religiousness and depression also varies by the specific measure of religiousness employed. Some dimensions of religiousness exhibited a notably higher association with depression than the overall weighted correlation would suggest. Examples of salutary associations include those involving intrinsic religiousness ($r = -.175$), religious behaviors ($r = -.124$), positive religious coping ($r = -.167$), religious well-being ($r = -.199$) and God concept ($r=-.199$). Other associations implied undesirable effects of religion, including: extrinsic religiousness ($r =.155$) and negative religious coping ($r =.136$). In sum, then, there appears to be a sound basis to believe that at least certain aspects of religiousness may protect against depression, anxiety, distress, and other negative affective outcomes.

The Stress Process: A Brief Overview

As outlined by Pearlin (1999), Wheaton (1999), and others, the stress process involves the interplay of stressors, resources, and mental health outcomes. Briefly, stressors are circumstances that require changes in the relationship of the individual to his or her environment and significant adjustments of lifestyle, behavior, or outlook, thereby taxing the capacity of the individual to respond (Lazarus and Launier 1978). Stressors consist of three types: (a) acute stressors, or major traumas or life events (e.g., job loss, bereavement); (b) chronic strains (e.g., poverty, disablement, marital conflict, neighborhood deterioration); and (c) daily hassles (e.g., traffic congestion, long lines for services). The idea behind this approach dates at least to the animal experimental

studies of Selye (1956); a wealth of evidence links each of these types of stressors with poorer mental health outcomes over time (e.g., Turner, Wheaton and Lloyd 1995).

However, research has also demonstrated that the noxious effects of stressors on mental health may depend upon the kinds of resources available to individuals for dealing with these various problems (Wheaton 1985, Lin and Ensel 1989). Two crucial types of resources in the stress process literature are social resources and psychological resources. Social resources typically refer to: (a) social integration (e.g., social network size, frequency of interaction); (b) enacted social support (e.g., receipt or provision of instrumental assistance, such as goods and services, informational aid, and such emotional support as companionship and morale support); and (c) anticipated support (e.g., the expectation that members of one's support network can be relied upon to provide help if one needs and requests it, whether or not one has actually drawn upon this network in the past) (Cohen 2004, Krause 2008). In the stress process tradition, the key psychological resources include: (a) self-esteem, or the global sense of one's intrinsic moral self-worth; and (b) personal efficacy (or the sense of control), or the perceived ability to influence one's life circumstances and engage one's environment to achieve one's daily objectives (Turner and Roszell 1994). Some researchers working within this tradition have also invoked other resources, including: (a) positive psychological traits and character virtues, such as optimism, meaning, gratitude, and forgiveness (Krause 2003a, 2006a); and (b) coping styles, or recurrent patterns by which individuals mobilize personal resources to deal with stressful events and conditions (Folkman and Lazarus 1986, Carver, Scheier and Wentraub 1989).

The core ideas of the stress process are highly flexible and can be integrated with other social and behavioral science approaches to address a range of specific problems and topics. For example, Pearlin (1989), Turner and others (Turner, Wheaton and Lloyd 1995, Turner and Lloyd 1999), have sought to explain social structural variations in mental health outcomes – e.g., by socioeconomic status, race and ethnicity, age, gender, etc. – in terms of (a) differential exposure to stressors, or variations in the number or intensity of negative events and conditions; and (b) differential vulnerability to stressors, or variations in levels or effectiveness of personal resources in promoting to resilience in the face of these stressors (McLeod and Nonnemaker 1999, Mirowsky and Ross 2003). With respect to religious variations in

mental health, investigators have examined the role of religious and spiritual factors in (a) reducing levels of social stress, (b) facilitating the accumulation of social and psychological resources, and (c) promoting specific coping approaches and enhancing the efficacy of personal resources in dealing with stress (Ellison 1994, Ellison and Levin 1998, Ellison et al. 2001).

Religion and Exposure to Stressors

How and why might religious involvement influence risk and number of stressful life events and conditions? Most religious communities and traditions attempt to shape the behaviors and lifestyle choices of their adherents in ways that conform to group norms that stem from doctrinal and theological tenets. Although these attempts at influence vary widely in the degree of their success, they may deter members from conduct that is unhealthy, immoral or unethical, or problematic for family solidarity and social order. Religious influences may operate in a number of different ways: (1) formal statements and "moral messages" from religious leaders, e.g., denominational pronouncements, sermons; (2) informal sanctions against members who deviate from group norms, e.g., expressions of disapproval, gossip, social ostracism; (3) emulation of role models or reference groups within the congregation, *i.e.*, persons or groups who are recognized and respected as exemplary members; (4) the threat of divine punishment for violation of religious standards, *i.e.*, the so-called "hellfire effect"; (5) limitations on the opportunities to engage in counter-normative activities due to lack of time or the dominance of coreligionist networks; and (6) cultivation of practices, routines, and habits that make deviant activities unlikely and unappealing (Hoffmann and Bahr 2005). In addition, McCullough and Willoughby (2009) have recently argued that religion shapes behavior by influencing self-control, selection and pursuit of personal goals, self-monitoring, and self-regulatory strength and behavior.

There is significant evidence linking aspects of religious involvement with a number of specific stress-related lifestyle factors. One important set of these factors involves health behaviors. For example, the frequency of attendance at religious services, in particular, is associated with avoidance of negative behaviors, such as heavy drinking, binge drinking, and carousing; smoking and other forms of tobacco

use; use of illicit drugs; promiscuity, infidelity, and other risky sexual practices; and others as well (Baier and Wright 2001, Hill et al. 2006, Burdette and Hill 2009, Gillum and Holt 2010). In addition, aspects of religious engagement are positively associated with positive behaviors, such as the use of preventive health care services (e.g., regular checkups, various types of screening tests); dental care; seat belt use; and regular diet, exercise, and sleep (Wallace and Forman 1998, Benjamins and Brown 2004, Hill et al. 2006). These health behaviors influence the risk of various chronic health problems, which in turn bear a strong influence on psychological distress and other mental health outcomes.

Further, a wealth of evidence links religious factors to the quality and stability of marital and family relationships. Specific research in this arena has focused on marital and relationship satisfaction (Ellison, Burdette and Wilcox 2010); risk of divorce (Call and Heaton 1997); frequency and types of marital disputes (Curtis and Ellison 2002); marital conflict resolution patterns, including forgiveness; domestic violence (Ellison, Bartkowski and Anderson 1999); and others (for review, see Mahoney 2010). Other studies have linked religion with the quality of relationships between parents and their adult children, and between grandparents and grandchildren (Pearce and Axinn 1998, King 2010). Some studies also find that more religious persons report greater affective family closeness overall, as well as more frequent contact with extended kin group members (Ellison 1997). In sum, then, religious involvement may influence mental health partly by decreasing the risk or frequency of family-related acute and chronic stressors.

Finally, most religious groups attempt to define and encourage moral, ethical behavior in other realms of life. Examples include economic affairs, where employees may be enjoined to be diligent workers and to avoid idleness and laziness. Most religious traditions promote honesty and integrity (e.g., Perrin 2000), as well as thrift and prudent stewardship – including charitable giving – in the management of personal and household financial resources (Wuthnow 1994). Religious persons are also encouraged to honor duly-constituted civil authorities, to obey law enforcement and other officials, to pay their taxes, and to fulfill their obligations as citizens (Grasmick, Bursik and Cochran 1991). To be sure, there is wide latitude in these directives, and some religious groups may offer very different counsel on these issues. Overall, however, it is reasonable to speculate that adherence to these

norms may reduce the risk of serious economic difficulties and legal hassles, which can take a significant toll on mental well-being.

Religion and Social Resources

A large body of research indicates that persons with larger and more supportive social networks tend to fare better on a range of mental health outcomes than their counterparts with fewer of these social resources (Cohen 2004, Krause 2008). How might religion affect access to and the effectiveness of social resources? First, with respect to social integration, or the quantitative aspect of social resources, religious congregations are network-driven institutions (e.g., Cornwall 1987). Individuals and families are often recruited into congregations through preexisting social ties. At the same time, religious groups are fertile ground for the cultivation of friendships because they bring together persons who share common beliefs, values, and interests on a regular basis, for worship, ritual, and other activities to which members ascribe particular significance (Ellison and George 1994). Indeed, several studies show that regular churchgoers enjoy larger networks and interact more frequently with their network members through in-person contact, by phone, etc., than other persons (Ellison and George 1994, Bradley 1995). Further, these patterns do not appear to result from dispositional factors; that is, they do not necessarily result from any tendency of churchgoers to be "joiners" in general or to exhibit greater extroversion or lower neuroticism than other persons (Bradley 1995).

Second, religious congregations offer valuable contexts for the exchange of tangible assistance such as goods (including financial aid), services, and information, as well as such emotional support as companionship and morale support (Taylor and Chatters 1988, Krause 2008). Some of this support occurs in formal church programs, which may be aimed at assisting persons with such particular needs as poor members, at-risk families, elders, persons with illness or disablement, and so on (Chaves and Tsitsos 2001). Indeed, some congregations go further, sponsoring programs to educate members about health behaviors and other physical health matters (Trinitapoli, Ellison and Boardman 2009). Religious groups often provide pastoral counseling or other forms of advising for members facing emotional difficulties, marital or family issues, or other types of problems (Neighbors, Musick and Williams 1998, Taylor et al. 2000).

However, a great deal of church-based social support is channeled through informal networks, exchanged among friends within the congregation. Everyday helping practices and acts of love and kindness are encouraged by the teachings of most religious traditions and by the ethos and rhetoric of many local congregations, which may emphasize fellowship and view themselves as an extended family (Pargament et al. 1983). Informal exchanges of support are also facilitated by the density of many church-based networks, which are characterized by long-term relationships among members (*i.e.*, support convoys). This is particularly important because studies point to anticipated support – *i.e.*, the perception that network members will deliver assistance when and if needed and requested – is a stronger predictor of mental health outcomes than either social integration or enacted social support, *i.e.*, that which has been delivered or exchanged (Krause 2008). Regular churchgoers may enjoy higher levels of anticipated support than others due to (1) norms of reciprocity within most religious groups, which allow them to draw upon "credits" for investments and assistance they have provided in the past; (2) confidence that fellow members will help them due to their own moral and religious convictions; and in some groups, (3) the possibility that members who decline or fail to deliver assistance when needed may lose status or respect within the congregation (Ellison 1994, Ellison and George 1994, Krause 2002, 2008).

Third, the support, particularly socio-emotional aid, provided by fellow church members may also be more beneficial than the support obtained from other sources (e.g., neighbors, coworkers, etc.). Although few studies have tested this hypothesis empirically, there are several reasons to believe that it may be accurate (e.g., Krause 2003b, 2006b). Research has revealed that individuals derive greater benefits from support when it is provided by persons who share common status characteristics, and especially by individuals who share common cultural values and life experiences (Suitor, Pillemer and Keeton 1995). This may be the case because support providers are likely to have greater empathy for the difficulties confronted by the recipient and may understand particular reasons why specific conditions are experienced as challenging or problematic, in part because these reasons may be shaped by culture and community norms. Such insight may help them to calibrate their support to the needs of the intended beneficiaries, thus reducing the potential for a failed support attempt (Jacobson 1987, Ellison 1994). In addition, the members of religious

communities often have a shared set of meanings and discourses concerning human suffering and the significance of helping others. It is possible that the use of such religious language and symbols may also hold particular psychosocial benefits for support recipients. Although we have emphasized the benefits of church-based social support for the recipients, it is important to note the value of such exchange networks for support providers, who may profit from opportunities to deliver assistance, thereby (1) not becoming overly dependent on their fellows (Maton and Rappaport 1984, Maton 1987), and (2) gaining a sense of self-worth and empowerment, as well as meaning and purpose, through helping others (Krause 2009).

Religion and Psychological Resources

A long tradition of psychological theory and research has maintained that religious faith and practice – primarily the Christian tradition – can undermine psychological resources by teaching that: (a) individuals are innately sinful and depraved, thereby lowering self-esteem and feelings of personal control; (b) God is omnipotent and omniscient, thereby promoting passivity and fatalism among the faithful; (c) believers should rely on God for assistance in times of trouble, thus diverting attention and energy from more realistic and productive coping strategies; and (d) God is judgmental and punitive, thereby instilling fear, guilt, and hopelessness (Ellis 1962, 1983, Watters 1992, Branden 1994). Albert Ellis (1962: 146), founder of Rational Emotive Therapy, went so far as to claim that "the concept of sin is the direct and indirect cause of virtually all neurotic disturbance." However, much of this critical work is based on theoretical analyses and case-based studies. Recent research based on both population and clinical samples yields a rather different picture of the links between religious engagement and psychological resources such as self-esteem and the sense of control (Ellison 1993, Krause 1995, Schieman, Nguyen and Elliott 2003, Krause 2005, Schieman, Pudrovska and Milkie 2005).

How and why might religion foster self-esteem and personal control? Investigators have offered several theoretical explanations for such patterns. First, although self-esteem is shaped by a number of factors, two social-psychological processes are particularly important: reflected self-appraisals and social comparisons (Rosenberg 1981). Briefly, based on notions of the "looking-glass self" dating from the

classic work of Cooley (1902), individuals can develop positive feelings of self-esteem, or the intrinsic sense of moral self-worth, if they perceive that others whose opinions they value hold them in high regard. Religion may contribute to positive reflected appraisals in at least two ways. As discussed above, religious congregations are settings in which friendships and supportive social ties often flourish. In contrast to secular contexts, in which persons are often evaluated in terms of their material wealth or possessions, education, physical attractiveness, or other external attributes, religious congregations may allow for evaluations of individuals based on quite different criteria, such as one's personal spirituality, kindness to others, service to the church, morality and wisdom (Ellison 1993). In these settings, individuals, even those with modest secular resources or social standing, may gain a sense of belonging and mattering to others (Bierman, Schieman and Ellison 2010). Such positive reflected appraisals, in turn, can build feelings of self-esteem.

Further, many persons of faith construct ongoing relationships with divine others (*i.e.*, God, Jesus) much as they would build connections with friends and associates (Pollner 1989). In lieu of face-to-face verbal exchanges or contacts via phone, e-mail, or letter, religious persons typically cultivate an intimate relationship with divine figures through various types of prayer, including conversational, meditative, ritual, and petitionary prayer (Poloma and Gallup 1991). Understandings of who or what God is and what God may expect from each person in the way of faith and conduct may emerge from scriptural study, as well as accounts of the faith journeys of historical figures and testimonials from religious leaders and popular celebrities, and others (Wikstrom 1987, Pollner 1989). Recent developments integrating insights from attachment theory with the psychology of religion suggest that God may be an ideal secure attachment figure who can be counted on to provide valuable assurance, an emotional "safe haven" for believers (Kirkpatrick 2004, Bradshaw, Ellison and Marcum 2010), because God is always available for guidance and solace for the faithful.

With regard to orthodox religious doctrine, a number of religious authors have countered the criticisms of Ellis (1962, 1983) and his ideological compatriots by noting the following tenets of Christian teaching: (a) God is believed to be the creator of all, and the most powerful entity in the universe; (b) all humans were made in God's image; (c) God demonstrated love by allowing the sacrifice of Jesus on the cross to cleanse the sins of humanity; (d) God wishes to have a close,

loving relationship with each person; and (e) believers receive the gift of eternal life. For believers, these core doctrinal tenets convey a clear sense of the dignity, significance and purpose for the existence of each individual, and thus may offer a basis for elevated feelings of self-worth (Narramore 1984, Schuller 1989).

Recent studies have also reported positive links between aspects of religious involvement and the sense of control, a pattern of findings that runs counter to the longstanding claims of critics (Krause and Tran 1989, Schieman, Pudrovska and Milkie 2005, Ellison and Burdette 2010). Why might this be the case? First, this facet of the self is influenced partly by processes of self-attribution; individuals come to attribute to themselves the ability to influence their environments and control their daily affairs when they have gained some experience in successfully doing so (Bandura 1997). Although this varies somewhat by tradition and denomination (e.g., Verba, Scholzman and Brady 1995), many religious congregations offer extensive opportunities for lay participation, including involvement in leadership activities. Specific examples include, among many others, church committees, charitable events, athletic teams, and other social activities, and youth and adult religious education classes. Through such endeavors, individuals may build self-confidence and gain valuable experiences. Further, they may develop skills that they can also utilize in other settings (e.g., secular groups, political activism), such as public speaking, organizing groups, writing letters, raising funds, and others (e.g., Schwadel 2002). Taken together, these activities may enhance feelings of personal control or mastery.

In addition, individuals' sense of control may also be influenced by religious beliefs and non-organizational practices, but not always in the deleterious ways that critics have often assumed. Strong beliefs that one is solely in control of one's affairs are not always conductive to positive mental health outcomes, and beliefs in divine control do not always involve relinquishing control of one's own affairs. Some researchers have begun to explore the prevalence and role of beliefs about divine control more carefully, and findings suggest that beliefs that God is actively involved in shaping one's life may have salutary implications for mental health (Schieman, Pudrovska and Milkie 2005, Schieman et al. 2006, Schieman 2008, 2010). Further, data from a representative sample of adults in the United States link religious attendance and belief in an afterlife with greater sense of control, suggesting that many believers gain a sense that the world, and their own affairs in

particular, are under control, though ultimate control may rest with a Higher Power (Ellison and Burdette 2010). Clearly existing understandings of the links between religious beliefs and the sense of control are currently in flux, and longstanding criticisms of the effects of religion are facing new questions.

Although much of the work within the stress-process tradition emphasizes the importance of self-esteem and personal control as key psychosocial resources (e.g., Turner and Roszell 1994, Wheaton 1999), there is growing interest in other psychological resources as well. Especially relevant here are key constructs from positive psychology, often termed virtues or character strengths (Peterson and Seligman 2004). Prominent examples of such strengths include forgiveness, gratitude, and the sense of meaning and purpose. Briefly, most religious traditions encourage forgiveness of others for misdeeds (McCullough and Worthington 1999, Rye et al. 2000). Consistent with this logic, it appears that there is a positive association between religiousness and the extent to which individuals are, or claim that they are, forgiving. Several studies have linked forgiveness, especially unconditional forgiveness, with desirable mental health outcomes (Krause and Ellison 2003). Although few studies have examined the links between stressors, forgiveness, and mental health, it is reasonable to expect that persons who can let go of feelings of anger, betrayal, shame, and other negative emotions that can stem from certain stressors (e.g., marital discord, interpersonal conflicts) are likely to experience lower levels of distress, depression, and other unpleasant affective states (Thoresen, Harris and Luskin 2000, Krause and Ellison 2003). Religion can also be an important source of meaning and purpose, as well as gratitude (Pargament 1997, Emmons 2005). Once again, the available evidence links these psychological resources with better mental health, and an emerging literature suggests that they may be particularly useful for persons grappling with stressful events or conditions (Krause 2003a, 2006a).

Religion and Coping

Another way in which religion may influence mental health outcomes is by providing specific coping tools and methods by which individuals can deal successfully with stressful events and conditions. According to Lazarus and Launier (1978: 288) coping refers to "efforts, both

action-oriented and intrapsychic, to manage (that is, master, tolerate, reduce, minimize) environmental and internal demands … which tax or exceed a person's resources." Early work on coping often assumed that religion plays a detrimental role, mainly offering a unidimensional passive, escapist, and counterproductive approach that diverts attention from more proactive coping techniques. Empirical studies subsequently revealed some beneficial effects of religious coping, but these desirable consequences surfaced mainly for persons dealing with a narrow range of problems for which (a) emotion-regulation was the primary coping task, (b) problem-solving approaches were ineffective, or (c) worldly explanations were unavailable. Examples of such stressors included bereavement, natural disasters, and unexpected tragedies that challenged everyday assumptions about the fairness of life (Bulman and Wortman 1977, Mattlin, Wethington and Kessler 1990).

More recent work has cast fresh light on the rich and variegated domain of religious coping. An important touchstone for much of this literature has been the classic theoretical approach of Lazarus, Folkman and their associates (Lazarus and Folkman 1984, Folkman et al. 1986). This line of analysis distinguishes between two key facets of the coping process: (a) primary appraisal, in which individuals assess the meaning of the given event or condition and attempt to gauge its challenges to the self and the future; and (b) secondary appraisal, in which individuals take stock of the resources available to address and overcome these challenges. Theorists and researchers have argued that religion can influence both of these elements of the coping process.

For example, a long tradition of work has noted the key role of religion in the search for meaning in the face of suffering (e.g., Frankl [1946] 2006), and a number of studies have identified a range of religious responses to adversity that correspond closely to the ideas of Lazarus and Folkman (1984) regarding primary appraisals. Religious cognitions may lead persons of faith to reframe the stressor as part of God's plan, as a "blessing in disguise," as an opportunity for personal or spiritual growth, and so on (e.g., Foley 1988). In a notable study of religious responses to physical disability, Idler (1995) observed that persons who adapted successfully were those who cultivated "nonphysical" senses of self. Since these individuals could no longer count on being able to pursue activities that required mobility or regular physical activity, they came to emphasize (to others and in their own thinking) different sets of personal attributes, skills and components of their identity. In some instances, such reframing made the onset of

disability less threatening to their core sense of self and their vision of the future.

Many major contributions to our understanding of religious coping have emerged from the research program of Pargament (1997) and his many students and colleagues. Briefly, Pargament has identified many methods through which individuals may draw upon religion and spirituality in dealing with personal problems. He argues that these methods are portable; *i.e.*, individuals tend to use similar religious coping methods across episodes and types of stressor. In one important early foray into the diversity of religious coping approaches, Pargament and associates (1988) squarely engaged the perception of many in the psychological community that religious coping is mainly passive, as individuals turn to God as a crutch to avoid taking responsibility for and dealing with their problems. To be sure, Pargament and his colleagues found that some persons did cope in this way, with undesirable consequences. However, this was not the modal style of religious coping; rather, many more individuals formed dynamic partnerships with God and perceived that they were working together to resolve problems. These collaborative copers drew strength from their relationship with God and fared much better on emotional, physical, and spiritual outcome measures. The results of that study cast fresh light on the phenomenon of religious coping, demonstrating that certain coping styles yield psychosocial dividends while others conform to negative stereotypes.

Pargament and his associates have continued to examine various methods of religious coping over the past two decades. His efforts have yielded a rich, theoretically-grounded understanding of the multidimensional phenomenon of religious coping (Pargament 1997), as well as a sophisticated scheme for measuring the many methods of religious coping, known as the RCOPE (and its short-form cousin, the Brief RCOPE) (Pargament et al. 1998, Pargament, Koenig and Perez 2000). These instruments have been employed in numerous studies of coping within diverse samples in a wide array of contexts. Although most of these works are based on cross-sectional data, the results of these studies highlight what appear to be salutary effects of several specific coping practices. Among the most productive religious coping methods are (a) collaborative coping, or engaging in problem-solving efforts with God, as in the popular epigram "God is my co-pilot"; (b) benevolent religious reappraisal, or reframing potentially negative conditions in religious terms, e.g., as part of God's plan; (c) seeking spiritual support and comfort from God; and (d) active

religious surrender, or attempting to solve those problems that can be tackled successfully, and then turning over more difficult aspects to God, as in the popular epigram "let go and let God." In one meta-analysis of 49 studies, with 105 effect sizes, Ano and Vasconcelles (2005) report substantial associations between these "positive" religious coping approaches and positive mental, physical, and spiritual adjustment outcomes (weighted $r = .33$, $p < .01$), and more modest but robust associations between such coping practices and negative adjustment (weighted $r = -.12$, $p < .01$). These patterns are highly consistent with the patterns reported by Smith et al. (2003), described above.

Is There a Dark Side of Religion?

Most recent studies of religion and mental health have emphasized salutary religious effects. But this does not necessarily mean that critics (e.g., Ellis 1962, 1983) were entirely incorrect in some of their claims. Indeed, a growing literature demonstrates that certain facets of religious belief and experience can indeed have deleterious consequences for health and well-being, thus documenting a "dark side" of religion (Exline 2002, Pargament 2002). Although researchers in this area have identified a number of possible elements of this "dark side," often termed "spiritual struggles," three elements have been the focus of most of the theoretical and empirical work on this topic: (a) interactional (or divine) struggle, or troubled or problematic relationships with God that are especially likely to surface during the coping process; (b) intrapsychic struggle, or difficulties with sustaining religious faith or practice; and (c) interpersonal struggle, or negative interactions with clergy or church members in religious settings (Exline and Rose 2005, Pargament et al. 2005).

Interactional, or divine, struggle refers to difficult relationships between individuals and God (Pargament 1997, McConnell et al. 2006). Although for most persons of faith, practices such as prayer, scriptural study, and other devotional pursuits lead to the perception of a close bond with a loving, caring deity, this is not the case for everyone (Pargament et al. 1998, Pargament, Koenig and Perez 2000). Some persons come to experience God as a judgmental figure, and they may interpret negative life events and chronic stressors as punishment for their sins or lack of spirituality. Others come to feel angry toward God, wonder whether God has abandoned them in their time

of trouble, or question whether God cares about them or has the ability to help them with their problems. Such feelings of estrangement from God constitute the core of divine struggle, and this can impair mental health by (a) depriving individuals of a close personal bond with God and (b) eliciting feelings of worthlessness, helplessness and hopelessness, which are important precursors to depression and other negative affective conditions. Several researchers have documented potent associations between divine struggle and depression, suicide ideation and other undesirable emotional outcomes in diverse samples (Exline, Yali and Lobel 1999, Exline, Yali and Sanderson 2000, Pargament et al. 2004, McConnell et al. 2006, Ellison and Lee 2010).

Closely related, but conceptually and empirically distinct, is the phenomenon of intrapsychic struggle, often gauged in terms of religious doubts. The status of doubt within the Christian tradition is somewhat ambiguous (Hecht 2003). On the one hand, some liberal theologians, e.g., Paul Tillich, have argued that the maturation of one's faith requires questioning and doubting. However, Pauline writings admonish the faithful to believe without doubting, and conservative theologians such as Karl Barth have asserted that religious doubt should be a source of shame for all Christians (Krause et al. 1999). Doubt may foster feelings of emotional distress, depression, anxiety, and related outcomes for several reasons. First, individuals who experience doubt are deprived of a valuable source of existential meaning, coherence, and coping assistance. Second, those who are (or have been) persons of faith are likely to feel guilt due to their non-normative status as doubting Christians. Third, these feelings may make them reluctant to share their doubts with fellow church members or clergy, which in turn may eliminate a potentially valuable source of spiritual nurturance and social support in addressing these issues (Krause and Ellison 2009). Several studies have investigated the links between religious doubt and various mental health outcomes, and their results generally confirm that doubting has undesirable emotional *sequelae* (Ellison 1991, Krause et al. 1999, Krause 2006c, Ellison and Lee 2010). In addition, the harmful effects of doubt vary by age, with younger people experiencing higher levels and greater deleterious effects, as compared with older adults. Doubts may also be more problematic for persons with lower levels of education and those who have recently experienced major stressful events (Krause et al. 1999, Galek et al. 2007).

Religious groups can also be sites of interpersonal strife and conflict, as well supportive bonds and acts of kindness. Negative interactions

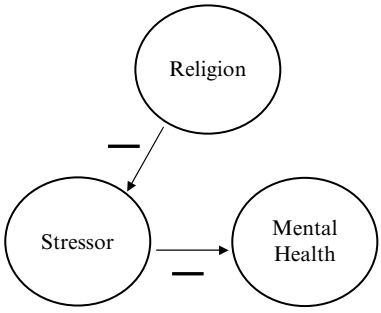
within religious settings can arise from a number of causes (Krause et al. 2000). For example, some congregations may make excessive demands on their members, requiring high levels of time, energy, and financial resources. Such demands may overload members, affecting family roles, work life, and exhaustion (Krause, Ellison and Wulff 1998). Many religious groups also attempt to shape members' behaviors in such areas as lifestyle choices and political orientations, among others. Individuals who deviate from normative behaviors may face unpleasant interactions with fellow members or even church leaders. Congregations, like other social groups, can fall prey to interpersonal jealousies, bickering and backbiting as well. Finally, congregations can experience more serious, large-scale conflicts (e.g., Becker 1999); these rifts can occur over matters of administration (e.g., management of facilities and finances); theological or doctrinal views of the clergy; or political matters, such as homosexuality, war, or other controversial topics.

Studies have repeatedly shown that the harmful effects of negative interactions may be proportionally greater than the salutary influence of positive encounters (Schuster, Kessler and Aseltine 1990, Okun and Keith 1998). This may be true for several reasons. Broad social norms create the expectation that most interactions will be neutral or positive, therefore, overtly unpleasant or hostile exchanges are unexpected and counter-normative, hence they can be especially damaging when they occur (Rook 1984). This may be especially true within religious groups, where such negativity is highly discouraged and therefore unanticipated. In addition, stressors can be particularly problematic when they challenge roles that are highly valued (Krause, Ellison and Wulff 1998). Because religious roles and moral standing may be especially important to members of faith communities, negative interactions with coreligionists could be expected to take a particularly heavy toll on emotional well-being. This impact could be even more deleterious for clergy members or lay leaders. Indeed, several cross-sectional and longitudinal studies of church-based negative interaction and mental health report findings that are consistent with these arguments (Krause et al.1998, Krause 2003b, Ellison, Zhang et al. 2009).

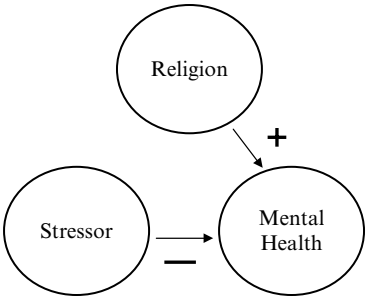
Conceptual Models

The secular literature on the stress process provides several conceptual models of the relationships between stressors, resources and health

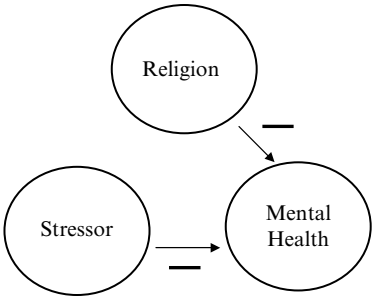
outcomes (Wheaton 1985, Lin and Ensel 1989). Several researchers have adopted these models readily for use in the study of links between multiple dimensions of religious involvement and mental health (Tix and Frazier 1998, Ellison et al. 2001, Fabricatore et al. 2004). Three models, which we will term the stress-deterrent, offsetting effects, and additive models, posit that stressors and resources have deleterious main effects on mental health outcomes. In the *stress-deterrent* model, represented in Figure 1.1a, religious involvement is simply regarded as exogenous, and aspects of religious participation (e.g., frequency of attendance, embeddedness in congregational networks) are expected to influence mental health partly by reducing levels of exposure to traumatic events and chronic conditions. Thus, according to this model, controlling for the presence, number, or severity of stressors would be expected to diminish the link between religious involvement and mental health. In the *offsetting effects* model, religious resources



1.1a: Stress-Deterrent Model



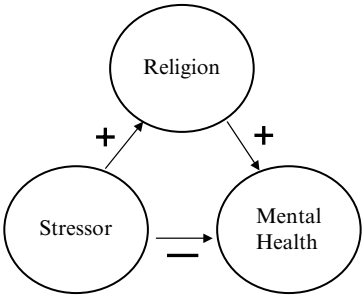
1.1b: Offseting Effects Model



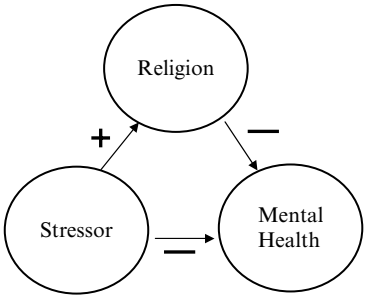
1.1c: Additive Effects Model

(e.g., congregational social support, psychological or coping resources) are expected to have salutary effects on mental health, thus partly or entirely countering the impact of stressors well-being. This model is depicted in Figure 1.1b. By contrast, in the *additive effects* version, those aspects of religiousness (e.g., maladaptive coping, religious doubt, negative interpersonal encounters), which we have termed the "dark side" of religiousness, have an independent role in undermining mental health, thereby adding to the problems caused by stressful events or conditions, as depicted in Figure 1.1c.

The second set of models described here involves more complex relationships between stressors, resources, and mental health outcomes. According to the *suppressor* model, persons facing stressful events and conditions tend to mobilize resources in order to deal with the consequences of these problems, e.g., by drawing on religious support networks or positive religious coping strategies. These resources, in turn, assist individuals by countering the noxious effects of stressors. Thus, the magnitude of harmful consequences of stressful events and circumstances may be "suppressed" (or masked) by the salutary role of religious resources; only when the salutary effects of these resources are controlled can the "true" scope of the deleterious effects of stressors be detected. This suppressor model is displayed in Figure 1.2a. The *mediator* model also assumes that stressors impair mental health, but this model suggests that one way in which traumas and chronic problems take their toll is by promoting religious or spiritual problems, e.g., increasing levels of religious doubt, feelings of estrangement from God, and so on. Thus, negative facets of religion mediate the link between stressors and mental health; by adjusting for these unwholesome aspects of religiousness, it is possible to observe



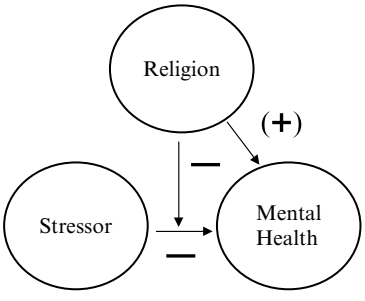
1.2a: Stress-Suppressing Model



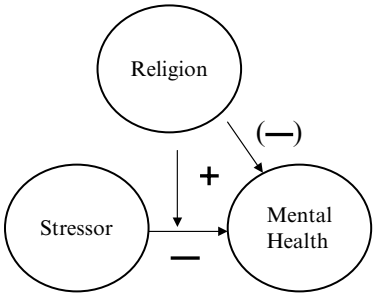
1.2b: Stress-Mediating Model

one of the pathways linking stressors with poorer mental health. This mediator model is represented in Figure 1.2b.

Finally, the third set of conceptual models involves contingent or interactive effects. Once again, stressors are assumed to impact mental health adversely. In the *stress-buffering* model, the deleterious effects of stress are conditioned by the levels of positive religious resources, e.g., congregational support, psychological resources. The salutary effects of religiousness are most evident among persons facing elevated levels of stressful events and conditions, and the harmful *sequelae* of stressors are substantially blunted among persons with higher levels of religious resources. By contrast, the undesirable impact of stressors is strongest among those persons with the lowest levels of such resources. This stress-buffering model, displayed in Figure 1.3a, is commonly evaluated by adding cross-product interaction term(s) to multivariate models predicting individual-level variations in mental health outcomes. Another interactive model is the *stress-exacerbating* model, depicted in Figure 1.3b. According to this conceptual model, negative aspects of religiousness or spirituality, such as those discussed earlier, may augment or compound the already-negative consequences of (secular) stressful events or conditions, thus having a harmful multiplier effect on mental health problems. Where this is the case, the noxious effects of stressors should be greatest among persons with the highest levels of these negative facets of religiousness, such as doubt, estrangement from God, and negative interpersonal encounters in the church. The magnitude of stressor effects should be weakest among persons who do not suffer from this "dark side" of religion or spirituality. This final model, the stress-exacerbating model, is presented in Figure 1.3b.



1.3a: Stress-Buffering Model



1.3b: Stress-Exacerbating Model

Subgroup Variations

In addition to exploring the issues outlined above, investigators are increasingly attentive to possible subgroup differences in the links between religious involvement and mental health outcomes. Much of the existing literature has centered on the potential moderating effects of race-ethnicity, social class and gender. Why might associations between religious factors and mental health outcomes be contingent on race-ethnicity? Many observers have called attention to distinctive aspects of African American theology, congregational life, worship practices, and other features of religious life that may hold implications for mental health (for a review, see Ellison et al. 2010). In particular, due to the legacy of racism, segregation, and economic exclusion, African American theology developed as a practical response aimed at healing, hope, and the individual and collective liberation of African Americans.

Despite commitment to Evangelical Protestant theology, which sometimes envisions God in highly judgmental terms, African American theology has tended to emphasize a benevolent, loving, forgiving God, a God of redemption and second chances. In addition, African American religion often embodies a communal orientation, with congregations serving as extended families and as focal points of members' social support systems. Moreover, many (but certainly not all) African American religious services involve ecstatic worship styles – including call-and-response preaching, dancing and other physical expressiveness, dynamic music, etc. – that may facilitate the management and release of negative emotions (e.g., grief, anger) and increase feelings of euphoria. Finally, there is a growing body of evidence confirming the distinctive role and high importance of religious faith and practice among African Americans, especially elders. A number of studies report that religious effects on health and well-being are stronger among African Americans as compared with whites, and also that religion buffers the noxious effects of experiences with discrimination and racist encounters on mental health (Bierman 2006, Ellison, Musick and Henderson 2008).

To date, few studies have examined the relationships between religion and mental health among Latino Americans, and we are aware of virtually no studies comparing the effects of religious factors among Latinos and non-Hispanic whites or other groups. Emerging work among older Mexican Americans discusses several distinctive

facets of Latino religion, particularly the valorization of suffering in silence, emulating the journey of Christ (Krause and Bastida 2009). Another recent study among working-age Mexican Americans in California reports what appear to be salutary effects of religious salience on depressive symptoms. This relationship is present for both women and men, although it is notably stronger for women, a pattern that may reflect the empowering image of the Virgin of Guadalupe, patron saint of Mexico and Mexican Americans (Ellison, Finch et al. 2009).

Another potentially important source of subgroup variation in links between religion and mental health is socioeconomic status. Relevant research extends longstanding interest in the role of religion in the lives of less fortunate groups. Schieman, Nguyen and Elliott (2003) have examined a productive debate about whether religious involvement compensates for social and economic deficits, or amplifies the advantages associated with higher levels of education and income. Several studies report that the salutary effects of religious faith and practice for mental health are moderated by education, with stronger associations generally emerging among persons with lower levels of education (Pollner 1989, Ellison 1991, Krause 1995). Taken together, such findings suggest that religious faith may substitute for education in providing a plausibility structure, or coherent interpretive framework, with which individuals can make sense of mundane events, world affairs, and personal challenges (Berger 1967). Recent work by Schieman and colleagues (2006) reveals that the sense of divine control predicts lower levels of psychological distress for lower-SES elders, but predicts higher levels of distress among their upper-SES counterparts. Further, there is new evidence that religious belief (particularly belief in an afterlife) mitigates or buffers the deleterious effects of financial hardship and decline, as well as feelings of relative deprivation, on psychological distress (Ellison, Burdette and Hill 2009, Bradshaw and Ellison 2010).

The associations between religion and mental health may also be conditioned by gender. It is well established that, on average, women are more religious than men, by virtually all conventional indicators. But in addition to these gender differences in levels of religiousness, there are indications that the benefits from religious belief and practice may vary by gender as well, although the specific patterns may depend upon which aspects of religiousness are considered. For example, on average women attend religious services more often than men, and

they enjoy higher levels of church-based emotional support than men. However, men may derive proportionally greater benefits from religious attendance and support (Krause, Ellison and Marcum 2002, McFarland 2010). On the other hand, several recent studies suggest that spiritual perceptions (e.g., feelings of union with God and deep connection to nature) may be more strongly linked with mental health outcomes for women than for men (Maselko and Kubzansky 2006, Ellison and Fan 2008, Greenfield, Vaillant and Marks 2009). Further, as noted earlier, at least one study of Mexican Americans reports that the inverse association between religious salience and depression is stronger among women (Ellison, Finch et al. 2009).

Although race-ethnicity, socioeconomic status, and gender are obvious starting points for sociologists interested in subgroup variations and moderator effects in this area, there are other promising directions as well. For example, it would be useful to determine whether religious involvement, particularly congregational social support and attachment to God, may substitute or compensate for a dearth of close interpersonal ties, or whether religion enriches existing relationships and amplifies the mental health advantages that are already enjoyed by individuals with close and supportive relationships. In addition, a recent study by Brashears (2010) reveals that associations between religiousness and *anomia* are moderated by the degree of religious homogeneity that characterizes personal social networks. Specifically, religious protective effects are stronger among persons whose social networks are composed primarily of coreligionists. Thus, closer attention to the broader contexts within which individual religious faith and practice are embedded can enhance our understanding of the links between individual religious involvement and mental health outcomes.

Concluding Thoughts

In this chapter we have sought to (a) provide a brief review of literature on religion and mental health, focusing on studies of affective disorders conducted using community- or population-based samples drawn in the United States; (b) identify the most promising mechanisms or explanatory pathways that may underlie associations between religious factors and mental health outcomes from the perspective of the stress process; (c) outline the most plausible conceptual models linking

religion with components of the stress process; and (d) briefly review evidence regarding subgroup variations in the relationships between religion and mental health.

Although considerable progress has been made over the past two decades, a number of important research questions in this area remain unaddressed, and several issues deserve the urgent attention of investigators. One key concern is the dearth of relevant high-quality, longitudinal data on representative community or population samples. Such data are vitally important if we are to move beyond simply observing tantalizing cross-sectional associations, toward establishing causal relationships. Moreover, given that individuals select into (or out of) religious belonging or belief, it is important to consider the role of selectivity in shaping observed relationships between religion and mental health. Longitudinal data will be essential for this purpose.

Another key issue involves the availability of appropriate measures of religiousness and related constructs. In particular, although conceptualization and measurement of health-relevant religious and spiritual domains has moved forward rapidly (e.g., Hill and Pargament 2003, Idler et al. 2003), the small number of valuable data sources in this area often lack sophisticated measures of such central constructs as congregational support processes, religious coping methods, character strengths (e.g., forgiveness, gratitude) and other constructs from positive psychology (e.g., meaning and purpose). It would also be productive to incorporate elements of religious belief, which are now receiving fresh attention from researchers (e.g., Schieman 2010), as well as spiritual experiences (e.g., Ellison and Fan 2008), although observers rightly worry that some constructs in this domain – especially "spiritual well-being" – may be confounded with mental health outcomes (Koenig 2008).

Given the religious makeup of the United States, which remains primarily Christian, it is understandable that the religious measurement approaches used in many survey data collection projects emphasize Christian practices and beliefs. However, it is also important for researchers to develop culturally appropriate strategies for gauging facets of other non-Judeo-Christian faith traditions, due to their prevalence around the world and their expanded numbers within the U.S. In recent years researchers have begun this task, developing and validating measures of core facets of religiousness for Hinduism (Tarakeshwar et al. 2003), Islam (Abu Raiya et al. 2008), and other faiths. Further work is needed to link these and other dimensions of

religion and spirituality with mental health outcomes among adherents of these faith traditions.

Finally, much more information is needed on the interface of religion with genetics, gene-environment interactions, and neurophysiological processes. Briefly, it is becoming clear from studies of monozygotic and dizygotic twins that religiousness has some genetic basis, although it appears that the extent of this inherited component varies widely depending upon the specific facet of religiousness under consideration. For example, according to one study of midlife adults in the United States, approximately 30% of individual-level variation in the frequency of religious attendance may be attributable to genetic factors; this figure rises sharply, to nearly 70% for the propensity for a "born again" or life-changing religious experience (Bradshaw and Ellison 2008). It is also well established that depression, anxiety, and other negative affective outcomes are significantly influenced by genetic factors. However, relatively few studies have attempted to assess whether the observed link between religiousness and mental health can be explained – at least in part – by genetic factors (for an exception, see Kendler, Gardner and Prescott 1997). Moreover, there is considerable interest in studying the interplay of genes and environments, *i.e.*, the extent to which genetic influences on outcomes such as depression or other mental health conditions may be contingent on (delayed, hastened, or forestalled altogether by) factors such as aspects of religiousness (religiously-based psychosocial resources, coping methods, etc.). Further work along these lines could make a valuable contribution to our understanding of the overall connection between religion and mental health.

In addition, a small but growing body of research documents the association between religious belief and experience, on the one hand, and brain functioning on the other hand. Moreover, recent work indicates that those persons who believe fervently are less reactive to errors, as measured by the changes in the function of the anterior cingulate cortex (ACC), which may offer a neurological mechanism for the observed link between religious beliefs (in God, an afterlife, etc.) and reduced anxiety (Inzlicht et al. 2009, Inzlicht and Tullett 2010). In addition, ongoing work relates specific facets of religious involvement, including particular religious coping styles and methods, with depression among older adults through changes in the size of the hippocampus (Hayward et al. 2011). Such research is vitally important, because it has the potential to connect social processes, such as those identified

by our discussion of religion and the stress process, with neuro-physiological pathways that ultimately give rise to affective states such as depression and anxiety.

Clearly research on religion and mental health has come a long way in a relatively short time. As investigators continue to pursue balanced, multi-disciplinary research programs, such advances are likely to continue, and indeed, to accelerate. By building upon the core constructs and models of the "stress process" tradition and integrating them with findings from other relevant fields, social scientists can make vital contributions to our understanding of the complex relationships between religion and mental health outcomes.

References

Abu Raiya, Hisham, Kenneth I. Pargament and Annette Mahoney. 2008. "A Psychological Measure of Islamic Religiousness: Development and Evidence for Reliability and Validity." *International Journal for the Psychology of Religion* 18: 291–315.

Ano, Gene and Erin Vasconcelles. 2005. "Religious Coping and Psychological Adjustment to Stress: A Meta-Analysis." *Journal of Clinical Psychology* 61: 461–80.

Baier, Colin J., and Bradley R.E. Wright. 2001. "If You Love Me, Keep My Commandments: A Meta-Analysis of the Effect of Religion on Crime." *Journal of Research in Crime and Delinquency* 38: 3–21.

Bandura, Albert. 1997. *Self-Efficacy: The Exercise of Control*. New York: Freeman.

Becker, Penny E. 1999. *Congregations in Conflict*. New York: Cambridge University Press.

Benjamins, Maureen R., and Carolyn Brown. 2004. "Religion and Preventive Health Care Utilization among the Elderly." *Social Science and Medicine* 58: 109–18.

Berger, Peter L. 1967. *The Sacred Canopy*. Garden City, NY: Doubleday.

Bierman, Alex. 2006. "Does Religion Buffer the Effects of Discrimination on Mental Health? Differing Effects by Race." *Journal for the Scientific Study of Religion* 45: 551–66.

_____, Scott Schieman and Christopher G. Ellison. 2010. "Religious Involvement, Beliefs about God, and the Sense of Mattering among Older Adults." *Journal for the Scientific Study of Religion* 49: 517–35.

Bradley, Don E. 1995. "Religious Involvement and Social Resources: Evidence from the Dataset Americans' Changing Lives." *Journal for the Scientific Study of Religion* 34: 259–67.

Bradshaw, Matt and Christopher G. Ellison. 2008. "Do Genetic Factors Influence Religious Life? Findings from a Behavior Genetic Analysis of Twin Siblings." *Journal for the Scientific Study of Religion* 47: 529–44.

_____. 2010. "Financial Hardship and Psychological Distress: Exploring the Buffering Role of Religion." *Social Science and Medicine* 71: 196–204.

_____ and John P. Marcum. 2010. "Attachment to God, Images of God, and Psychological Distress in a Nationwide Sample of Presbyterians." *International Journal for the Psychology of Religion* 20: 130–47.

Branden, Nathaniel. 1994. *The Six Pillars of Self-Esteem*. New York: Bantam Books.

Brashears, Matthew E. 2010. "Anomia and the Sacred Canopy: Testing a Network Theory." *Social Networks* 32: 187–96.

Bulman, Ronnie J. and Camille B. Wortman. 1977. "Attributions of Blame and Coping in the "Real World" Severe Accident Victims React to Their Lot." *Journal of Personality and Social Psychology* 35: 351–63.
Burdette, Amy M. and Terrence D. Hill. 2009. "Religious Involvement and Transitions into Adolescent Sexual Activities." *Sociology of Religion* 70: 28–48.
Call, Vaughn R.A. and Tim B. Heaton. 1997. "Religious Influence on Marital Stability." *Journal for the Scientific Study of Religion* 36: 382–92.
Carver, Charles, Michael F. Scheier and Jagdish Kumari Weintraub. 1989. "Assessing Coping Strategies: A Theoretically-based Approach." *Journal of Personality and Social Psychology* 56: 267–83.
Chaves, Mark and William Tsitsos. 2001. "Congregations and Social Services: What They Do, How They Do It, and With Whom." *Nonprofit and Voluntary Sector Quarterly* 30: 660–83.
Cohen, Sheldon. 2004. "Social Relationships and Health." *American Psychologist* 59: 676–84.
Cooley, Charles H. 1902. *Human Nature and the Social Order*. New York: Scribner.
Cornwall, Marie. 1987. "The Social Bases of Religion." *Review of Religious Research* 29: 44–56.
Curtis, Kristen Taylor and Christopher G. Ellison. 2002. "Religious Heterogamy and Marital Conflict: Findings from the National Survey of Families and Households." *Journal of Family Issues* 23: 551–76.
Ellis, Albert L. 1962. *Reason and Emotion in Psychotherapy*. Secaucus, NJ: Lyle Stuart.
_____. 1983. *The Case Against Religiosity*. New York: Institute for Rational-Emotive Therapy.
Ellison, Christopher G. 1991. "Religious Involvement and Subjective Well-Being." *Journal of Health and Social Behavior* 32: 80–99.
_____. 1993. "Religious Involvement and Self-Perception among Black Americans." *Social Forces* 71: 1027–55.
_____. 1994. "Religion, the Life Stress Paradigm, and the Study of Depression." Pp. 78–121 in *Religion, Health, and Aging: Theoretical Foundations and Methodological Frontiers*, edited by J.S. Levin. Thousand Oaks, CA: Sage.
_____. 1997. "Religious Involvement and the Subjective Quality of Family Life among African Americans." Pp. 117–131 in *Family Life in Black America*, edited by R.J. Taylor, L.M. Chatters and J.S. Jackson. Newbury Park, CA: Sage.
_____, John P. Bartkowski and Kristin L. Anderson. 1999. "Are there Religious Variations in Domestic Violence?" *Journal of Family Issues* 20: 87–113.
_____, Jason D. Boardman, David R. Williams, and James S. Jackson. 2001. "Religious Involvement, Stress, and Mental Health: Findings from the 1995 Detroit Area Study." *Social Forces* 80: 215–49.
_____ and Amy M. Burdette. 2010. "Religion and the Sense of Control among US Adults." Manuscript in review.
_____, Amy M. Burdette and Terrence D. Hill. 2009. "Blessed Assurance: Religion, Anxiety, and Tranquility among US Adults." *Social Science Research* 38: 656–67.
_____, Amy M. Burdette and W. Bradford Wilcox. 2010. "The Couple That Prays Together: Race, Ethnicity, Religion, and Relationship Quality among Working-age Couples." *Journal of Marriage and Family* 72: 963–75.
_____ and Daisy Fan. 2008. "Daily Spiritual Experiences and Psychological Well-Being among US Adults." *Social Indicators Research* 88: 247–71.
_____, Brian K. Finch, Daniell Nicole Ryan, and Jennifer J. Salinas. 2009. "Religious Involvement and Depressive Symptoms among Mexican-origin Adults in California." *Journal of Community Psychology* 37: 171–93.
_____ and Linda K. George. 1994. "Religious Involvement, Social Ties, and Social Support in a Southeastern Community." *Journal for the Scientific Study of Religion* 33: 46–61.

_____, Robert A. Hummer, Amy M. Burdette, and Maureen R. Benjamins. 2010. "Race, Religious Involvement, and Health: The Case of African Americans." Pp. 321–48 in *Religion, Families, and Health: Population-based Research in the United States*, edited by C.G. Ellison and R.A. Hummer. New Brunswick, NJ: Rutgers University Press.

_____ and Jinwoo Lee. 2010. "Spiritual Struggles and Psychological Distress: Is There a Dark Side of Religion?" *Social Indicators Research* 98: 501–17.

_____ and Jeffrey S. Levin. 1998. "The Religion-Health Connection: Evidence, Theory, and Future Directions." *Health Education and Behavior* 25: 700–20.

_____, Marc A. Musick and Andrea K. Henderson. 2008. "Balm in Gilead: Racism, Religious Involvement, and Psychological Distress among African American Adults." *Journal for the Scientific Study of Religion* 47: 291–309.

_____, Wei Zhang, Neal Krause, and John P. Marcum. 2009. "Does Negative Interaction in Church Promote Psychological Distress? Longitudinal Findings from the Presbyterian Panel Survey." *Sociology of Religion* 70: 409–31.

Emmons, Robert A. 2005. "Giving Thanks: Spiritual and Religious Correlates of Gratitude." *Journal of Psychology and Christianity* 24: 140–48.

Exline, Julie J. 2002. "Stumbling Blocks on the Religious Road: Fractured Relationships, Nagging Vices, and the Inner Struggle to Believe." *Psychological Inquiry* 13: 182–89.

_____ and Ephraim Rose. 2005. "Religious and Spiritual Struggles." Pp. 315–30 in *Handbook of the Psychology of Religion*, edited by R.F. Paloutzian and C.L. Park. New York: Guilford.

_____, A.M. Yali and M. Lobel. 1999. "When God Disappoints: Difficulty Forgiving God and its Role in Negative Emotion." *Journal of Health Psychology* 4: 365–79.

_____, A.M. Yali and W.C. Sanderson. 2000. "Guilt, Discord, and Alienation: The Role of Religious Strain in Depression and Suicidality." *Journal of Clinical Psychology* 56: 1481–96.

Fabricatore, Anthony N., Paul J. Handal, Doris M Rubio, and Frank H. Gilner. 2004. "Stress, Religion, and Mental Health: Religious Coping in Mediating and Moderation Roles." *International Journal for the Psychology of Religion* 14: 91–108.

Foley, Daniel P. 1988. "Eleven Interpretations of Personal Suffering." *Journal of Religion and Health* 27: 321–28.

Folkman, Susan, Richard S. Lazarus, Christine Dunkel-Schetter, Anita DeLongis, and Rand J. Gruen. 1986. "Dynamics of a Stressful Encounter: Cognitive Appraisal, Coping, and Encounter Outcomes." *Journal of Personality and Social Psychology* 50: 992–1003.

Frankl, Viktor. 2006. *Man's Search for Meaning*. Boston: Beacon Press.

Freud, Sigmund. 1928. *The Future of an Illusion*. New York: Norton.

Galek, Kathleen C., Neal Krause, Christopher G. Ellison, Taryn Kudler, and Kevin J. Flannelly. 2007. "Religious Doubt and Mental Health Across the Lifespan." *Journal of Adult Development* 14: 16–25.

Gillum, R. Frank and Cheryl L. Holt. 2010. "Associations between Religious Involvement and Behavioral Risk Factors for HIV/AIDS in American Women and Men in a National Health Survey." *Annals of Behavioral Medicine* [E-published 10 August].

Grasmick, Harold G., Robert J. Bursik and John Cochran. 1991. "Render Unto Caesar What is Caesar's: Religiosity and Taxpayers' Inclinations to Cheat." *Sociological Quarterly* 32: 251–66.

Greenfield, Emily A., George E. Vaillant and Nadine F. Marks. 2009. "Do Formal Religious Participation and Spiritual Perceptions Have Independent Linkages with Diverse Dimensions of Psychological Well-Being?" *Journal of Health and Social Behavior* 50: 196–212.

Hackney, Charles H. and Glenn S. Sanders. 2003. "Religiosity and Mental Health: A Meta-Analysis of Recent Studies." *Journal for the Scientific Study of Religion* 42: 43–55.

Hayward, R. David, Amy D. Owen, Harold G. Koenig, David C. Steffens, and Martha E. Payne. 2011. "Negative Religious Coping and Atrophy of the Hippocamus: Implications for Late Life Mental Health." Paper presented at the annual meetings of the Society for Personality and Social Psychology, San Antonio, TX.

Hecht, J.M. 2003. *Doubt: A History*. San Francisco: Harper & Row.

Hill, Peter C. and Kenneth I. Pargament. 2003. "Advances in the Conceptualization and Measurement of Religion and Spirituality: Implications for Physical and Mental Health Research." *American Psychologist* 58: 64–74.

Hill, Terrence D., Amy M. Burdette, Christopher G. Ellison, and Marc A. Musick. 2006. "Religious Attendance and the Health Behaviors of Texas Adults." *Preventive Medicine* 42: 309–12.

Hoffmann, John P. and Stephen M. Bahr. 2005. "Crime/Deviance." Pp. 241–63 in *Handbook of Religion and Social Institutions*, edited by Helen Rose Ebaugh. New York: Springer.

Idler, Ellen L., Marc A. Musick, Christopher G. Ellison, Linda K. George, Neal Krause, Marcia Ory, Kenneth I. Pargament, Lynda H. Powell, Lynn G. Underwood, and David R. Williams. 2003. "Measuring Multiple Dimensions of Religion and Spirituality for Health Research: Conceptual Background and Findings from the 1998 General Social Survey." *Research on Aging* 25: 327–65.

Inzlicht, Michael, Ian McGregor, Jacob B. Hirsh, and Kyle Nash. 2009. "Neural Markers of Religious Conviction." *Psychological Science* 20: 385–92.

Inzlicht, Michael and Alexa M. Tullett. 2010. "Reflecting on God: Religious Primes Can Reduce Neurophysiological Response to Errors." *Psychological Science* 21: 1184–90.

Jacobson, David E. 1987. "The Cultural Context of Social Support and Social Networks." *Medical Anthropology Quarterly* 1: 42–67.

Kendler, Kenneth S., Charles O. Gardner and Carol A. Prescott. 1997. "Religion, Psychopathology, and Substance Use and Abuse: A Multimeasure, Genetic-Epidemiologic Study." *American Journal of Psychiatry* 154: 322–29.

King, Valarie. 2010. "The Influence of Religion on Ties Between the Generations." Pp. 86–105 in *Religion, Families, and Health: Population-based Research in the United States*, edited by C.G. Ellison and R.A. Hummer. New Brunswick, NJ: Rutgers University Press.

Kirkpatrick, Lee A. 2004. *Attachment, Evolution, and the Psychology of Religion*. New York: Guilford.

Koenig, Harold G. 2008. "Concerns about Measuring 'Spirituality' in Research. *Journal of Nervous and Mental Disease* 196 : 349–55.

_____. 2009. "Research on Religion, Spirituality, and Mental Health: A Review." *Canadian Journal of Psychiatry* 54: 283–391.

_____, ed.. 2011. *Handbook of Religion and Health*, 2nd ed. New York: Oxford University Press.

_____, Michael E. McCullough and David B. Larson, eds. 2001. *Handbook of Religion and Health*. New York: Oxford University Press.

Krause, Neal. 1995. "Religiosity and Self-Esteem among Older Adults." *Journal of Gerontology: Psychological Sciences* 50B: 236–46.

_____. 2002. "Exploring Race Differences in a Comprehensive Battery of Church-based Social Support Measures." *Review of Religious Research* 44: 126–49.

_____. 2003a. "Religious Meaning and Well-Being in Late Life." *Journal of Gerontology: Social Sciences* 58B: S160–70.

_____. 2003b. "Exploring Race Differences in the Relationship Between Social Interaction with Clergy and Feelings of Self-Worth in Late Life." *Sociology of Religion* 64: 183–205.

_____. 2005. "God-Mediated Control and Psychological Well-Being in Late Life." *Research on Aging* 27: 136–64.
_____. 2006a. "Gratitude Toward God, Stress, and Health in Late Life." *Research on Aging* 28: 163–83.
_____. 2006b. "Church-based Social Support and Mortality." *Journal of Gerontology: Social Sciences* 61B: S140–46.
_____. 2006c. "Religious Doubt and Psychological Well-Being: A Longitudinal Investigation." *Review of Religious Research* 47: 287–302.
_____. 2008. *Aging in the Church: How Social Relationships Affect Health*. West Conshohocken, PA: John Templeton Foundation Press.
_____. 2009. "Comparing the Effects of Volunteering and Providing Informal Social Support in Church on Health in Late Life." *Journal of Aging and Health* 21: 63–84.
_____ and Elena Bastida. 2009. "Religion, Suffering, and Health among Older Mexican Americans." *Journal of Aging Studies* 23: 114–23.
_____, Linda M. Chatters, Tina Meltzer, and David L. Morgan. 2000. "Negative Interaction in the Church: Insights from Focus Groups of Older Adults." *Review of Religious Research* 41: 510–33.
_____ and Christopher G. Ellison. 2003. "Forgiveness by God, Forgiveness of Others, and Psychological Well-Being in Late Life." *Journal for the Scientific Study of Religion* 42: 77–93.
_____ and Christopher G. Ellison. 2009. "The Doubting Process: A Longitudinal Study of the Precipitants and Consequences of Religious Doubt." *Journal for the Scientific Study of Religion* 48: 293–312.
_____, Christopher G. Ellison and Jack P. Marcum. 2002. "The Effects of Church-based Emotional Support on Changes in Physical Health: Do They Vary by Gender?" *Sociology of Religion* 63: 21–47.
_____, Christopher G. Ellison and Keith Wulff. 1998. "Church-based Emotional Support, Negative Interaction, and Psychological Well-Being: Findings from a National Sample of Presbyterians." *Journal for the Scientific Study of Religion* 37: 725–41.
_____, Berit Ingersoll-Dayton, Christopher G. Ellison, and Keith Wulff. 1999. "Aging, Religious Doubt, and Psychological Well-Being." *The Gerontologist* 39: 525–33.
_____ and Thanh Van Tran. 1989. "Stress and Religious Involvement among Older Blacks." *Journal of Gerontology* 44: 4–13.
Lazarus, Richard S. and Susan Folkman. 1984. *Stress, Appraisal, and Coping*. New York: Springer.
Lazarus, Richard S. and Robert Launier. 1978. "Stress-Related Transactions between Person and Environment." Pp. 287–327 in *Perspectives in Interactional Psychology*, edited by L. Pervin and M. Lewis. New York: Plenum.
Lin, Nan and Walter Ensel. 1989. "Life Stress and Health: Stressors and Resources." *American Sociological Review* 54: 382–99.
Mahoney, Annette. 2010. "Religion in Families, 1999–2009: "A Relational Spirituality Approach." *Journal of Marriage and Family* 72: 805–27.
Maselko, Joanna and Laura D. Kubzansky. 2006. "Gender Differences in Religious Participation, Spiritual Perceptions, and Health: Results from the General Social Survey." *Social Science and Medicine* 62: 2848–60.
Maton, Kenneth I. 1987. "Patterns and Psychological Correlates of Material Support Within a Religious Setting: The Bidirectional Support Hypothesis." *American Journal of Community Psychology* 15: 185–207.
_____ and Julian Rappoport. 1984. "Empowerment within a Religious Setting: A Multivariate Analysis." *Prevention in Human Services* 3: 37–74.
Mattlin, Jay A., Elaine Wethington and Ronald C. Kessler. 1990. "Situational Determinants of Coping and Coping Effectiveness." *Journal of Health and Social Behavior* 31: 103–22.

McConnell, Kelly, Kenneth I. Pargament, Christopher G. Ellison, and Kevin J. Flannelly. 2006. "Examining the Links between Spiritual Struggles and Psychopathology in a National Sample." *Journal of Clinical Psychology* 62: 1469–84.

McCullough, Michael E., and Brian L.B. Willoughby. 2009. "Religion, Self-Regulation, and Self-Control: Associations, Explanations, and Implications." *Psychological Bulletin* 135: 69–93.

McCullough, Michael E. and Everett L. Worthington, Jr. 1999. "Religion and the Forgiving Personality." *Journal of Personality* 67:1141–64.

McFarland, Michael J. 2010. "Religion and Mental Health among Older Adults: Do the Effects of Religious Involvement Vary by Gender?" *Journal of Gerontology: Social Sciences* 65B: S621–30.

McLeod, Jane D., and James M. Nonnemaker. 1999. "Social Stratification and Inequality." Pp. 321–44 in *Handbook of the Sociology of Mental Health*, edited by C.S. Aneshensel and J. Phelan. New York: Springer.

Mirowsky, John and Catherine Ross. 2003. *Social Causes of Psychological Distr*ess, 2nd ed. Hawthorne, NY: Aldine de Gruyter.

Narramore, S. Bruce. 1984. *No Condemnation*. Grand Rapids, MI: Zondervan.

Neighbors, Harold W., Marc A. Musick and David R. Williams. 1998. "The African American Minister as a Source of Help for Serious Personal Crises: Bridge or Barrier to Mental Health Care?" *Health Education and Behavior* 25: 759–77.

Okun, Morris A. and Verna Keith. 1998. "Effects of Positive and Negative Social Exchanges from Various Sources on Depressive Symptoms in Younger and Older Adults." *Journal of Gerontology: Psychological Sciences* 53B: P4–20.

Pargament, Kenneth I. 1997. *The Psychology of Religion and Coping*. New York: Guilford.

_____. 2002. "The Bitter and the Sweet: An Evaluation of the Costs and Benefits of Religiousness." *Psychological Inquiry* 13: 168–81.

_____, Joseph Kennell, William Hathaway, Nancy Grevengoed, Jon Newman, and Wendy Jones. 1988. "Religion and the Problem-Solving Process: Three Styles of Coping." *Journal for the Scientific Study of Religion* 27: 90–104.

_____, Harold G. Koenig and Lisa M. Perez. 2000. "The Many Methods of Religious Coping: Development and Initial Validation of the RCOPE." *Journal of Clinical Psychology* 56: 519–43.

_____, Harold G. Koenig, Nalini Tarakeshwar, and June Hahn. 2004. "Religious Coping Methods as Predictors of Psychological, Physical, and Spiritual Outcomes among Medically Ill Elderly Patients: A Two-Year Longitudinal Study." *Journal of Health Psychology* 9: 713–30.

_____, Nicole Murray-Swank, Gina M. Magyar, and Gene G. Ano. 2005. "Spiritual Struggle: A Topic of Interest to Psychology and Religion," Pp. 245–68 in *Judeo-Christian Perspectives on Psychology: Human Nature, Motivation, and Change*, edited by W.R. Miller and H.D. Delaney. Washington, DC: American Psychological Association.

_____, Bruce W. Smith, Harold G. Koenig, and Lisa Perez. 1998. "Patterns of Positive and Negative Religious Coping with Major Life Stressors." *Journal for the Scientific Study of Religion* 37: 710–24.

_____, William Silverman, Steven Johnson, Ruben Echemendia, and Susan Snyder. 1983. "The Psychosocial Climate of Religious Congregations." *American Journal of Community Psychology* 11: 351–83.

Pearce, Lisa D. and William G. Axinn. 1998. "The Impact of Family Religious Life on the Quality of Mother-Child Relations." *American Sociological Review* 63: 810–28.

Pearlin, Leonard I. 1989. "The Sociological Study of Stress." *Journal of Health and Social Behavior* 30: 241–57.

_____. 1999. "The Stress Process Revisited: Reflections on Concepts and their Interrelationships." Pp. 395–416 in *Handbook of the Sociology of Mental Health*, edited by C.S. Aneshensel and J. Phelan. New York: Springer.

Perrin, Robin D. 2000. "Religiosity and Honesty: Continuing the Search for the Consequential Dimension." *Review of Religious Research* 41: 534–44.
Peterson, Christopher and Martin E.P. Seligman. 2004. *Character Strengths and Virtues: A Handbook and Classification.* New York: Oxford University Press.
Pollner, Melvin L. 1989. "Divine Relations, Social Relations, and Well-being." *Journal of Health and Social Behavior* 30: 90–104.
Poloma, Margaret and George H. Gallup, Jr. 1991. *Varieties of Prayer: A Survey Report.* Philadelphia: Trinity Press International.
Rook, Karen S. 1984. "The Negative Side of Social Interaction: Impact on Psychological Well-being." *Journal of Personality and Social Psychology* 46: 1097–1108.
Rosenberg, Morris. 1981. "The Self-Concept: Social Product and Social Force." Pp. 593–624 in *Social Psychology: Sociological Perspectives*, edited by M. Rosenberg and R. Turner. New York: Basic Books.
Rye, Mark S., Kenneth I. Pargament, M. Amir Ali, Guy L. Beck, Elliot N. Dorff, Charles Hallisey, Vasudha Narayanan, and James G. Williams. 2000. "Religious Perspectives on Forgiveness." Pp. 17–40 in *Forgiveness: Theory, Research, and Practice*, edited by M.E. McCullough, K.I. Pargament, and C.E. Thoresen. New York: Guilford.
Schieman, Scott. 2008. "The Religious Role and the Sense of Personal Control." *Sociology of Religion* 68: 361–81.
_____. 2010. "Religious Beliefs and Mental Health: Applications and Extensions of the Stress Process Model." Pp. 179 – 201 in *Sage Handbook of Mental Health and Illness*, edited by D.D. Pilgrim, A. Rogers and B. Pescosolido. Thousand Oaks, CA: Sage.
_____, Kim Nguyen and Diana Elliott. 2003. "Religiosity, Socioeconomic Status, and the Sense of Mastery." *Social Psychology Quarterly* 66: 202–21.
_____, Tetyana Pudrovska and Melissa Milkie. 2005. "The Sense of Divine Control and the Self-Concept: A Study of Race Differences in Late Life." *Research on Aging* 27: 165–96.
_____, Tetyana Pudrovska, Leonard I. Pearlin, and Christopher G. Ellison. 2006. "The Sense of Divine Control and Psychological Distress: Variations across Race and Class." *Journal for the Scientific Study of Religion* 45: 529–49.
Schuller, Robert H. 1989. *Believe in the God Who Believes in You*. New York: Bantam.
Schuster, Tonya L., Ronald C. Kessler, and Robert H. Aseltine, Jr. 1990. "Supportive Interactions, Negative Interactions, and Depressed Mood." *American Journal of Community Psychology* 18: 423–38.
Schwadel, Phillip. 2002. "Testing the Promise of the Churches: Income Inequality and the Opportunity to Learn Civic Skills in Church." *Journal for the Scientific Study of Religion* 41: 563–73.
Selye, Hans. 1956. *The Stress of Life*. New York: McGraw-Hill.
Smith, Timothy B., Michael E. McCullough and Justin Poll. 2003. "Religiousness and Depression: Evidence for a Main Effect and the Moderating Influence of Stressful Life Events." *Psychological Bulletin* 129: 614–36.
Suitor, J. Jill, Karl Pillemer, and Shirley Keeton. 1995. "When Experience Counts: The Effects of Experiential and Structural Similarity on Patterns of Support and Interpersonal Stress." *Social Forces* 73: 1573–88.
Tarakeshwar, Nalini, Kenneth I. Pargament and Annette Mahoney. 2003. "Measures of Hindu Pathways: Development and Preliminary Evidence of Reliability and Validity." *Cultural Diversity and Ethnic Minority Psychology* 9: 316–32.
Taylor, Robert J. and Linda M. Chatters. 1988. "Church Members as a Source of Informal Social Support." *Review of Religious Research* 30: 193–202.
_____, Christopher G. Ellison, Linda M. Chatters, Jeffrey S. Levin, and Karen D. Lincoln. 2000. "Mental Health Services within Faith Communities: The Role of Clergy in Black Churches." *Social Work* 45: 73–87.
Thoresen, Carl E., Alex H.S. Harris and Frederic Luskin. 2000. "Forgiveness and Health: An Unanswered Question." Pp. 254–80 in *Forgiveness: Theory, Research, and*

Practice, edited by M.E. McCullough, K.I. Pargament and C.E. Thoresen. New York: Guilford.

Tix, A.P. and P.A. Frazier. 1998. "The Use of Religious Coping During Stressful Life Events: Main Effects, Moderation, and Mediation." *Journal of Consulting and Clinical Psychology* 66: 411–22.

Trinitapoli, Jenny A., Christopher G. Ellison, and Jason D. Boardman. 2009. "US Religious Congregations and the Sponsorship of Health-Related Programs." *Social Science and Medicine* 68: 2231–39.

Turner, R. Jay and Donald A. Lloyd. 1999. "The Stress Process and the Social Distribution of Stress." *Journal of Health and Social Behavior* 40: 374–404.

Turner, R. Jay and P. Roszell. 1994. "Psychosocial Resources and the Stress Process." Pp. 179–210 in *Stress and Mental Health: Contemporary Issues and Prospects for the Future*, edited by W.R. Avison and I. Gotlib. New York: Plenum Press.

Turner, R. Jay, Blair Wheaton, and Donald A. Lloyd. 1995. "The Epidemiology of Social Stress." *American Sociological Review* 60: 104–25.

Verba, Sidney, Kay Scholzman, and Henry Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics.* Cambridge, MA: Harvard University Press.

Wallace, John M. and Tyrone A. Forman. 1998. "Religion's Role in Promoting Health and Reducing Risk among American Youth." *Health and Education and Behavior* 25: 721–41.

Watters, Wendell. 1992. *Deadly Doctrine: Health, Illness, and Christian God-Talk*. Buffalo, NY: Prometheus Books.

Wheaton, Blair. 1985. "Models for the Stress-Buffering Functions of Coping Resources." *Journal of Health and Social Behavior* 26: 352–64.

_____. 1999. "Social Stress." Pp. 277–300 in *Handbook for the Sociology of Mental Health*, edited by C.S. Aneshensel and J. Phelan. New York: Springer.

Wikstrom, Owe. 1987. "Attribution, Roles, and Religion: A Theoretical Analysis of Sunden's Role Theory and the Attributional Approach to Religious Experience." *Journal for the Scientific Study of Religion* 26: 390–400.

Wuthnow, Robert. 1994. *God and Mammon in America*. New York: Free Press.

CHAPTER TWO

THE ROLE OF DIVINE BELIEFS IN STRESS PROCESSES

Scott Schieman and Alex Bierman

The understanding of health and well-being has benefited from Leonard Pearlin's *stress process model*, which provides a framework from a sociological perspective. While this model has undergone multiple iterations (e.g., Pearlin et al. 1981, Pearlin 1989, 1999), they share the central theme of attending to the ways in which "this process and its components largely arise from and are influenced by various structural arrangements in which individuals are embedded" (Pearlin 1989: 214). It is argued that these social-structural arrangements are pivotal because they influence not only individuals' levels of exposure to stress but also the subsequent effects of stress on measurable mental health outcomes and the resources that are available to manage these outcomes.

A primary stratagem for understanding individual persons' enmeshment in social-structural arrangements is through the study of their institutional involvements. Social institutions are, in part, social structures that organize relatively stable patterns of human activity, thereby providing structure to society (Turner 1997). Through involvement in institutions, individuals become embedded within the structural arrangements of society, which in turn shape people's exposure and responses to adversity. Religion is a fundamental organizing institution, and of course there is a rich tradition in sociological theory and research about the ways that involvement in this institution influences personal and social functioning (e.g., Durkheim [1897] 1951).

A growing number of recent studies examining the link between religion and well-being have sought to integrate and apply the stress process model's conceptual framework (for examples, see Ellison 1994, Ellison et al. 2001). However, the research has primarily examined behavioral indicators of such institutional involvement as the frequency of attendance at religious services, or such global indicators of religiosity as self-rated religious salience. This entails an important oversight in the past because, at its most basic level, *religion is about*

belief (Froese and Bader 2007: 466), and "for many believers, the cultivation of an intimate relationship with God is a cornerstone of religious life" (Exline 2002: 185). Thus, while the importance of behavioral aspects of religion for well-being should not be dismissed, beliefs about the divine are a pivotal means of involvement in religious institutions; in turn, these beliefs may be critical for understanding the links between religious involvement and psychological well-being.

In this chapter, we use the stress process model as a framework for delineating the ways in which divine beliefs may influence well-being. We focus on theory and research related to two core themes: (1) the association between beliefs about God and psychological well-being (direct and indirect effects); and (2) the way in which these beliefs may alter the relationship between stress and psychological well-being (moderating effects). Throughout, we attend to the possibility that beliefs about God may have *both positive and negative implications* for stress processes and mental health outcomes.

Beliefs about God and Psychological Well-Being

One of the most common hypotheses about the benefits of religion is that it provides comfort to believers (Spilka et al. 2003). A core feature of this hypothesis is the contention that some religious beliefs may instill a sense of optimism and encouragement during particularly onerous times. Decades ago, Larry Petersen and Anita Roy (1985: 52) underscored the significance of particular beliefs about God's causal agency in the relationship between adversity and psychological well-being:

> Biblical passages (and religious leaders) frequently stress the notion that God is a personal being who watches over and cares for adherents' lives and that He intervenes to ensure that their problems will be favorably resolved. The internalization of this notion should allow the individual to be optimistic even in the face of difficult problems and thereby reduce feelings of apprehension or discouragement. Consequently, it is predicted that religious comfort beliefs will be negatively related to anxiety.

Accordingly, elements of one's personal relationship with God would diminish stress and tension. Simply put: *Believers should have better mental health*.

Petersen and Roy tested their argument using what they labeled "religious comfort beliefs," or the extent to which individuals believe

that God controls the things that happen to them and intervenes to guarantee that their troubles are solved in a favorable manner. In analyses of data from sampled residents of Memphis, Tennessee, they asked study participants to report their level of agreement with statements about divine intervention and control, including: "God sees to it that everything that happens to me, even the bad things, will turn out for the best eventually," "God makes sure that my problems will work themselves out," and "God has a plan for this world and everything that happens to us, even the suffering we sometimes endure, is part of God's plan." They observed that individuals who expressed stronger religious comfort beliefs tended to report a greater sense of meaning and purpose in life. At the same time, however, individuals who expressed these beliefs also tended to exhibit higher levels of religious salience—which is the importance of a person's faith is his or her life. Salience was also related to higher levels of purpose and meaning. By extension, when Petersen and Roy included these measures simultaneously in the analyses, the effect of religious salience fully accounted for the effects of religious comfort. More important, when they examined anxiety as an outcome, they found no link between levels of religious comfort and symptoms of anxiety.

Although Petersen and Roy's study failed to support the contention that belief in the divine diminishes stress and tension, their findings were limited by a strong overlap in the measures of meaning and religious salience. Specifically, the measure of meaning and purpose included a question asking, "Would you say your life has a great deal of meaning, some meaning, or hardly any meaning?" Likewise, one of the items in the religious salience index was: "Without my religious faith, the rest of my life would not have much *meaning* to it." The fact that there are "meaning" components in each of these indices is problematic because it artificially strengthens the relationship between the two. When considered simultaneously in analyses, it is not surprising that this is the strongest correlation. The overlap in measurement between these two constructs may have obscured relationships between meaning and other aspects of religion and the independent effects of them on mental health.

Additional research has addressed these limitations by using more conceptually and psychometrically distinct measures of religion and outcomes. Some research has used measures of *divine relations*—that is, essentially aggregate measures of the "psychological proximity of a divine other and the frequency and depth of interaction with that

other" (Pollner 1989: 95). For example, in their analyses of two General Social Surveys, Christopher Ellison and Daisy Fan (2008) found that individuals who frequently felt God's presence, love, and guidance were less likely to report any symptoms of psychological distress, and reported more happiness, excitement about life, and optimism. Moreover, Ellison and Fan observed that these aspects of divine relations were associated with greater well-being even after statistically controlling for such other indicators of personal religiousness as the frequency of attendance and prayer. In another set of studies, Ellison and his colleagues found that people who report higher levels of *devotional intensity*—as indexed by the frequency of prayer and feelings of closeness to God—tend to report higher levels of and life satisfaction and happiness (Ellison 1991, Ellison, Gay and Glass 1989). Similarly, Pollner's (1989) analysis of the 1983–1984 General Social Survey found that a measure of divine relations—composed of feeling close to God, a powerful or spiritual force, and prayer—was related to higher levels of happiness and life satisfaction. In each of these studies, the researchers ruled out the possible influences of socio-demographic attributes and such measures of religiosity as affiliation/denomination and frequency of religious attendance.

While findings about the relationship between divine relations and subjective well-being are noteworthy, it is not clear whether frequency of prayer *or* closeness to the divine has a greater impact on people's well-being or if both constructs have similar influences. For instance, some studies have shown that the frequency of prayer is associated with *lower* levels of well-being (e.g., Ellison et al. 2001). By contrast, however, feeling close to God seems to have the opposite influence on well-being. When researchers combine praying and feeling close to God into a "devotional intensity" or a "divine relations" index, they may be blending effects that dilute or offset the separate effects of these different indicators of religiousness. It is likely that the behavioral aspects of a relationship with a higher power and the belief aspects have distinct associations with mental health outcomes, hence should therefore be considered as independent contributors to mental health outcomes. Future inquiry might seek to further understand why these different indicators sometimes have divergent influences on psychological functioning.

Other studies have examined beliefs about the divine and found mixed results. For example, Ross (1990) asked a random sample of Illinois residents about two aspects of their beliefs: (1) the extent that

trust and belief in God contributes to their own success in life and (2) the extent that God will reward those who try to do their best. She observed that individuals who more strongly endorse these beliefs had levels of psychological distress similar to those who did not endorse them. Similarly, in a study of adults in Ohio, Poloma and Pendleton (1990) found that the sense of being close to God was unrelated to psychological distress, life satisfaction and happiness, but it was the strongest predictor of a sense of meaning and purpose in life. That is, people who rated their personal relationship with God as very close were more likely to perceive that their lives had a favorable direction and a purpose—two key indicators of "existential well-being." Stark and Maier (2008) also found that feeling close to God was positively related to happiness, even when accounting for church attendance. Alternatively, Levin (2002) examined a measure of "religious love" ("a self-reported loving relationship with God") among outpatients at a family practice clinic and found that religious love was related to lower levels of depression, even when the analyses included statistical controls for social support, psychological resources, and additional aspects of personal religiousness.

Along similar lines, Bradshaw, Ellison and Flannelly (2008) found that American adults who believed that God is a loving, approving and forgiving figure tended to report fewer signs of psychopathology, including depression, anxiety, interpersonal sensitivity, phobic anxiety, somatization, paranoid ideation, and hostility. However, individuals who held images of God as a remote figure tended to report more symptoms of psychopathology. Moreover, Bradshaw and his colleagues observed these relationships independently of the frequency of prayer. In their analyses of these same data, Flannelly et al. (2010) found similar results, showing that, net of social support and religious attendance, conceiving of a close and loving God was related to lower levels of different indicators of psychopathology. However, perceiving an approving and forgiving God, as well as a creating and judging God, had little influence on psychopathology. When it comes to divine conceptions, the balance of evidence indicates that it is the belief in a close, caring divine that has the greatest positive influence on mental health.

Furthermore, in Bradshaw and his colleagues' research (2008: 654), prayer is related to greater symptoms of a number of psychopathology outcomes; the researchers suggest that this positive relationship may be because "individuals who are confronting high levels of stress and distress pray more often." However, these researchers also found an

interaction effect between prayer and God imagery such that the positive relationship between prayer and pathology appeared mainly among individuals who did not believe in God as a loving figure, and instead viewed God as a remote figure. This research illustrates why combining different aspects of a relationship with the divine into one measure is problematic. These different dimensions may not only have countervailing influences on mental health, but their effects may also be contingent on each other. The countervailing influences of these dimensions of religiosity also highlight weaknesses in the use and interpretation of cross-sectional data. Since the relationship between God imagery and mental health is interpreted as *religiousness preceding mental health* but the relationship with prayer *as mental health preceding religiousness*, we could also interpret the results for God imagery as indicating that individuals with more psychopathology are more likely to see God as distant and less loving. In other words, individuals suffering from psychological difficulties may be more likely to perceive God as a distant and unhelpful figure in the midst of their suffering—or worse, as a causal influence in their anguish. Only through the use of longitudinal data can these questions be resolved.

It should also be noted that Bradshaw, Ellison and Marcum (2010) examined a survey of Presbyterians in the United States and found that imagery of the divine was not significantly related to a general measure of distress after they statistically controlled for different types of attachment to God. These types of attachment were secure (e.g., "I have a warm relationship with God"; "I feel that God is generally responsive to me") and anxious (e.g., "God sometimes seems very warm and other times very cold to me"). However, these types of attachment appear to involve seeing God as both warm and remote, and the lack of significance of beliefs regarding images of the divine may be due to aspects of attachment to the divine encompassing imagery of the divine. Although Bradshaw and his colleagues (2010) note that imagery of the divine and attachment were distinct constructs in a principal components analysis (PCA), some researchers have criticized PCA for being a relatively blunt method of analyzing underlying dimensions of observed indicators (Preacher and MacCallum 2003). If more theoretically oriented methods of latent variable modeling were used, such as a confirmatory factor analysis, it is possible that attachment to the divine may be seen as a superordinate construct that subsumes imagery of a higher power. In addition, these measures of attachment include not only imagery of the divine as remote or loving, but also of a God who

is rather active in one's life. This has also been found in other measures of attachment to God, which include such items as "Knowing that God is there for me helps me live my daily life" (Sim and Yow 2010).[1] Thus, implicit in the attachment to the divine is not only the view of a higher power as far or near, but also as *directly involved in everyday life*. These causal beliefs may be essential for levels of attachment by serving as a conduit for understanding the degree to which a higher power is actively close and loving.

While most research has examined internalizing aspects of psychological functioning, which denote such dysfunctions as depression and anxiety, much less attention has been given to externalizing aspects of disorder, such as alcohol abuse. An exception to this is Kendler and colleagues' (2003) population-based study of twins in Virginia. These researchers examined how beliefs in a God who intervenes and judges were related to diagnostic criteria of a number of externalizing and internalizing disorders. They found that, after controlling for other indicators of personal religiousness, these divine beliefs were not related to internalizing aspects of psychological problems, such as major depression and anxiety disorder. However, beliefs in an intervening and judging God were related to lower probabilities of externalizing difficulties, such as nicotine and alcohol dependence; beliefs about an involved God were especially important. This research suggests that researchers should consider how beliefs about God are related to a variety of different types of psychological problems so that important effects are not overlooked. Moreover, distinct patterns of relationships may be discovered when psychiatric problems are examined, rather than continua of overall levels of distress.

Other aspects of psychological functioning, such as the recovery from mental health problems, deserve more attention as well. In one study, Murphy and Fitchett (2009) examined "response to treatment" among inpatients and outpatients receiving treatment for depression; they defined response to treatment as at least a 50 percent reduction in symptoms over an 8-week period. They found that an indicator of what they labeled "religious well-being"—measured as the belief in a concerned God—was positively related to response to treatment.

[1] These researchers examined a small sample of adolescents from Singapore and found that attachment was positively related to depression. There were also three-term interactions between father attachment, mother attachment, and God attachment for the outcomes of hope and self-esteem.

This finding suggests that beliefs about God may be beneficial not only for preventing psychiatric problems but also enhancing recovery from them.

Other research has focused more explicitly on the possibility of detrimental effects of beliefs about God. In a study of older adults, Ingersoll-Dayton, Torges and Krause (2010) found that individuals who believed in an unforgiving God tended to report higher levels of depression. This association was entirely explained by a lack of self-forgiveness. Although this research shows how beliefs in a fractured relationship with a higher power may detrimentally influence mental health, it should also be noted that the sample the researchers used was almost entirely Christian. This is critical because the ideas of original sin and forgiveness are central to Christian belief systems. For individuals ascribing to religious belief systems that do not emphasize sin and forgiveness to such a degree, it is possible that beliefs about forgiveness by a higher power may not be as consequential for mental health.

In another study that identifies the deleterious consequences of strained divine relations, Exline, Yali and Sanderson (2000) found that feeling abandoned by God and having difficulty trusting God was related to greater levels of depression in both clinical and student samples; these patterns held net of other forms of personal religiousness. However, this measure was not related to suicidal ideation in the clinical sample; suicidal ideation was not examined in the student sample. In addition, Exline, Yali and Lobel (1999) demonstrated that beliefs about alienation from God were useful in explaining the effects of an additional construct: having difficulties forgiving God (e.g., "I sometimes find it difficult to forgive God for things that happen"). Among a sample of college students, these researchers showed that having difficulties forgiving God was positively related to depression and anger. Furthermore, feeling alienated from God helped explain the relationship between forgiveness and depression. It therefore appears that individuals who see themselves as having problematic relations with the divine may experience worse mental health—perhaps because they tend to perceive God as more distant and remote. However, when the researchers took dispositional tendencies toward anger into account, the relationship between difficulties with divine forgiveness and anxiety was reduced to non-significance. This finding is important because it is one of the few studies to take individual dispositions into account, and it suggests that at least part of the effects of beliefs about the divine may be due to individual personality characteristics.

In addition to the analysis of images of the divine and one's overall relationship with the divine, research has also investigated beliefs regarding *specific aspects* of one's relationship with God. One set of beliefs that has received attention is the extent to which people believe that God controls the events and outcomes in their lives. For example, in a small sample of African-American Baptists from Washington, D.C., Jackson and Coursey (1988) found that a measure of the "degree of attribution to God as an active causal agent" was positively related to purpose in life, even when secular control beliefs were held constant. Krause has developed a similar construct—"God-mediated control"—when individuals "work collaboratively with God to master the social environment" (2007: 519). Analyzing data from a national survey of older white and African Americans, Krause (2005) found that older people who have a stronger belief in God-mediated control tend to have higher levels of life satisfaction, more optimism, and less anxiety about death. Moreover, not only did African Americans report stronger beliefs in God-mediated control than whites, the positive influence of this belief on the three psychological outcomes are stronger among African Americans. Some of our own research has found similar patterns. In a study of older adults in Washington and the surrounding metropolitan area in Maryland, we observed that African Americans report stronger beliefs in divine control compared to white elders (Schieman et al. 2006). Moreover, divine control beliefs were predictive of lower levels of anxiety only among African Americans—especially those with fewer socioeconomic resources.

One additional concern about evidence regarding beliefs about God involves the lack of research from a cross-national perspective. One of the few recent exceptions is an analysis of the United States, the Netherlands, and Denmark with data from the World Values Survey (WVS), a multinational probability survey (Snoep 2008). Findings show that the importance of God in one's life was positively related to happiness—but only among Americans. In addition, a separate measure of praying to God outside of religious services was not significantly related to happiness among respondents in any of the three nations. This research again suggests that measures of divine beliefs and religious behavior should be evaluated separately in analyses.

Snoep (2008) did not examine the potential reasons for cross-national differences in relationships between importance of God and happiness, but an additional study did address possible reasons for such differences by examining an additional outcome—life satisfaction—using 79 nations in the WVS. Using multi-level modeling techniques

that are capable of examining both individual and contextual-level influences, Okulicz-Kozaryn (2009) examined the relationship between life satisfaction and the belief in God and the importance of God in everyday life. Analyses showed that these relationships were context-dependent. Specifically, belief in God was detrimentally associated with life satisfaction, but this relationship *reversed* when many people in a country believed in God, in which case individual belief in God was beneficially related to life satisfaction. Similar results were found for beliefs regarding the importance of God ("salience"). This study demonstrates the sociological dimensions of the importance of divine beliefs for psychological well-being. The way in which these beliefs are related to well-being depends on the extent to which these beliefs are held by others and, if held in isolation, may possibly be detrimental for mental health. Because research on divine beliefs has been conducted primarily in the United States, where many profess such beliefs, the mental health effects of these beliefs may be more beneficial than if observed in other parts of the world. Thus, an important but nascent area of research is in examining how divine beliefs may influence mental health differently across nations due to cultural and social-structural differences.

Future Directions for Research on Beliefs about God and Psychological Well-being

Collectively, the balance of evidence indicates that some aspects of relationships with the divine and beliefs about God are more relevant for psychological well-being than others. In particular, the sense of divine love and support seem to be among the most consistently beneficial. However, the findings about beliefs in divine intervention are less clear. Overall, beliefs about divine interaction and control are more strongly related to the sense of meaning and purpose—forms of existential well-being—but are less clearly linked to psychological distress. Several points are especially clear, though. First, researchers should seek to differentiate among beliefs about the divine, devotional practices in one's relationship with the divine, and additional aspects of religious belief and behavior. Summative indexes that blend these diverse aspects of religiosity may obscure important relationships by combining distinct and possibly countervailing influences on mental health.

Second, when researchers seek to establish associations between beliefs about the divine and mental health, they must account for other forms of religiousness, especially devotional activities and religious salience. For some aspects of mental health, these alternative forms of religiousness may matter more than beliefs about God or divine relations. Alternatively, given their prominence in the religious role, rather than simply indicating a spurious effect of divine beliefs, these additional dimensions of religiousness may indicate indirect pathways by which beliefs about the divine influence psychological well-being. For example, beliefs about the divine are the product of religious socialization (Krause 2007, Schieman and Bierman 2007), suggesting that the extent to which beliefs about the divine influence mental health is a critical explanatory link between religious behaviors and individual well-being. However, little research has used techniques to examine specific indirect pathways by which different aspects of religiosity influence each other ultimately to influence mental health. Along the same lines, little research has utilized longitudinal data to establish better causal ordering between beliefs about the divine and mental health. Particularly important in the future may be cross-lagged modeling designs that allow researchers to test whether the relationship between beliefs about the divine and mental health are bidirectional.

Third, it is possible that different types of relationship may be observed when specific types of psychopathology are examined, rather than general measures of well-being as encapsulated in measures of happiness or distress. Particularly important is expanding analyses to externalizing as well as internalizing aspects of psychopathology. A common theme among many world religions is social control; core beliefs of the Golden Rule and "turning the other cheek" underscore decorum and prudence toward both self and others. Such tenets may influence externalizing problems even more than internalizing ones by confining destructive and intemperate behavior. Primary among individuals' reasons to adhere to such dictates may be a sense of a close, personal connection with a divine other who is both monitoring one's behavior and distributing punishments for misdeeds in this life and, perhaps even more so, in the afterlife. Beliefs about the divine may therefore be even more influential for externalizing types of disorder as compared to internalizing disorders.

Fourth, it is clear that divine beliefs are multifaceted, including (but not limited to) involvement, intervention, control, meaning, presence, caring, and love. Typically, researchers have used a measure of one or

some aspects of these beliefs, without considering additional dimensions. More attention should be given to delineating the structure and content of these different dimensions of beliefs, and the extent to which each relates to mental health. Particularly critical is the question of whether it is accurate to measure beliefs about the divine as multiple completely separate constructs. Even if there are a variety of dimensions of belief, it is possible and even likely that many of the facets are different dimensions constituting a unified system of belief. By "partialling out" variance to look at "independent" effects of each type of these beliefs, researchers may overlook the way in which such beliefs operate as a more coherent whole to influence mental health. Essentially, effects may appear to be minimal because each aspect of belief overlaps to such a degree that there are few independent relationships to examine. Additional research should therefore utilize modeling techniques that explore and test for superordinate cognitive constructs that underlie different aspects of belief, and examine whether these superordinate constructs reveal relationships with mental health that are not clear when different dimensions of belief are considered independently.

Fifth, although divine beliefs may help to explain the influence of additional aspects of religiosity, researchers should also explore the potential explanations for the modalities through which divine beliefs influence mental health. An especially fertile arena for future research involves the following question: What is the influence of divine relations and beliefs on *exposure* to different types of stressors? One hypothesis embedded in the comfort thesis asserts that people who are more religious should not experience as many stressors as those who are not religious. By extension, this lower exposure should contribute to more favorable levels of mental health and well-being. Close, loving, and supportive divine relations, for example, should protect people against the adversities of everyday life, helping them avoid the onset of these problems in the first place. Yet, as far as we can determine, there is a lack of scientific consensus about the claim that divine relations and beliefs actually *lower* exposure to stressors. In addition, one of the primary influences on mental health is an individual's understanding of self. People who have high self-esteem and a strong sense of self-efficacy tend to have better mental health (Pearlin 1999), and these psychological resources often serve as primary mechanisms by which social experiences influence mental health (Pearlin et al. 1981, Mirowsky and Ross 2003). These resources may also help explain the influence of divine relations and beliefs on mental health because "if people

believe that God loves and values them, they are likely to have a strong sense of self-worth" (Krause 2005: 142). Similarly, the sense that one can call on a caring, powerful other when encountering obstacles in life may enhance a sense of self-efficacy (Pargament 1997). Although research has examined how some types of divine beliefs relate to these psychological resources (e.g., Krause 2005, Schieman 2008), the extent to which they explain the relationship between divine beliefs and psychological well-being has been given less attention.

Sixth, few cross-national studies on these relationships have been conducted, and what little research there is distinctly shows that relationships between beliefs about the divine and psychological well-being vary across nations. None of this research has examined diagnoses of pathologies or even scales of depression or distress. Additional research is therefore needed to examine both how the relationship between beliefs about the divine and mental health varies across nations, as well as why these effects may vary. The research reviewed here does suggest, however, that a critical factor in creating differences in these relationships is the extent to which others share these beliefs. Research should also examine the way in which structural factors create differences in the relationship between divine beliefs and mental health. Some research suggests, for instance, that the extent to which governments regulate religious, political and social liberties can condition the relationship between individual religiosity and psychological well-being (Elliott and Hayward 2009).

Beliefs About God as Moderators in the Stress Process

Do divine beliefs moderate the association between stressors and mental health outcomes? One of the most common ways that researchers have approached this type of question involves the "buffering hypothesis" (Cohen and Wills 1985). Indeed, there is a rich history of theory and research about buffering effects in the study of stress and mental health (Lin and Ensel 1989, Pearlin 1999). The buffering hypothesis requires us to think about the psychological benefits of religious belief and behavior in the context of the adversities of everyday life. While there are alternative ways to state the potential associations (Wheaton 1985), the most intuitive is as follows: Stressors should be *less distressing* for people who more strongly profess beliefs about the divine. Empirically, this would be demonstrated by showing that, in the aggregate, stressors are less likely to impact mental health adversely

when individuals have strong beliefs about the divine, and stressors are more likely to be detrimental to mental health when individuals have weak divine beliefs. Although this would indicate a benefit of beliefs about the divine, it is important to specify the type of benefit being addressed. A buffering effect does *not* suggest that beliefs about the divine influence mental health. Rather, a buffering effect hypothesis suggests that divine beliefs influence the *effects of* stressors. These are two distinct types of effect, and a common mistake in the literature is to assume that a buffer must also directly influence mental health. Consequently, the question of the extent to which divine beliefs buffer the effects of stressors is separate from the mixed evidence for the effects of beliefs about the divine on mental health outcomes.

It should also be noted that buffering effects might reveal contingent effects of stressors that are not apparent when the effects of stressors are examined in isolation. Take the example of a stressor that has a moderate effect on mental health, but only when beliefs about the divine are low. In other words, imagine that strong beliefs about divine intervention buffer the effects of a stressor. However, because the stressor has only a moderate effect on mental health, and then only when divine beliefs are weak, the stressor may appear to have no influence on mental health when the buffering effects of divine beliefs are not taken into account. This illustrates a second common mistake in the literature, which is to assume that, if researchers do not demonstrate a direct effect of a stressor on mental health, there is little reason to examine buffering effects. In fact, buffers in this relationship may obscure the extent to which a stressor influences mental health, and the effect of this stressor may become apparent only when these contingencies are taken into account. This also illustrates an important reason to examine the buffering effects of divine beliefs. Divine relations and beliefs may be critical and understudied elements that, when taken into account, will more clearly show that certain stressors influence mental health.

Why would divine relations and beliefs function as buffers? One's relationship with God or a higher power may instill confidence that divine support will render problems resolvable and that one can cope with these problems. Neal Krause (2006: 166) summarizes the cognitive processes that can occur when viewing one's life as undergirded by God:

> If people believe that the problems they face are part of God's plan to strengthen them and help them grow, they are likely to feel grateful to

> God when adversity arises. And if these feelings of gratitude toward God are deeply and sincerely felt, then the deleterious effects of the stress are likely to be diminished.

For those who see life as based on a continual relationship with a higher power, stressors are likely to be less troubling because they are likely to be seen as derived from this relationship, and therefore neither too threatening nor insurmountable.

This underscores how religious beliefs may counteract a primary reason for stress—that experiences are likely to be most traumatic when they threaten an individual's sense of meaning. Janoff-Bulman and Frieze, for instance, describe how individuals operate with certain core assumptions about the world around them, and experiences are traumatic when they violate these assumptions. One primary assumption they note is "the perception of the world as meaningful and comprehensible" (1983:3). Belief that one's mortal experiences occur within the context of a higher power may therefore lessen the potency of stress by providing a framework of meaning with which to understand these experiences. Peterson and Roy (1985: 85) describe how religious beliefs could enhance meaning in the face of adversity:

> Religious meaning systems are a potentially important source of meaning and purpose for the individual because they encompass nearly the entire spectrum of human experience. They are typically comprehensive enough to explain even mundane aspects of the individual's life. However, these explanations will not necessarily promote well-being by making the individual happy or by reducing anxiety. For example, an individual may accept a religious explanation for why people suffer (e.g., its God's will or people pay for their sins), but still feel intense sadness and apprehension when confronted with the knowledge that a loved one has a terminal illness. The importance of a religious meaning system for understanding well-being is not that it reduces painful emotional responses to adverse circumstances of life; in fact, in some instances it may even encourage such responses. The importance of a religious meaning system is that it makes these circumstances understandable by attaching a meaning to them. The individual knows that there is an underlying order or purpose to life's events and that these events fit into a larger scheme of things.

Thus, beliefs about God may be important when stress occurs not only because people see these experiences as less threatening, hence surmountable, but also because, even if such experiences are still adverse, they do not rob individuals of a sense of meaning.

While the theoretical rationale for the buffering hypothesis sounds logical, there is surprisingly little empirical evidence to support it.

Among the few community-based studies to address this question, Strawbridge and his colleagues evaluated data from a sample of more than 2,500 older adults in the Alameda County Study. They found that the frequency of prayer, attendance at religious services, and the importance of religious beliefs buffered against the distress associated with financial and health problems. These researchers assert that, "experiencing financial problems was associated with nearly a six-fold increase in the prevalence of depression at the low end of the non-organizational religiosity scale compared with less than a twofold increase for those at the high end of the scale" (1998: S122) However, each of these indicators of religiousness also exacerbated the link between particular kinds of stressor and depression. Frequent prayer and the importance of religious/spiritual beliefs exacerbated the association between child problems and depression; frequent religious attendance exacerbated the depression that was associated with marital problems, abuse, and caregiving.

Similar results for financial problems were also found by Wang and Patten (2002), who demonstrated that praying or seeking comfort through religion when stress occurs weakened the influence of financial problems on depression, but only for women. It is important to note here that neither these researchers nor Strawbridge et al. (1998) included any specific indicators of divine relations or beliefs, so it is not possible to draw conclusions about the extent to which beliefs about the divine were directly responsible for these buffering effects. Yet, we do know that people who have higher levels of these forms of personal religiousness also tend to report higher levels of the sense of divine control (Schieman and Bierman 2007).

Neal Krause (2009) did, however, examine the experience of financial problems in the context of religious beliefs more closely. In a longitudinal study of older adults, he examined general beliefs about gratitude, such as being thankful for what one has and counting one's blessings. He found that gratitude buffered the effects of financial strain on change in depression over time. More important, a measure of God-mediated control was positively related to change in gratitude over time. This study was useful in that it explicated the pathways by which beliefs about the divine may ameliorate the effects of stress. Beliefs in a higher power can reinforce gratitude about one's position in life, which can in turn reduce the influence of stress on mental health. It should be noted, however, that the specific way in which gratitude prevented these effects is not clear in this study. Whether beliefs

about divine control helped created a framework of meaning that allowed individuals to maintain gratitude, or whether gratitude helped to make the stressors less threatening, is not clear in this research.

In an earlier study, Krause (2006) examined a different type of stressor, neighborhood deterioration. Although he examined overall health rather than mental health, he also examined a more specifically religious moderator: *gratitude toward God*. This measure was comprised of statements like "I am grateful to God for all he has done for me." Krause found that gratitude toward God buffered the effects of neighborhood deterioration on health, but only among women. It therefore appears that beliefs regarding one's relationship with a higher power, especially in terms of what one feels that he or she has been given by God, can ameliorate the effects of stress; but these buffering effects appear to be gender-specific. This is especially intriguing in the context of Wang and Patten's gender-specific findings. Little attention has been given to the way that divine relations and beliefs may influence other experiences in individuals' lives differently by gender. In addition, it is again unclear *how* these beliefs buffer the effects of the stressor. Whether gratitude provides a sense of meaning or reduces threat is less clear, as is the possibility that gratitude makes certain experiences seem less negative simply by cognitively placing them in the context of a plurality of positive experiences.

In their study of God imagery and attachment to God, Bradshaw and his colleagues (2010) also examined divine beliefs as moderators of the effects of stress. In contrast to their findings regarding the direct effects of imagery on psychological distress (in which imagery had little relationship with distress once attachment was controlled), these researchers found that it was imagery of a higher power that moderated the effects of stress on psychological distress. Bradshaw and his team examined whether respondents had experienced a financial problem in the previous year; they found that imagery of a remote higher power influenced the relationship between financial problems and psychological distress. However, rather than buffering the effects of financial problems on distress, remote imagery *exacerbated* these effects, *increasing* the extent to which financial problems were associated with distress. In addition, remote imagery exacerbated the influence of a second stressor, experiencing a major disagreement with a close friend. These results are notable because imagery had little direct influence on psychological distress, thereby reinforcing the importance of considering both direct and interactive effects of beliefs about the

divine. Had these interactive effects not been considered, the importance of God imagery for psychological distress would have been underestimated. In addition, these results show that beliefs about the divine may not only buffer the effects of stress. In certain cases, these beliefs may also intensify the effects of stress on mental health, although why this occurs is not clear. An obvious interpretation of these findings is that those who see God as close as opposed to remote will experience less distress from stress. However, neither the imagery of a loving God nor secure attachment moderated these effects. These findings suggest that the causes of exacerbating effects are not specifically due to a lack of belief in closeness to a higher power.

Implicit in a sense of closeness with the divine is a belief in the causal relevance of the higher power for everyday life. It is therefore possible that beliefs specifically about the causal influence of a higher power—or lack thereof—are responsible for these exacerbating effects. In one of the few studies to test whether or not beliefs about divine control protect against the depressing effects of stressful life events, Bjorck and colleagues (1997) collected data from parishioners at white and Korean Protestant churches in southern California. They observed different patterns for white and Korean participants. Among whites, stressful life events were associated with lower levels of depression among those who believed in divine control. However, among white participants who did not share this same high level of belief in divine control, stressful events were more highly correlated with more depressive symptoms. In other words, the belief in God's agency protected participants against the depression often associated with stressful life events. These patterns are consistent with the claim that believers may gain from loss. In the face of adversity, deeply devout and committed individuals may tend to experience greater meaning, strength, and personal growth. Stress may be seen as a divine test.

By contrast, however, Bjorck and his team also observed that the Korean participants experienced a higher level of depressive symptoms when they encountered stressful life events—but only when they held strong beliefs in divine control. The authors provide a "tentative cultural explanation," suggesting that Protestant Koreans may blend Eastern views of fatalism and submission to authority with beliefs about divine intervention. If God is viewed as the "ultimate authoritative judge," this may contribute to more of a passive acceptance of one's fate. That is, when people believe that God *causes* stressors, some may sense that there is little that they can do to resolve the problem. In this fatalistic context, stressors may take a greater toll on mental health.

This research therefore helps to explicate why some divine beliefs may intensify the effects of stress on mental health. If God is seen as a resource or comfort when stress occurs, the effects of stress may be diminished. However, if an all-powerful being is seen as the source of the stress, these problems may seem much more momentous, even to the point of being uncontrollable or insurmountable, and therefore much more stressful. This suggests that in examining buffering effects, research should consider beliefs about the role of divine control in one's life in conjunction with beliefs about the extent of control by the divine.

Future Directions for Research on Beliefs about God as Moderators in the Stress Process

Taken together, multiple challenges strike at the heart of understanding buffering effects. The most important of these is *why* a buffering effect occurs. The explanations for these buffering effects have been almost entirely theoretical. The only even partial test is Krause's demonstration that God-mediated control enhances gratitude. Even here, though, the reasons for the importance of gratitude are not clear. Does gratitude enhance buffering simply by "watering down" the stressor in a sense that the stressor is seen as a rare problem in a sea of blessings, or are more subtle mechanisms at work? The importance of religion for meaning is frequently mentioned, but less commonly examined. It is quite possible that it is the meaning-making function of religion that is particularly important for the buffering effects of gratitude. In addition, as mentioned previously, psychological resources are often a primary means by which stress influences mental health. It is therefore quite possible that beliefs in the divine protect individuals from the influence of stress by protecting individual resources such as sense of self-esteem or self-efficacy. The sense that an all-powerful being cares about us and is invested in our welfare is likely a strong sense of consolation when faced with adverse experiences that threaten our sense of self.

Another important challenge is in examining the diverse number of stressors that individuals can face. Researchers have largely focused on economic hardship, despite economic hardship being a relatively infrequent experience for many individuals. If anything, what little research there is on buffering suggests that beliefs about the divine may buffer some stressors but not others, and in certain cases exacerbate some types of stressor. Although increased attention to additional stressors

and facets of belief is clearly warranted, there may be substantial drawbacks to simply analyzing buffering effects of more facets of beliefs and stressors. Absent substantial theoretical development, the risk is a menagerie of different effects, with little sense of the rhyme or reason of how they resonate into a coherent pattern. Hence, although empirical study is clearly warranted, this additional empirical study should be subsumed by intensive theoretical development of why and how these buffering effects occur. Paramount in this theoretical development should be attention to the distinction between buffering and direct effects, guided by the knowledge that both the existence and causes of direct and buffering effects may be different. Moreover, in addition to examining buffering effects, explanations for buffering effects should also be tested, thereby enhancing additional theoretical development.

Additional attention should also be given to the *intensity* of stressors. Beliefs about divine control may become activated only as the severity of the stressor increases or as adverse conditions compound. In this respect, stressors that are life-changing (e.g., trauma) or long-standing (e.g., economic hardship) may be more amenable to buffering than milder or intermittent forms of stress. Adding to this complexity, there seem to be different contexts for the sense of divine intervention. In a study of people from southeast England and south Wales, Loewenthal and Cornwall (1993) observed that participants selected different causes for different stressful life events, although God was rarely invoked for non-health events like work-, relationship-, or money-related matters. However, when an event involved death, miscarriage, or life-threatening illness or injury, study participants were more likely to perceive divine intervention. An important direction for development of theoretical understanding of the buffering effects of divine beliefs is in specifying the type and intensity of stressors for which buffering or exacerbating effects are most likely to occur.

The extent of these buffering or exacerbating effects may also depend on the degree to which divine beliefs have been invoked in the past. In the case of a long-standing stressor, divine beliefs may initially be beneficial for mental health. However, if the stressor is not resolved, these buffering effects may eventually lose potency or turn deleterious as individuals are faced with the possibility that the stressor has not been resolved through reliance on a higher power. Similarly, in the case of a new chronic stressor or event, the degree to which divine beliefs moderate the influence of stress may depend on past buffering experiences. Individuals who have successfully relied on divine beliefs in the

past may be especially deleteriously influenced if these beliefs do not mitigate the new stressor.

Research has also generally not taken the full extent of buffering resources into account. It is possible that divine beliefs may be particularly important as a buffering resource when individuals have few other resources. This would help to explain why divine beliefs appear to buffer stressors differently in different studies; the extent to which divine beliefs were important depended on the extent to which other resources available to individuals in the sample. Researchers should therefore consider whether not only divine beliefs moderate the effects of stress, but also whether these moderating effects are in turn moderated by additional social and psychological resources. Social statuses may be particularly important here. For example, the unmarried may have less social support resources available, and the support of a divine power may therefore be particularly important among these individuals. This may help to explain why it appears from research that women are more likely to gain buffering effects from divine beliefs than men. Women may have less human or social capital when stress occurs, and divine beliefs may therefore be more important as a resource. This also suggests that additional aspects of social statuses may differentiate buffering effects depending on the importance of these beliefs. For example, in the United States, religion has often been a core resource for African Americans (Krause 2002). It is therefore possible that these buffering effects may differ by race as well as gender. At the same time, divine beliefs may be detrimental if they fail to ameliorate the stress, and these groups have strong reliance on these beliefs. In addition, as with the direct effects of divine beliefs, the buffering effects of divine beliefs may also depend on cultural context. It is possible that when these beliefs are not shared in common or mutually supported by a social group, they are more likely to be maladaptive and increase rather than diminish the effects of stress. Divine beliefs may therefore be particularly useful among some individuals because they are generally shared among socially similar others, as may be the case for African-Americans or women. Clearly, this is an understudied area ripe for theoretical and empirical development.

Conclusion

Belief is a core component of personal religiousness. Beliefs about God represent a cornerstone of faith. Given the centrality of belief in

religious systems and practical experience, it is not surprising that beliefs about the divine play a central role in the nature and consequences of stress processes. Beliefs about the divine may influence mental health, and beliefs may also be important for mental health by preventing the effects of stress on mental health. These two effects are distinct and may have separate explanatory mechanisms, but there has been little empirical attention to these explanations. It is also possible that certain aspects of these beliefs may adversely influence mental health or exacerbate the effects of stress, and much more theoretical and empirical attention should be given to developing an understanding of when beneficial or detrimental effects are most likely to occur. There has also been little attention to the way in which cultural and structural characteristics may condition these effects, which is critical because what little research has been done on this question suggests that the importance of divine beliefs for mental health may vary substantially across different macro-level social units. Thus, despite recent advances in this arena, there are many opportunities for discovery that can inform both the sociology of mental health *and* the sociology of religion.

References

Bjorck, Jeffrey P., Yung Soon Lee and Lawrence H. Cohen. 1997. "Control Beliefs and Faith as Stress Moderators for Korean American versus Caucasian American Protestants." *American Journal of Community Psychology* 25: 61–72.

Bradshaw, Matt, Christopher G. Ellison and Kevin J. Flannelly. 2008. "Prayer, God Imagery, and Symptoms of Psychopathology." *Journal for the Scientific Study of Religion* 47: 644–59.

Bradshaw, Matt, Christopher G. Ellison and Jack P. Marcum. 2010. "Attachment to God, Images of God, and Psychological Distress in a Nationwide Sample of Presbyterians." *International Journal for the Psychology of Religion* 20: 130–47.

Cohen, S. and T. Wills. 1985. "Stress, Social Support, and the Buffering Hypothesis." *Psychological Bulletin* 92: 310–57.

Durkheim, Émile. [1897] 1951. *Suicide*. New York: Free Press.

Elliott, Marta and R. David Hayward. 2009. "Religion and Life Satisfaction Worldwide: The Role of Government Regulation." *Sociology of Religion* 70: 285–310.

Ellison, Christopher G. 1991. "Religious Involvement and Subjective Well-being." *Journal of Health and Social Behavior* 32: 80–99.

_____. 1994. "Religion, the Life-stress Paradigm, and the Study of Depression." Pp. 78–121 in *Religion in Aging and Health*, edited by J.S. Levin. Thousand Oaks, CA: Sage.

_____, J.D. Boardman, D.R. Williams, and J.S. Jackson. 2001. "Religious Involvement, Stress, and Mental Health: Findings from the 1995 Detroit Area Study." *Social Forces* 80: 215–49.

_____ and Daisy Fan. 2008. "Daily Spiritual Experiences and Psychological Well-being Among U.S. Adults." *Social Indicators Research* 88: 247–71.

_____, David A. Gay and Thomas A. Glass. 1989. "Does Religious Commitment Contribute to Individual Life Satisfaction?" *Social Forces* 68: 100–23.

Exline, Julia Juola. 2002. "Stumbling Blocks on the Religious Road: Fractured Relationships, Nagging Vices, and the Inner Struggle to Believe." *Psychological Inquiry* 13: 182–89.

_____, Ann Marie Yali and Marci Lobel. 1999. "When God Disappoints: Difficulty Forgiving God and its Role in Negative Emotion." *Journal of Health Psychology* 4: 365–79.

_____, Ann Marie Yali and William C. Sanderson 2000. "Guilt, Discord, and Alienation: The Role of Religious Strain in Depression and Suicidality." *Journal of Clinical Psychology* 56: 1481–96.

Flannelly, Kevin J., Kathleen Galek, Christopher G. Ellison, and Harold G. Koenig. 2010. "Beliefs about God, Psychiatric Symptoms, and Evolutionary Psychiatry." *Journal of Religion and Health* 49: 246–61.

Froese, Paul and Christopher D. Bader. 2007. "God in America: Why Theology is Not Simply the Concern of Philosophers." *Journal for the Scientific Study of Religion* 46: 465–81.

Ingersoll-Dayton, Berit, Cynthia Torges and Neal Krause. 2010. "Unforgiveness, Rumination, and Depressive Symptoms among Older Adults." *Aging and Mental Health* 14: 439–49.

Jackson, Laurence E. and Robert D. Coursey. 1988. "The Relationship of God Control and Internal Locus of Control to Intrinsic Religious Motivation, Coping and Purpose in Life." *Journal for the Scientific Study of Religion* 27: 399–410.

Janoff-Bulman, Ronnie and Iresen Hanson Frieze. 1983. "A Theoretical Perspective for Understanding Reactions to Victimization." *Journal of Social Issues* 39: 1–17.

Kendler, Kenneth S., Xiao-Qing Ling, Charles O. Gardner, Michael E. McCullough, David Larson, and Carol A. Prescott. 2003. "Dimensions of Religiosity and their Relationship to Lifetime Psychiatric and Substance Use Disorders." *American Journal of Psychiatry* 160: 496–503.

Krause, Neal. 2002. "Church-based Social Support and Health in Old Age: Exploring Variations by Race." *Journal of Gerontology: Social Sciences* 57B: S332–47.

_____. 2005. "God-mediated Control and Psychological Well-being in Late Life." *Research on Aging* 27: 136–64.

_____. 2006. "Religious Doubt and Psychological Well-being: A Longitudinal Investigation." *Review of Religious Research* 47: 287–302.

_____. 2007. "Social Involvement in Religious Institutions and God-mediated Control Beliefs: A Longitudinal Investigation." *Journal for the Scientific Study of Religion* 46: 519–37.

_____. 2009. "Religious Involvement, Gratitude, and Change in Depressive Symptoms over Time." *International Journal for the Psychology of Religion* 19: 155–72.

Levin, Jeff. 2002. "Is Depressed Affect a Function of One's Relationship with God? Findings from a Study of Primary Care Patients." *International Journal of Psychiatry in Medicine* 32: 379–93.

Lin, Nan and Walter Ensel. 1989. "Life Stress and Health: Stressors and Resources." *American Sociological Review* 54: 382–99.

Loewenthal, Kate Miriam and Nicola Cornwall. 1993. "Religiosity and Perceived Control of Life Events." *International Journal for the Psychology of Religion* 3: 39–45.

Mirowsky, John and Catherine E. Ross. 2003. *Social Causes of Psychological Distress*, 2nd ed. Hawthorne, NY: Aldine De Gruyter.

Murphy, Patricia E. and George Fitchett. 2009. "Belief in a Concerned God Predicts Response to Treatment for Adults with Clinical Depression." *Journal of Clinical Psychology* 65: 1000–08.

Okulicz-Kozaryna, Adam. 2010. "Religiosity and Life Satisfaction across Nations." *Mental Health, Religion and Culture* 13: 155–69.

Pargament, Kenneth I. 1997. *The Psychology of Religion and Coping*. New York: Guilford Press.

Pearlin, Leonard I. 1989. "The Sociological Study of Stress." *Journal of Health and Social Behavior* 30: 241–56.

_____. 1999. "The Stress Process Revisited: Reflections on Concepts and their Interrelationships." Pp. 395–415 in *The Handbook of the Sociology of Mental Health*, edited by C. S. Aneshensel and J. C. Phelan. New York: Kluwer Academic/Plenum.

_____, Morton A. Lieberman, Elizabeth G. Menaghan, and Joseph T. Mullan. 1981. "The Stress Process." *Journal of Health and Social Behavior* 22: 337–56.

Petersen, Larry R. and Anita Roy. 1985. "Religiosity, Anxiety, and Meaning and Purpose: Religion's Consequences for Psychological Well-being." *Review of Religious Research* 27: 49–62.

Pollner, Melvin. 1989. "Divine Relations, Social Relations, and Well-being." *Journal of Health and Social Behavior* 30: 92–104.

Poloma, Margaret M. and Brian F. Pendleton. 1990. "Religious Domains and General Well-being." *Social Indicators Research* 22: 255–76.

Preacher, Kristopher J. and Robert C. MacCallum. 2002. "Repairing Tom Swift's Electric Factor Analysis Machine." *Understanding Statistics* 2:1 3–43.

Ross, Catherine E. 1990. "Religion and Psychological Distress." *Journal for the Scientific Study of Religion* 29: 236–45.

Schieman, Scott. 2008. "The Religious Role and the Sense of Personal Control." *Sociology of Religion* 69: 273–96.

_____ and Alex Bierman. 2007. "Religious Activities and Changes in the Sense of Divine Control: Dimensions of Stratification as Contingencies." *Sociology of Religion* 68: 361–81.

_____, Tetyana Pudrovska, Leonard I. Pearlin, and Christopher G. Ellison. 2006. "The Sense of Divine Control and Psychological Distress: Variations by Race and Socioeconomic Status." *Journal for the Scientific Study of Religion* 45: 529–50.

Sim, Tick Ngee and Amanda Shixian Yow. 2010. "God Attachment, Mother Attachment, and Father Attachment in Early and Middle Adolescence." *Journal of Religion and Health* DOI 10.1007/s10943-010-9342-y.

Snoep, Liesbeth. 2008. "Religiousness and Happiness in Three Nations: A Research Note." *Journal of Happiness Studies* 9: 207–11.

Spilka, Bernard, Ralph W. Hood, Jr., Bruce Hunsberger, and Richard Gorsuch. 2003. *The Psychology of Religion: An Empirical Approach*. New York: Guilford Press.

Stark, Rodney and Jared Maier. 2008. "Faith and Happiness." *Review of Religious Research* 50: 120–25.

Strawbridge, William J., Sarah J. Shema, Richard D. Cohen, Robert E. Roberts, and George A. Kaplan. 1998. "Religiosity Buffers Effects of Some Stressors on Depression but Exacerbates Others." *Journal of Gerontology* 53B: Sll5–26.

Turner, Jonathan H. 1997. *The Institutional Order: Economy, Kinship, Religion, Polity, Law, and Education in Evolutionary and Comparative Perspective.* New York: Longman.

Wang, Jian Li and Scott B. Patten. 2002. "The Moderating Effects of Coping Strategies on Major Depression." *Canadian Journal of Psychiatry* 47: 167–73.

Wheaton, Blair. 1985. "Models for the Stress-buffering Functions of Coping Resources." *Journal of Health and Social Behavior* 26: 352–64.

CHAPTER THREE

TRANSCENDENT EXPERIENCE AND HEALTH: CONCEPTS, CASES, AND SOCIOLOGICAL THEMES

Jeff Levin

Programmatic study of religion and health has been among the most notable developments in sociomedical research over the past two decades. Most rewarding from the perspective of religious social science is the steady expansion of assessment of religious dimensions and domains. Previously, social research focused almost exclusively on respondents' affiliation (e.g., rates of cancer morbidity in Protestants, Catholics, Jews, and others), with a smaller group of studies assessing the frequency of attendance at religious services as a determinant of physical or mental health (see Levin and Schiller 1987). This was helpful, to a point, sparking sufficient interest in this subject to mobilize a cohort of researchers that evolved into a community of scholars. But it also represents a limited vision of the construct of religion, leaving a lot unexplored.

As investigators have expanded their scope, findings have accumulated on the population-health impact of other constructs, including religious behaviors (public and private), attitudes, beliefs, feelings, thoughts, values, and so on (Idler et al. 2003, Hall, Meador and Koenig 2008). Yet one domain of religiousness continues to be given short shrift in health research, and yet may be the most provocative (although elusive) domain to study empirically. There are many putative linkages with the physiological and psychophysiological systems that constitute the human body-mind complex. Systematic engagement of this domain would stretch the religion and health field through interdisciplinary collaboration among social scientists, biomedical researchers, psychologists, neuroscientists, and investigators at the cutting edge of research on human consciousness. The domain spoken of here is *religious experience*.

Among the earliest sociological explorations of this concept—and still the most comprehensive—is the taxonomy of religious experiences developed by Stark (1965) and expanded in *Religion and Society*

in Tension (Glock and Stark 1965). It differentiates among four types of experiences—termed confirming, responsive, ecstatic, and revelational—and encompasses various subtypes and special cases. These include feelings of awe, salvational states such as being born again, receipt of miracles, feelings of ecstasy, prophetic inspiration, and a host of diabolic or demonic experiences, such as temptation and possession. Glock and Stark's contemporaneous work at typologizing religiosity provided a foundation for most subsequent empirical assessment of religion among sociologists, exemplified by their multidimensional Religiosity in 5-D Scale and variations that followed. Yet this fascinating conceptual work on religious experience gained little traction among sociologists of religion. The development, validation and refinement of measures of this construct have not followed the same trajectory as other religious dimensions.

For the religion and health field, absence of a research tradition on religious experience within the sociology of religion is reinforced by biomedicine's reticence to engage subjective or qualitative constructs, whether as health outcomes or exposure or risk variables. Where religion is considered at all, it is more acceptable—for pragmatic and ideological reasons—to stick with observable behaviors or objectively affirmable statuses or characteristics that can be quantified (see Levin 2003a). Religious beliefs, attitudes, values, and the like are considered "soft" by comparison, but at least objectively "real." Unitive, mystical, or transcendent experiences; subjective perceptions of connection with God or the divine; spiritual rebirth—for biomedicine these concepts are regarded as wholly subjective, perhaps products of delusion, and thus intractable from a research standpoint. As even sociologists of religion focus their psychometric efforts elsewhere, there is little extant scholarship on religious experience and health, except for a few one-off studies (see Levin 2001b). This subject remains the most marginal corner of a field of study that itself has only recently emerged from the margins of sociomedical research.

This is a shame. Rather than something to ignore, the experience of religion—doing religion and being religious seen through the lens of religious people—and its instrumentality for well-being, is an exciting research frontier. Most provocative are experiences at "the margins of reality" (Jahn and Dunne 1987), the interface of consciousness, neuroscience, transpersonal psychology, non-Western religion, and alternative medicine. Among adventuresome scientists, physicians, psychologists, and scholars of mysticism, these themes have begun to

be explored. Social scientists mostly have kept their distance, perhaps because of perceived conceptual fuzziness and intractability of measurement. This concern is understandable, if overstated, but does not prevent study of such constructs in health research. As has been noted, "The unorthodoxy of a construct, conceptually speaking, is not a particular barrier to its psychometric validation and use in subsequent analyses" (Levin et al. 1997: 1089). Provided one can define a religious construct and validate a measure, then epidemiologists, clinicians, and medical social scientists can make use of it in their studies.

Conceptual Boundaries

Among myriad classes and types of religious experiences, the most mysterious go by many names: noetic, mystical, unitive, transpersonal, transcendent. While these terms do not designate precisely the same thing, they have much in common, especially in comparison with experiences that define or result from normative religious practice (e.g., being born again) and with experiences even farther out, conceptually, in the spiritual cosmos (e.g., astral projection, lucid dreams, hallucinogen-induced visions, psi phenomena, past-life memories, alien abduction reports, trance channeling). The content of this chapter thus occupies a midpoint in the spectrum of religious experience: not baptism in the Holy Spirit or the sense of awe engendered by formal worship, on the one hand, and not channeling of discarnate entities from the Ashtar Command or ascended masters, on the other.

The experiences of interest here have shared characteristics: (a) they are triggered by or evocative of an altered state of consciousness; (b) they engender feelings of love, union, or oneness with others or all sentient beings; (c) they typically, but not exclusively, are experienced individually and in private, rather than collectively and in communal settings; (d) they often follow a quest or journey toward self-actualization, encompassing a spiritual practice centered on meditation or prayer; (e) they are not actively sought but rather experienced as a grace, an attainment that arises after diligence in piety, mindfulness, or spiritual practice; and (f) they have verifiable psychophysiological correlates or sequelae and thus, hypothetically, observable impacts on health or healing.

These are not absolutes. Other types of experiences may share some of these same features, and not every person comes to or experiences

unitive-like moments or interludes of God consciousness in the same way. But based on decades of studying these sorts of experiences, as well as some personal involvement, these characteristics seem like a fair representation of how transcendent-like experiences differ from other expressions of religiousness.

A few definitions would be helpful. The subject of the transcendent experience, among religious topics, is prone to conceptual confusion. Words and constructs that mean or imply related but somewhat different things are often used interchangeably, to the detriment of scholarly discourse. This impedes careful research, although it may be understandable: transcendence implies, at its core, experience of "the Absolute or the Ultimate which is beyond perception and beyond human understanding" (Watson 1991: 362).

Transcendent experience refers to an event or state that "typically evokes a perception that human reality extends beyond the physical body and its psychosocial boundaries." Such experiences are labeled as transcendent because they entail "transcendence of one's personal identity and dissolution of a primary conscious focus on or grounding in one's ego." The transcendent experience is often described as "the perception of merging or identification with the source of being—whether known as God or Higher Self or the Absolute or Eternal." Of special relevance here is characterization of the transcendent experience as "the ultimate expression of subjective awareness" (Levin and Steele 2005: 89). It is described differently by different people and across religious traditions. The identification of common characteristics or themes is thus a prerequisite for any systematic empirical study.

Based on a thorough reading of research reports and the writings of mystics and philosophers, a recent conceptual and theoretical exploration of the transcendent experience differentiated among a "green" type of experience and a "mature" type of experience. The green type of transcendent experience

> is typically characterized as transitory and involving a profound experience of pleasure, oftentimes described as ecstatic. This may occur abruptly, in response to an event or specific physical or spiritual practice. It may be experienced in varying degrees of intensity. In some instances, it may be accompanied by unusual affective or perceptual phenomena. Furthermore, this type of experience may occur repeatedly throughout one's life, depending on circumstances. Maslow's "peak-experience" and many experiences described as "mystical" would fit into this category (Levin and Steele 2005: 89).

By contrast, the mature type of transcendent experience

> is usually characterized as long lasting. The feeling associated with the mature transpersonal experience is a more enduring serenity and equanimity. It is not so much about transient mystical feelings or phenomena as about entering into a new state of awareness. It is more likely to be experienced as a self-transformation shift in one's consciousness or spiritual perception. The yogic *samādhis*, and other similar states, seem to fit into this category (Levin and Steele 2005: 89–90).

According to national survey data soliciting information on related experiences, we estimated a lifetime prevalence of about one in three for the green transcendent experience and about one percent for the mature experience. These numbers are meant only as rough estimates, but provide a baseline for more rigorous investigation.

Mystical experience, in contrast to transcendent experience, "diverges in fundamental ways from ordinary conscious awareness and leaves a strong impression of having encountered a reality different from—and, in some crucial sense, higher than—the reality of everyday experience" (Wulff 2000: 397). This encompasses "supernatural" or inexplicable experiences of saints and mystics and adepts, corresponding to the traditional definition of mysticism as entailing initiation into esoteric mysteries (see Gaynor 1953). Across religious traditions and across commentaries on the subject, common traits can be identified: mystical experience tends to be ineffable, noetic, transient, passive and, often, introvertive (Wulff 2000). Mystical experiences may be passively experienced graces (e.g., Paul's "gifts of the spirit"; the *siddhis* spoken of by Patañjali in the *Yoga Sutras*) or may be actively pursued by mystics, esoteric adepts, and common folks on defined spiritual paths (e.g., the candle magick of neophyte occultists; exercises to enhance one's ability to levitate or leave the body). Accordingly, certain mystical experiences are promoted by respective religions or initiatory orders as graces or normative attainments, respectively.

Some mystical experiences may share features of the transcendent experience. Transcendent bliss—transient or lasting—and transpersonal interconnectedness are often reported by mystics. The apparent similarity and overlap in these constructs leads to the term *mystical* often being misused: as a synonym for deeply transcendent or unitive experiences in general, or even for reports of paranormal activity (e.g., ESP, clairvoyance, déjà vu) or more lurid experiences (e.g., channeling, alien abduction). Depending upon the context and source, "mystical" may take on a positive or disparaging tone.

Transcendent-like experiences are a subtype of the reports of mystics and adepts, but also among ways that people experience the transpersonal and noetic outside of an explicitly mystical context. One need not be a mystic or esotericist to experience transcendence or unitive awe or connection with God or all life. In common parlance, these words may be interchangeable; but for social scientists who intend to explore these phenomena systematically, careful differentiation is required. These experiences may have different patterns of expression in the population, as well as distinct antecedents and outcomes.

Unitive experience refers to feelings of oneness, interconnectedness, or sacred union with God, all sentient beings, or all of creation. Such feelings are often reported by mystics and are a feature of transcendent experiences generally. It could be thought of as a subtype of the transcendent experience, but flashes of oneness-consciousness are also experienced in the normal waking state in unexpected settings and occasions. For example, it may arise as a fleeting sensation during meditation or other spiritual pursuits or as a sequela of secular activities such as immersion in nature or in sexual union.

In her 1930 classic, *Mysticism*, Evelyn Underhill (2002) speaks at length about what she terms the unitive state, the Unitive Way, and Unitive Life. Each refers to the "spiritual marriage" between self and Spirit, the Ultimate Reality that leads to Eternal Life (2002: 429). According to Underhill, the awakening of self to higher Self is a journey of transformation, of spiritual alchemy. This awakening has characteristics of both the transpersonal—the attainment is a shared divinity of all sentient beings who partake of the Source of being—and the transcendent—the state of union is a state of deification, of oneness with transcendental consciousness. Description of the Unitive Way is part of a larger discussion of what she terms the Mystic Way, the Purgative Way, and the Illuminative Way, and corresponds to what she also terms the "deified life" (2002: 175), a state of spiritual transfiguration into the divine substance of God and thus oneness with all manifestation that partakes of it.

Few efforts have been made to investigate patterns and correlates of unitive experience. Conceptual work is lacking, and thus, too, the validated assessment required for further study. A promising approach is found in the Wiand Interconnectedness Scale, a five-item unidimensional ($\alpha = .72$) psychological assessment instrument measuring each of five hypothesized domains of unitive feeling. Interconnectedness is defined here as "wholeness, meaning all parts are functioning in an

unbroken, undivided state of unity" (Wiand 2006: 260), the parts referring to ostensibly separate and independent units of physical and biological existence, such as people. Accordingly, the scale assesses feelings of personal interconnectedness ("connectedness to feelings, thoughts, memories"), internal wholeness ("feeling whole and fully present"), universal interconnectedness ("connectedness to nature and the universe"), humankind interconnectedness ("connectedness to people"), and oneness interconnectedness ("being a part of something greater which includes everything"). Preliminary evidence suggests that persons with diagnosed dissociative disorder have lower scores on this measure, and that interconnectedness mitigates experience of state anxiety (Wiand 2006).

Transpersonal experience refers to an awareness of one's "consciousness expanded beyond the usual ego boundaries and the limitations of time and space." In normal consciousness, by contrast, "an individual experiences himself as existing within the boundaries of his physical body, which separate him distinctly from the rest of the world" (Grof 1975: 154). The transpersonal is thus antonymous with the personal. One identifies principally with the collective, the many, or the all—the we rather than the I. There may be something of the unitive in transpersonal experiences, but the transpersonal is not necessarily spiritual (e.g., ecstatic moments of crowd participation at a sporting event). Transpersonal experiences may also be associated with psychological growth and self-actualization, as cues to begin "waking up" from our "consensus trance," the quasi-hypnotic state in which humans go through life (Tart 1987: 85–106). According to transpersonal psychotherapists, this trance, otherwise known as normal waking consciousness, is responsible for the tacit belief that we are separate, differentiated, unrelated individuals.

The word *transpersonal* is often used synonymously with transcendent, but this is poor usage. The former refers to awareness of supra-individual identity; the latter to perception of realities beyond the physical and material. These are distinct concepts, classes of concepts actually, notwithstanding that transpersonal and transcendent experiences may go hand in hand. That is, a given transcendent experience—green or mature—may be highly transpersonal; and a given transpersonal experience may have a significant transcendent or unitive element. But these constructs are not implicitly identical.

Likewise, the transpersonal is sometimes confounded with nonlocal mind or consciousness. Nonlocality is a characteristic of human

consciousness whereby one person "is linked to all else … to all other moments and places and persons" regardless of space and time (Dossey 1989:183). This concept derives from theory and research in contemporary physics and, while seemingly impossible, is supported by empirical evidence of what Einstein termed "spooky actions at a distance" (quoted in Born 2004: 155) and Radin (2006) called "entangled minds." Nonlocal connections among humans, such as those validated by experimental studies of distant intentionality and healing (see Benor 2001) could be called *transpersonal*, as contrasted to intrapersonal or interpersonal (see Dossey 1993:249–253). But not all transpersonal experiences are necessarily nonlocal (except in the sense that, technically speaking, everything may be); they may be experienced as heightened group identification localized in space and time to a psychosocially defined setting. The distinction here is discrete, for sure, but significant, underscoring the importance of careful attention to conceptual boundaries among these constructs.

Noetic experience is a much less used phrase. It refers to receipt of "knowledge that comes to us directly through our subjective experiences or inner authority" (Schlitz, Vieten and Amorok 2007: 4). It is thus in some ways a bridge or umbrella concept evoking bits of each of the other types of experiences described here. A key element of noetic experience, not necessarily shared by the other terms, is an emphasis on inner knowing of the esoteric (as in gnosis, intuitive wisdom, etc.). The other experiences may possess a noetic quality, in some circumstances and for some people—or they may not. For an experience to be noetic it must, by definition, engage *nous*—the higher Mind or Spirit emanating directly from the Godhead, enabling the self to partake of knowledge of the divine (see Gaynor 1953). Noetic experiences include flashes of intuition, creative epiphanies, receptivity to revelation, and lasting states of divine knowing that may accompany or result from spiritual discipline.

The word *noetic* comes from the Greeks and gnostics by way of Western esoteric traditions, such as Theosophy. It is best known as part of the name of the Institute of Noetic Sciences (IONS), a think tank devoted to scientific exploration of human consciousness for purposes of personal and global transformation. Since the 1970s, IONS has been at the forefront of significant scientific advances through support of research on consciousness, mind-body healing, parapsychology, and complementary medicine. Among the research and educational ventures in which IONS has involved itself are projects that encompass or

touch on all of the types of nuanced experiences described here: transcendent, mystical, transpersonal, unitive, as well as the more anomalous and fringe types of experiences noted earlier and also experiences that are sequelae of normative religious or spiritual practice. IONS has a special interest in the health and healing impact of all such experiences.

Transcendent experiences, in all their manifestations, are of growing interest within psychology and neuroscience, and among those who study healing (see Levin and Steele 2005). Social scientists have paid less attention, as noted earlier. There is also the matter of their confounding with experiences from the psi or paranormal realm, conveying a sense that some investigators find lurid or off-putting. Even basic sociodemographic data are sketchy, such as current or lifetime prevalence patterns and psychosocial or social-structural antecedents. Ironically, for psi (see Radin 1997) and other anomalous experiences (see Cardeña, Lynn and Krippner 2000), there are longstanding traditions of research, both in laboratory and population-based settings.

Of special interest is the possibility that transcendence, and related constructs, may have an impact on physiological parameters, health status, and the healing process. Is this theoretically plausible? One review summarizes models, from various perspectives, that offer validated or hypothesized physiological rationales for a health or healing impact of transcendence (Levin and Steele 2005). These include Green and Green's (1985) model of "higher-order self," Mandell's (1980) concept of "God in the brain," Persinger's (1987) discussion of "temporal lobe transients," Tart's (1975) metaphor of neurological "hardware" and "software," and Nelson's (1990) taxonomy of "praeternatural" experiences. A recent discussion has identified selfless compassion—a trait combining elements of transpersonal awareness, noetic empathy, and unitive intent—as a *sine qua non* for functioning as an effective healer (Levin 2011).

Cases

We need not wait until data are collected to observe an intersection of transcendent experience and health. The following cases exemplify spiritual traditions for which the quest for transcendence is a recognized feature of normative belief or practice. Each tradition, moreover,

identifies wellness or healing as an anticipated benefit or sequela of transcendence.

Jewish Renewal, Meditation, and Healing

Among the most influential figures in the Jewish diaspora since the 1960s, Rabbi Zalman Schachter-Shalomi ("Reb Zalman") is best known for founding Jewish Renewal, a movement to respiritualize the practice of Judaism for purposes of personal and social transformation. Its congregations and *chavurot* (small affinity groups) draw on Jews from across the branches of Judaism, and Renewal is evolving into a proto-denomination, akin to Reform, Conservative, Reconstructionist, and Modern Orthodox Judaism. Renewal seeks to refashion Jewish religious observance into a religiously authentic and personally and socially relevant and constructive form. Accordingly, Renewal rabbis, groups, and adherents place a premium on beliefs and practices that affirm the search for meaning and a desire for service within a Jewish religious context. Renewal strives to be traditional and progressive; liberal and *halakhic* (observant of Jewish law); and inwardly and outwardly focused.

Renewal, more so than other branches of Judaism, values the pursuit of consciousness-raising, healing, and hot-button social justice issues such as environmental advocacy and GLBT rights. Meditation is a defining feature of the practice of many Renewal Jews, but as a means of character formation and not just for the accompanying transient bliss. Self-actualization, in sociological terms, serves instrumental as well as expressive functions for Renewal, the refinement of consciousness serving as a means to mobilize the requisite *middot* (character traits) to inspire and motivate socially conscious living.

Reb Zalman and his followers were strongly influenced by the human potential movement of the 1960s and 1970s. This shows in Renewal's valuing of the personal quest for transcendence, a broad definition of healing inclusive of societal transformation, and willingness to adapt psychospiritual practices from other religions while careful not to "worship strange gods" (II Kings 17:38). This requires a balancing act. The group known as JUBUs (Jewish-Buddhist syncretists), for example, comprises ethnic Jews who have adopted lifestyles grounded in Buddhist beliefs and practices, whether Tibetan or Zen or some other variant. Other JUBUs integrate Buddhism directly into Jewish religious observance (see Kamenetz 1994, 1997). While there is a strong JUBU

influence on Renewal, Reb Zalman has been careful to differentiate Jewish Renewal from such syncretistic and heterodox movements (Schachter-Shalomi 1993).

These distinctions may seem discrete to Jews outside of Renewal, much less to Christians and other non-Jewish observers. Renewal has succeeded, though, in thoughtfully constructing a unique religious space. An oft stated putdown that Jewish Renewal is simply new-age or counterculture Judaism—an accommodation to nonce cultural trends by non-observant Jews—is wide of the mark. Renewal, on the whole, embraces greater Torah-observance than the Reform movement and some Conservative Jews, and is more explicitly theistic than Reconstructionism. Renewal is not an overtly post-*halakhic* Judaism, and its rabbis and congregations seek a thoughtful integration of *frum* (observant) living, expanded awareness, and social consciousness. It thus does not fall neatly on the left-right continuum of Jewish theology and observance.

This is an idealized vision of Renewal—fully Torah-observant lifestyles are not the norm—but reasonably characterizes accepted belief and practice. Reb Zalman's eclecticism—Lubavitch *chasid*, psychedelic pioneer, academic psychologist, doctoral training at a Reform seminary—is mirrored in Renewal. At its heart, Renewal is warm to Jewish tradition, ritual, and law, more open than other branches of liberal Judaism to engage tradition, to identify creative and meaningful ways to be true to *halakhic* ideals without compromising on deep-seated cultural values. Jewish practice, as a means to spiritual growth, manifests in partnering with God in acts of *tikkun olam* (repair of the world).

The rabbinic sages teach that normative Judaism is disinclined to undue focus on the transcendent (Cherlow 2005), emphasizing physical life in the here and now in order to fulfill the *brit* (covenant) of "horizontal" *mitzvot* (commandments). For this reason, Renewal promotes practices such as mindfulness meditation as means to larger, outwardly focused ends. Echoing the rabbinic maxim that *torah* is the greatest *mitzvah* of all because it leads to observance of all other commandments (*B. Shabbat* 127a), so too are inner growth, self-actualization, and transcendence valued in Renewal: as means to strengthen oneself for the vital work of spreading holiness, "redeeming the sparks," and fulfilling *mitzvot* of *chesed* (mercy) and *tzedakah* (justice) in pursuit of *emet* (truth) and *shalom* (peace) (*M. Avot* 1:2, 18). Renewal encourages Jews to go deeper in experience of the transcendent, of the

eternal, of the Oneness of God as described in the *shema* prayer ("*Adonai echad*" [the Lord is one]), for purposes of enhancing *kavannah* (intentionality), *mussar* (moral living), and social consciousness.

A consequence of upholding such a worldview, according to writing on *mussar*, is attainment of wholeness and well-being (see Cooper 1997). Transcendent-like states of consciousness are of various shades: *kavvanah*, *hitbonenut* (contemplative self-understanding), *hitbodedut* (self-isolation), *yichudim* ("unifications," or imagining names of God), *machlin degadlut* (expanded awareness), and more. According to rabbinic and Jewish medical sources, these states are believed to elicit changes in conscious awareness and in one's connection with God that may have a significantly impact on health (Isaacs 1998, Freeman and Abrams 1999, Cutter 2007).

Jewish meditation is not a contemporary development and did not originate in Renewal. The late Orthodox rabbi and scientist Aryeh Kaplan (1978, 1982, 1985) wrote a series of influential books on the subject decades ago. He outlined the multitude of longstanding Jewish religious concepts referencing states of consciousness and associated psychospiritual benefits. Such writing has even earlier roots: in the collected wisdom of the chasidic masters, in the perspectives of medieval kabbalists, and in the rabbinic canon. Contemporary writing continues to explore the instrumentality of the Jewish quest for spirituality in relation to psychological growth, self-actualization, and even physical healing (see Levin and Prince 2010). The Jewish healing movement of the past twenty years has striven to translate these concepts into liturgical, communal and programmatic innovations for the Jewish community.

Yoga and the Physiology of Healing

Contemporaneous with the emergence of Jewish Renewal in the 1970s, another prominent spiritual renewal movement gained a foothold in the West. Indian traditions of yoga and meditation, including those associated with the *rāja yoga* of Patañjali and more eclectic approaches, flourished and spread in North America. They were popularized by myriad spiritual teachers, typically monk-initiates of the Swami order. Western "converts" to yoga came from cultural, political, and demographic strata of the population similar to Renewal: young, liberal-minded spiritual seekers disaffected from mainline religions. The similarity between adherents to Jewish Renewal and yoga, in some

instances, went even further: these movements drew on some of the very same people. Many of those attracted to yoga were fallen away or secular Jews.

Unlike Jewish Renewal, yoga has deep roots in the West. Its emergence into public consciousness over 40 years ago was due to high-profile celebrity converts and pilgrims, notably the Beatles and Mia Farrow, who publicized the yoga philosophy and Maharishi Mahesh Yogi's brand of transcendental meditation (TM). Yoga, though, had an established presence in the United States dating to the nineteenth century. One of the delegates at the Parliament of World Religions, held in Chicago as a part of the World Columbian Exposition in 1893, was Swami Vivekenanda, a disciple of Sri Ramakrishna. His own devotees later established a North American headquarters in Chicago, where they have been located for decades, down the street from the location of the 1893 world's fair. Other yoga masters followed, notably Paramahansa Yogananda, who established his Self-Realization Fellowship in Los Angeles in 1920. Subsequent Eastern imports include various yogic and related philosophical schools and traditions, including *sāṅkhya*, *kriya yoga*, and *vedānta*, all of which established themselves in the United States decades before the arrival of the human potential movement, hippies, the Beatles, TM, or the new age.

Yoga had a ready audience in the West, but a different one from that in its traditional homeland. Westerners, though not native to the Hindu culture in which yoga arose, were especially receptive to yoga as cast in an instrumental context. Practices associated with yoga were adopted as means to inner growth, self-actualization, attainment of transcendent states of consciousness, and physical healing, often as a complement to an existing Western faith commitment (or to none at all). Within the yoga system—its philosophy, its sacred writings, its practices, the teachings of its Western emissaries—there was much to accommodate this adaptation. The *Yoga Sutras*, for example, devotes one of its four chapters to the *siddhis*, or miraculous attainments, accessible through diligence in a combination of *hatha* (postures), *prānāyāma* (breathing exercises), and *dhāranā* (concentration) and *dhyāna* (meditation) (see Woods 1914). These formulae—actually, quite forbidden to all but the most adept and purely intentioned yogis—resonate with the pragmatic, I-want-it-all-now Western mindset—and helped to construct a highly nuanced form of yoga in the United States that was less a religious tradition than a life-style plug-in.

The principles of yoga science and *āyurveda* explicitly acknowledge links among yogic practices, associated states of consciousness, and physiological sequelae. This system posits existence of a "subtle" (invisible) dimension to human anatomy and physiology, parallel to and interpenetrating recognized structures and functions of the human body. Core constituent elements include layers of interpenetrating subtle bodies or sheaths (causal, mental, astral, etheric, physical), seven major *chakras* or subtle-energy centers arrayed along the spinal column from sacrum to crown, and a bioenergy or life force (*prāna*) that flows along subtle channels (*nādīs*) (analogous to the *qi* and meridians of traditional Chinese medicine, respectively) that connect the *chakras* (see Levin and Mead 2008). These structures and functions modulate the mutual influence among spiritual forces, thoughts, emotions, and somatic states. They account for an impact of consciousness and spirituality on physical and psychological states or conditions, normal and pathological. For followers of this spiritual tradition, and for practitioners of associated healing arts, yoga offers a belief system affirming the instrumentality of transcendent states for attaining the highest level of wellness in body, mind, and spirit.

These ancient teachings continue to be validated by Western science (see Lad 1999). Among the earliest evidence of psychophysiological effects, of observable links between mind and body, were findings from studies of yogic adepts in Western laboratories. Most notable was the work of Dr. Elmer Green, who conducted experimental studies of Swami Rama at the Menninger Clinic, in Topeka, Kansas. The Swami could warm and cool his hands and stop his heart at will, through conscious control of his autonomic nervous system, a capability that Western scientists believe to be outside the realm of self-regulation (Green and Green 1977). In the late 1970s, the book *Science Studies Yoga* (Funderburk 1977) reported on numerous such studies, detailing physiological impacts of yoga practice and meditation on parameters of the muscular-articular, circulatory, respiratory, endocrine, and nervous systems. More recently, IONS published an annotated bibliography that updates and expands this work, summarizing results of over 1,500 studies on physical and psychophysiological effects of meditation and yoga on the cardiovascular, cortical, metabolic, and respiratory systems; on blood chemistry and a variety of other biomarkers; and on myriad psychological and psychiatric outcomes (Murphy and Donovan 1999). The heightened visibility of yoga beginning in the

1960s was instrumental in establishing the foundations of modern mind-body medicine.

Accordingly, contemporary *ashrams* feature, for Western clientele, associated clinical practices (Swami Satchidananda's Yogaville) or treatment centers (Swami Sivananda's Ashram Yoga Ranch), medical research arms (Swami Rama's Himalayan Institute), or health spas (too numerous to mention), or have sponsored scientific conferences (Maharishi University) or medical symposia (Sai Baba's Sathya Sai Organization). In *āyurveda*, the domains of health, consciousness, and spirituality are not as discrete and disconnected as in Western medicine. Their interconnections are acknowledged and inform diagnosis and therapy, as in other esoteric healing systems found across cultures and throughout history (see Levin 2008).

Sociological Themes

For seekers of the transcendent, or of wellness or healing through experience of transcendent states, the quest may be about more than one's circumstances (e.g., an acute health issue, a spiritual hunger). There is an instrumentality to transcendence-seeking that is wide-ranging; the quest for transcendence may be a marker of a distinctive worldview and a means to social (not just personal) transformation. Several themes can be observed that help to make sense of the complicated interplay of *weltanschauung*, conation, and praxis involved in the lives of contemporary seekers of transcendence.

Social Control and the (Re-)construction of Reality

The quest for transcendence, for expressive or instrumental reasons, such as healing or wellness, has come to define a virtual community among seekers. This was first observable in the early 1980s, when this pursuit began to differentiate from the broader new age phenomenon. A perfect storm of rising new age belief, an emerging critical mass of holistic healing alternatives, the coming of age of a generation of offspring of human potential movement pioneers, the beginnings of scientific research on the interface of consciousness and spirituality and medicine, mainstreaming of self-help and self-care ideologies, and growing visibility of outsider phenomena related to health-seeking—channeled teachings, energy practitioners, medical intuitives, eclectic

bodywork, and more—gave rise to a medical counterculture that affirmed alternative worldviews and altered states of consciousness as gateways to health and healing. Seeded by a network of foundations and professional organizations, an identifiable intellectual space was created that gave birth to diverse movements in science, politics, medicine, publishing, psychology, the environment, and other domains. Emergence of the contemporary field of complementary and alternative medicine (CAM) is a visible example.

Unlike the selfless idealism of the original "Aquarian conspiracy" (Ferguson 1987), this emphasis on health suggests a tendency toward materialism and self-focus at odds with the communitarian humanism that established this ethos decades ago. Lasch (1979) prophesied a troubling side to this in his reference to the "therapeutic sensibility" of an emerging "culture of narcissism." Personal transformation, in this context, is not just a good in itself, but a prerequisite to "social change" and even harbingers a "paradigm shift" to a new "planetary culture" (see Levin and Coreil 1985: 889). Constructing such floridly utopian contexts for the private pursuit of actualization suggests an insecurity that requires glossing over or aggrandizing.

Transcending the visible, material, sensate, rational in pursuit of healing and wholeness has come to define a paradigmatic approach not just to health-seeking but to understanding the universe and our place in it. Transcendence and related states—mystical, unitive, transpersonal, noetic, etc.—have become markers of buy-in to a shared worldview much as the gift of glossolalia defines one into the social world of the charismatic movement. Accordingly, one can be read out of this movement as easily as read in, if not accepting of terms of commitment to a movement that might be unrecognizable to its founders.

The intersection of several related memes—the transcendent quest, transpersonal psychology, spiritual-but-not-religious, CAM or integrative medicine—now maps out an intellectual community that reinforces normative beliefs and attitudes about issues unrelated to either transcendent experiences or physical health. An institutional center of this worldview-community at one time was the Council Grove Conference, a network (or self-described "family") of hundreds of people who have gathered together in annual retreat for over 40 years. Originally meant as a gathering for academic scientists, clinicians, and opinion leaders with a shared interest in consciousness research (Fadiman 1969), as the founding cohort has died, the mission has evolved into more of a weeklong sleep-over camp for senescent

new-agers, most of whom are non-scientists. Participants might object to such characterization, but the family tacitly enforces a religiously, politically, culturally, and aesthetically constructed worldview. This means new age, far left, aging hippie counterculture, and bohemian-eclectic, with little deviation countenanced or recognized.

The shared worldview makes sense of a confusing world that has seemingly rejected the family's construction of reality and provides order to otherwise random-seeming global events outside of its control. Claims of special gnosis, a wisdom connoting healing abilities, derived from higher or discarnate sources (e.g., Bailey's Tibetan masters), are empowering for group cohesion and commitment. Tacit narratives highlight key roles for participants in the history of the study of consciousness and healing. Pieces of these narratives are true: early participants included seminal scientific figures (e.g., Drs. Elmer Green, Gardner Murphy, John Lilly, Charles Tart, Stanislav Grof). But this attitude, decades downstream, elicits condescension toward outsiders who do not share the religious, political, cultural, or aesthetic worldview and thus may not accept the revealed wisdom.

As a former participant, the present author experienced this first hand, although politely and without malice of intent. Important values (with respect to religion, politics, and culture) were, over the years, dismissively labeled as products of unevolved consciousness, apparently without imagining that there were present at the retreat people with other views. Participants are so completely socialized into the consensus ethos that they may not be aware of the homogeneity of their worldview, ironic in that diversity is espoused as an idealized cornerstone. Ideological disagreements at times have been interpreted during group-process-style circles as threats to the worldview or to the group itself or as affronts to the vision of its revered founders, and thus met with some push-back. Some of these sessions have resembled what one might have encountered at Synanon decades ago. Such reaction is reminiscent of Weber's observations on the routinization of charisma (see Gerth and Mills 1946: 54)—institutions evolving to focus more on organizational perpetuation and preservation of their mythology than on pursuing their original charge.

Deviance and Marginality in a Scientific Community

Another kind of community has been established around the intersection of transcendent experience and health. This comprises the core

group of social, behavioral, and biomedical scientists and clinicians who pioneered the study of the interconnections between religious practice, faith, and spirituality, on the one hand, and health, healing, and medical care, on the other. Beginning in the mid 1980s, a cohort of about a dozen academicians from various fields—sociology, psychology, medicine, epidemiology, gerontology—began a systematic and, at times collective, effort to review existing data, map out an agenda for research, and conduct such studies. This story has been told elsewhere (e.g., Levin and Koenig 2005), and the barriers and resistance experienced by the principals in the early years of this field have been well articulated. Among the original cohort, an *espirit de corps* developed, producing collaborative work and by now a substantial second generation of academic researchers.

Those present at the onset were able to observe the trajectory of change from marginality to normal science (see Levin 2001a). To broach this subject as recently as the early 1990s was to risk professional censure. The late Dr. David Larson famously referred to this as the "anti-tenure factor" (Sherrill and Larson 1994). Presumably, there is a price to pay for ideological deviance, especially in the biomedical world. Two decades later, all of the pioneers in this field are tenured full professors, and most possess endowed or distinguished chairs or are center or program directors. Clearly, the environment has changed.

If the general topic of religion, spirituality, and health is now tolerated (if not fully accepted) within the social and behavioral sciences and academic medicine, the same cannot be said of every substantive topic in this field. The remaining taboo in this field, mirroring its status in the sociology of religion, as noted earlier, is religious experience (Levin 2003a). Biomedicine is more overtly a positivistic science than is sociology, and investigators are socialized to look askance at nonobservables, subjective constructs, and qualitative assessment, and to delegate such information to a lower status than quantifiable measures, biomarkers, and physicians' observations (e.g., the relative status of symptoms vs. signs). Religion as a health determinant has been accepted by biomedical researchers and journals to the extent that it is in the form of measurable counts of observed behaviors (e.g., frequency of attendance at church). Intrapsychic religious motives, reports of a sense of spirituality, and accounts of moments of unitive bliss or anomalous experience are subjects relegated to the margins of the biomedical literature, such as in CAM journals.

The same field whose acceptance required such struggle is sufficiently institutionalized (via publications, funding, professional groups) that formal structures now exist to define certain topics as outside the pale. This is ironic, but understandable. Attaining mainstream status within biomedicine was a hard fought battle—"religion" was and remains a hard sell in academic medicine—and efforts to move the field toward consideration of something as subjective as states of consciousness threaten this new-found security. Emergence of a norms-enforcing consensus within a previously marginal field that then closes ranks sufficiently to squeeze out alternative views of reality, is not unprecedented. Consider the history of transpersonal psychology. Once humanistic psychologists succeeded in obtaining official status as Division 32 within the American Psychological Association in 1971, the transpersonal psychologists among their members began organizing for similar recognition. To this day they have not succeeded. The main source of resistance has been the leadership of Division 32 (Aanstoos, Serling and Greening 2000).

Para-Professionalism and New Healing Roles

With the advent of humanistic and transpersonal psychology, oversight of the quest for transcendence has been professionalized. Many new health-directed roles have arisen, whose professional activities converge around the intersection of the mutual quests for wellness and spiritual self-actualization: energy healer, body worker, spiritual director, medical intuitive, meditation teacher, healing channel, transpersonal psychotherapist, holistic nurse, and more. Many of these occupations operate within an energy-based model or paradigm, instead of a strictly biomedical perspective, whereby pursuit of relief from somatic symptoms, of psychological well-being, and of spiritual growth are all aspects of a larger journey toward wholeness. Experiencing transcendent bliss or unitive connection to God or all beings, from this perspective, may be seen as an idealized endpoint of this journey and improved physical health or mitigation of psychological distress as markers of progress.

What is unique about such practitioners in the present context is their role as gatekeepers, a la primary care physicians in the generalist medical setting, with respect to managing CAM referrals. Some practitioners may know more than medical doctors about the salutogenic or healing process (see Antonovsky 1987, Levin 2003b, 2007), in all its intricacies; so this function could be welcome for those laypeople who

value the quest for transcendence. But it presents a challenge for practitioners not to overstep legal boundaries surrounding their professional practice, such as by diagnosing organic disease, prescribing medical treatment, or claiming clinical efficacy.

Over twenty years ago, the present author, at the time a young medical school professor, began receiving weekly massage therapy from an eclectically trained massage therapist. The initial referral was for rehabilitation of residual symptoms of muscular weakness and pain secondary to a long-resolved orthopedic issue of his teenage years. The weekly visits quickly addressed and resolved the issue responsible for the referral, but sessions were enjoyable and so were continued for several years. Their purpose changed from strictly rehabilitation to a means to "go deeper," in the parlance of transpersonal therapy and bodywork—to seek wholeness, balance, and high-level wellness. The therapist became a trusted counselor and friend, and made valuable referrals to other practitioners who offered more specialized services: Rolfing, *jin shin do*, Reiki, reflexology, osteopathic adjustments, and others even more exotic. These referrals were pursued as much in the context of psychospiritual growth and body-mind-spirit integration as motivated by any somatic complaints.

The massage therapist was explicit and careful to avoid medical claims or couching referrals as medically related. Indeed, he viewed these modalities in the same way as the author: as means to refine the client's physical vehicle, to assist him in entering into a greater and deeper state of harmony and balance, in order to facilitate and hasten clearer and more spiritually engaged states of consciousness. In this context, by now widespread among such practitioners (see Levin and Mead 2008), the healer's role is not just (or principally) about relief of discomfort or restoration of physical function, but rather as an agent of client growth and actualization through modeling the professional traits of focus, intention, and compassion (see Levin 2011). To this may be added service as a kind of primary-care provider and gatekeeper for clients venturing further into a world of practitioners whose work may entail shepherding them along the path toward transcendent consciousness and wellness.

Emergence of CAM as a Social Movement

Many CAM systems acknowledge a role for consciousness, intention, and transpersonal awareness in the salutogenic process. Endorsement

of the quest for transcendence, as a feature or dimension of holistic or whole-person wellness, is ubiquitous within systems of CAM belief and practice. States of consciousness—from normal to unitive, from localized in human brains to transpersonal or nonlocal—are significant features of nosology, etiology, pathophysiology, and treatment for many esoteric healing traditions, including *āyurvedic*, traditional Chinese, Tibetan, and Anthroposophic medicine (see Levin 2008). Spiritual features implicit in their underlying philosophies have reinforced their marginality for biomedicine (Levin 2009). Yet this perceived deviance has not impeded the growth of CAM in academic medicine and at the National Institutes of Health (NIH). Over 100 U.S. medical schools now include coursework or electives on CAM, integrative medicine clinics exist in most major academic health sciences centers, and the annual NIH budget for CAM research exceeds $100 million. Less than 20 years ago, these respective figures were close to "none" and "zero." Within the context of Western medicine, CAM can be said to exemplify a successful social movement.

The spiritual/transpersonal emphasis of CAM modalities, relative to mainstream therapies, lends the biomedical critique of CAM as deviant behavior an inquisitorial tone. This word is not selected for its metaphorical value. The familiar discourse of decades past on the church of modern medicine, doctors as priests, etc., may be more real than imagined. Alternative medicine has been described as "heresy," approvingly, and its supporters as "heretics" (Stambolovic 1996). Heresy-*vs*-orthodoxy debates, using these words explicitly, have arisen in discussions of the relevance of faith and prayer to healing in systems such as traditional Islamic medicine (see Jones 2004). The question arises whether CAM may not represent so much a substantive movement of reform as a truly worldview-altering event for Western medicine—more an apostasy than a heresy. This would account for the heated resistance couched in religious terms: the CAM movement may be as much about respiritualizing medicine as about validating efficacious new therapies.

As evidence-based research validates CAM protocols and spiritual and whole-person values infuse themselves into Western medicine, the quest for transcendence should become a less marginal feature of health-seeking behavior. Even more so than medical self-care in the 1970s (Schiller and Levin 1983), a value that insinuated itself into mainstream medical thinking, health-directed consciousness expansion exhibits characteristic features of a genuine mass movement.

There are ideological aspects of transcendence-seeking, a common *lingua franca* familiar to new-agers, Sufis, kabbalists, transpersonal psychologists, Christian humanists, and CAM users. There is a sense of "we-ness" among seekers, defined by familiar concepts and ideas, normative practices, popular teachers, and publications. Many groups—professional and lay, educational and research-oriented—populate the interface of health and transcendence: IONS, the International Society for the Study of Subtle Energies and Energy Medicine, the American Holistic Medical Association, the Association for Transpersonal Psychology, centers for CAM research, full-service spas and retreats, *ashrams*, holistic healing clinics, and more. Finally, strategic and tactical efforts have mapped the future of discourse in this area, especially for research. Scientific working groups, such as convened by the Samueli Institute (Jonas and Chez 2004), have outlined next steps for studying interconnections of spirituality, consciousness and healing (see also Jonas and Crawford 2003). This work is ongoing and already producing results.

References

Aanstoos, Christopher M., Ilene Serlin and Thomas Greening. 2000. "A History of Division 32 (Humanistic Psychology) of the American Psychological Association." Pp. 85–112 in *Unification Through Division: Histories of the Divisions of the American Psychological Association,* Vol. 5, edited by D.A. Dewsbury. Washington, DC: American Psychological Association.

Antonovsky, Aaron. 1987. *Unraveling the Mystery of Health: How People Manage Stress and Stay Well*. San Francisco, CA; Jossey-Bass.

Benor, Daniel J. 2001. *Spiritual Healing: Scientific Validation of a Healing Revolution*. Southfield, MI: Vision Publications.

Born, Max. 2004. *The Born-Einstein Letters 1916–1955: Friendship, Politics and Physics in Uncertain Times*. New York: Macmillan.

Cardeña, Etzel, Steven J. Lynn and Stanley Krippner. 2000. *Varieties of Anomalous Experience: Examining the Scientific Evidence*. Washington, DC: American Psychological Association.

Cherlow, Yuval. 2005. "Parashat Metzorah: Birth, Purity, and Impurity." Pp. 180–83 in *Professors on the Parashah: Studies on the Weekly Torah Reading*, edited by L. Moscovitz. Jerusalem: Urim Publications.

Cooper, David A. 1997. *God is a Verb: Kabbalah and the Practice of Mystical Judaism*. New York: Riverhead Books.

Cutter, William. 2007. *Healing and the Jewish Imagination: Spiritual and Practical Perspectives on Judaism and Health*. Woodstock, VT: Jewish Lights.

Dossey, Larry. 1989. *Recovering the Soul: A Scientific and Spiritual Search*. New York: Bantam.

_____. 1993. *Healing Words: The Power of Prayer and the Practice of Medicine*. New York: HarperSanFrancisco.

Fadiman, James. 1969. "The Council Grove Conference on Altered States of Consciousness." *Journal of Humanistic Psychology* 9: 135–37.

Ferguson, Marilyn. 1980. *The Aquarian Conspiracy: Personal and Social Transformation in Our Time*. New York: Tarcher.
Freeman, David L. and Judith Z. Abrams. 1999. *Illness and Health in the Jewish Tradition: Writings from the Bible to Today*. Philadelphia: Jewish Publication Society.
Funderburk, James. 1977. *Science Studies Yoga: A Review of Physiological Data*. Honesdale, PA: Himalayan International Institute of Yoga Science & Philosophy.
Gaynor, Frank. 1953. *Dictionary of Mysticism*. New York: Philosophical Library.
Gerth, H.H. and C. Wright Mills. 1946. "The Man and His Work: Intellectual Orientations." Pp. 45–74 in *From Max Weber: Essays in Sociology*. New York: Oxford University Press.
Glock, Charles Y. and Rodney Stark. 1965. *Religion and Society in Tension*. Chicago: Rand McNally.
Green, Elmer, and Alyce Green. 1977. *Beyond Biofeedback*. Ft. Wayne, IN: Knoll Publishing.
_____. 1985. "Biofeedback and Transformation." Pp. 145–62 in *Spiritual Aspects of the Healing Arts*, edited by D. Kunz. Wheaton, IL: Theosophical Publishing House.
Grof, Stanislav. 1975. *Realms of the Human Unconscious: Observations from LSD Research*. New York: Viking Press.
Hall, Daniel E., Keith G. Meador and Harold G. Koenig. 2008. "Measuring Religiousness in Health Research: Review and Critique." *Journal of Religion and Health* 47: 134–63.
Idler, Ellen L., Marc A. Musick, Christopher G. Ellison, Linda K. George, Neal Krause, Marcia G. Ory, Kenneth I. Pargament, Lynda H. Powell, Lynn G. Underwood, and David R. Williams. 2003. "Measuring Multiple Dimensions of Religion and Spirituality for Health Research: Conceptual Background and Findings from the 1998 General Social Survey." *Research on Aging* 25: 327–65.
Isaacs, Ronald H. 1988. *Judaism, Medicine, and Healing*. Northvale, NJ: Jason Aronson.
Jahn, Robert G. and Brenda J. Dunn. 1987. *Margins of Reality: The Role of Consciousness in the Physical World*. San Diego: Harcourt Brace Jovanovich.
Jonas, Wayne B. and Chez, Ronald A. 2004. "Recommendations Regarding Definitions and Standards in Healing Research. *Journal of Alternative and Complementary Medicine* 10: 171–81.
Jonas, Wayne B. and Cindy C. Crawford, eds. 2003. *Healing, Intention, and Energy Medicine: Science, Research Methods and Clinical Implications*. Edinburgh: Churchill Livingstone.
Jones, R. Kenneth. 2004. "Introduction to: Heresy and Orthodoxy in Medical theory and Research. *Social Science and Medicine* 58: 671–74.
Kamenetz, Rodger. 1994. *The Jew in the Lotus: A Poet's Rediscovery of Jewish Identity in Buddhist India*. New York: HarperSanFrancisco.
Kamenetz, Rodger. 1997. *Stalking Elijah: Adventures with Today's Jewish Mystical Masters*. New York: HarperSanFrancisco.
Kaplan, Aryeh. 1978. *Meditation and the Bible*. New York: Samuel Weiser.
_____. 1982. *Meditation and Kabbalah*. York Beach, ME: Red Wheel/Weiser.
_____. 1985. *Jewish Meditation: A Practical Guide*. New York: Schocken Books.
Lad, D. Vasant. 1999. "Ayurvedic Medicine." Pp. 200–15 in *Essentials of Complementary and Alternative Medicine*, edited by W. B. Jonas and J.S. Levin. Philadelphia: Lippincott Williams & Wilkins.
Lasch, Christopher. 1979. *The Culture of Narcissism: American Life in An Age of Diminishing Expectations*. New York: Norton.
Levin, Jeff [Jeffrey S.]. 2001a. "Etiology Recapitulates Ontology: Reflections on Restoring the Spiritual Dimension to Models of the Determinants of Health." *Subtle Energies and Energy Medicine* 12(1): 17–37.
_____. 2001b. *God, Faith, and Health: Exploring the Spirituality-Healing Connection*. New York: Wiley.

_____. 2003a. "'Bumping the top': Is Mysticism the Future of Religious Gerontology?" Pp. 402–11 in *Aging, Spirituality, and Religion: A Handbook*, vol. 2, edited by M.A. Kimble and S.H. McFadden. Minneapolis: Fortress Press.
_____. 2003b. "Spiritual Determinants of Health and Healing: An Epidemiologic Perspective on Salutogenic Mechanisms." *Alternative Therapies in Health and Medicine* 9(6): 48–57.
_____. 2007. "Integrating Positive Psychology into Epidemiologic Theory: Reflections on Love, Salutogenesis, and Determinants of Population Health." Pp. 188–218 in *Altruism and Health: Perspectives from Empirical Research*, edited by S.G. Post. New York: Oxford University Press.
_____. 2008. "Esoteric Healing Traditions: A Conceptual Overview." *Explore: The Journal of Science and Healing* 4: 101–12.
_____. 2009. "Restoring the Spiritual: Reflections on Arrogance and Myopia—Allopathic and Holistic." *Journal of Religion and Health* 48: 482–95.
_____. 2011. "Energy Healers: Who They Are and What They Do." *Explore: The Journal of Science and Healing* 7: 13–26.
_____ and Jeannine Coreil. 1985. "'New Age' Healing in the U.S." *Social Science and Medicine* 23: 889–97.
_____, Thomas A. Glass, Lawrence H. Kushi, John R. Schuck, Lea Steele, and Wayne B. Jonas. 1997. "Quantitative Methods in Research on Complementary and Alternative Medicine: A Methodological Manifesto." *Medical Care* 35: 1079–94.
_____ and Harold G. Koenig, eds. 2005. *Faith, Medicine, and Science: A Festschrift in Honor of Dr. David B. Larson*. New York: Haworth Pastoral Press.
_____ and Laura Mead. 2008. "Bioenergy Healing: A Theoretical Model and Case Series." *Explore: The Journal of Science and Healing* 4: 201–209.
_____ and Michele F. Prince. 2010. "Judaism and Health: Reflections on an Emerging Scholarly Field." *Journal of Religion and Health*.
_____ and Preston L. Schiller. 1987. "Is There a Religious Factor in Health?" *Journal of Religion and Health* 26: 9–36.
_____ and Lea Steele. 2001. "On the Epidemiology of 'Mysterious' Phenomena. *Alternative Therapies in Health and Medicine* 7(1): 64–66.
_____ and Lea Steele. 2005. "The Transcendent Experience: Conceptual, Theoretical, and Epidemiologic Perspectives." *Explore: The Journal of Science and Healing* 1: 89–101.
Mandell, Arnold J. 1980. "Toward a Psychobiology of Transcendence: God in the Brain." Pp. 379–464 in *The Psychobiology of Consciousness*, edited by J.M. Davidson and R.J. Davidson. New York: Plenum Press.
Murphy, Michael and Steven Donovan. 1999. *The Physical and Psychological Effects of Meditation: A Review of Contemporary Research with a Comprehensive Bibliography 1931–1996*, 2nd ed. Sausalito, CA: Institute of Noetic Sciences.
Nelson, Peter L. 1990. "The Technology of the Praeternatural: An Empirically Based Model of Transpersonal Experiences." *Journal of Transpersonal Psychology* 22: 35–50.
Persinger, Michael A. 1987. *Neuropsychological Bases of God Beliefs*. New York: Praeger.
Radin, Dean. 1997. *The Conscious Universe: The Scientific Truth of Psychic Phenomena*. New York: HarperEdge.
_____. 2006. *Entangled Minds: Extrasensory Experiences in Quantum Reality*. New York: Paraview Pocket Books.
Schachter-Shalomi, Zalman. 1993. "Bases and boundaries of Jewish, Christian, and Moslem Dialogue." Pp. 17–31 in *Paradigm Shift: From the Jewish Renewal Teachings of Reb Zalman Schachter-Shalomi*, edited by E. Singer. Northvale, NJ: Jason Aronson.
Schiller, Preston L. and Jeffrey S. Levin. 1983. "Is Self-Care a Social Movement?" *Social Science and Medicine* 17: 1343–52.

Schlitz, Marilyn Mandala, Cassandra Vieten and Tine Amorok. 2007. *Living Deeply: The Art and Science of Transformation in Everyday Life*. Oakland, CA: New Harbinger Publications.
Sherrill, Kimberly A. and David B. Larson. 1994. "The Anti-Tenure Factor in Religious Research in Clinical Epidemiology and Aging." Pp. 149–77 in *Religion in Aging and Health: Theoretical Foundations and Methodological Frontiers*, edited by J.S. Levin. Thousand Oaks, CA: Sage Publications.
Stambolovic, Vuk. 1996. "Medical Heresy—The View of a Heretic." *Social Science and Medicine* 43: 601–604.
Stark, Rodney. 1965. "A Taxonomy of Religious Experience." *Journal for the Scientific Study of Religion* 5: 97–116.
Tart, Charles T. 1975. *States of Consciousness*. New York: Dutton.
_____. 1987. *Waking Up: Overcoming the Obstacles to Human Potential*. Boston: New Science Library.
Underhill, Evelyn. 2002. *Mysticism: A Study in the Nature and Development of Spiritual Consciousness*, 12th ed. Mineola, NY: Dover Publications.
Watson, Donald. 1991. *The Dictionary of Mind and Spirit*. New York: Avon Books.
Wiand, Lenore. 2006. "The Effects of Sacred/Shamanic Flute Music on Trauma and States of Consciousness." *Subtle Energies and Energy Medicine* 17: 249–84.
Woods, James Haughton. 1914. *The Yoga-System of Patañjali: Or the Ancient Hindu Doctrine of Concentration of Mind*. Delhi, India: Motilal Banarsidass.
Wulff, David M. 2000. "Mystical Experience." Pp. 397–440 in *Varieties of Anomalous Experience: Examining the Scientific Evidence*, edited by E. Cardeña, S. J. Lynn, and S. Krippner. Washington, DC: American Psychological Association.

CHAPTER FOUR

DOES RELIGION PROTECT AGAINST PSYCHOLOGICAL DISTRESS AMONG CHRONICALLY ILL AND POOR WOMEN?

Barbara Kilbourne, Sherry Cummings, and Robert S. Levine

A large body of research supports an inverse relationship between most dimensions of religiosity and psychological distress. The *stress process model* offers one mechanism through which religiosity potentially affects depression. This model specifies stressors, usually measured as acute or chronic life events, as the key causal variables that leads to psychological distress, measured as depressive symptoms. Other factors, such as social or economic resources, potentially moderate or mediate the relationship (Pearlin et al. 1981, Wheaton 1983, Avison and Turner 1988, Katerndahl and Prachman 2002). Increasingly, religiosity has been included in models as an important social resource (Jang and Johnson 2004, Eliassen, Taylor and Lloyd 2005, Bradshaw and Ellison 2010). However, research examining the influence of religiosity on psychological status suffers from conceptual ambiguity, thus obscuring the nature of the role played by religiosity in the stress-depression dynamic. This study clarifies specific dimensions of religion and focuses on the ways in which various dimensions of religion, both directly and with shared covariance with other social resources, affect the relationship between chronic illness and depressive symptoms in a sample of economically disadvantaged women. In addition, we examine how aspects of religion serve as linkages between macro- and micro- structures to affect mental health.

A long list of acute and chronic life events are seen as stressors. Examples of acute stressors are death of a family member, divorce, foreclosure, job loss, or being arrested. Chronic stressors include chronic unemployment or underemployment, physical disability, heart disease, and caring for an ill family member. The line between acute and chronic is often blurred. Chronic unemployment may follow job loss or an acute coronary event may result in disability through congestive heart failure. This study focuses on the relationship between chronic gastro-intestinal distress (CGD)—(possibly the result of an

acute event—and psychological distress. This relationship has long been recognized within the clinical setting. The current study moves outside the clinic and introduces a set of risk factors for and protective factors against depression that potentially protect against, exacerbate, mediate or moderate the CGD-depression connection, with religion as our primary protective factor.

Women, Economic Disadvantage and Health

Women are much more likely than men to experience psychological distress that is manifest as depression. Roughly nine percent of American adults meet the DSM-4 criteria for clinical or subclinical depression (Kessler et al. 2005). Rates for women are considerably higher than those for men, with a risk ratio of 2:1 (Kessler 2003). In any given year, twelve percent of adult women will meet the criteria for clinical depression, and twenty percent of all adult women will have at least one episode in their lifetime (Kessler et al. 2003). Traditionally the stress process model failed to take into consideration the differential exposure to chronic and acute stress across the socioeconomic gradient. Economically disadvantaged women comprise one group at particularly high risk for psychological distress (Ennis, Hobfoll and Schronder 2000, Rios et al. 2001, Everson et al. 2002, Fiscella and Williams 2004, Chatters and Taylor 2005, Bradshaw and Ellison 2010, Gavin et al. 2010). Many economically marginal women remain unmarried or spend significant periods of their lives divorced or widowed (Gazmararian 1995) and as single mothers (Wang 2004). These women are likely to reside in disadvantaged neighborhoods, yet another stress factor contributing to depression (Ross 2000, Ross and Mirowsky 2001, Stafford et al. 2005, Eiber and Strum 2006, Matheson et al. 2006, Mair et al. 2010).

Socioeconomic status (SES) is also positively associated with physical health (Marmot, Kogevinas and Elston 1987, Smith 2004, Banks et al. 2006). Lower SES individuals experience poorer subjective and objective health (Adler et al. 2008), and a recent article divided the country into eight subgroups where the poorest three groups experienced morbidity and mortality outcomes similar to those in developing countries—hence shorter life expectancy (Murray et al. 2006). An extensive array of explanations for the etiology of health outcomes associated with economic marginality appears in previous research. Perhaps the most compelling studies link lifetime exposure to stress

associated with low SES to poor health outcomes (e.g., Kristenson et al. 2004, Slopen et al. 2010), to lifestyle choices either directly attributable to SES or endogenous as a response to stress (Jarvis and Wardle 1999). Lack of health insurance among disadvantaged persons contributes to the SES gradient. For example, differing treatment based on insurance status contributes to adverse outcomes following trauma, unduly burdening patients at the economic margin (Haider et al. 2008), and during a myocardial infarction, lack of insurance often results in treatment inconsistent with best practice (Shen, Wan and Perlin 2001). Finally, educational disadvantage (Smith 2007) or residence in a disadvantaged neighborhood (Weden, Carpiana and Roberts 2007) explains a portion of the SES-health gradient.

Chronic Gastro-intestinal Disease (CGD) and Depression

Psychological distress often co-occurs with chronic disease (Mills 2001, Levin 2002, Schnittker 2005, Verhaak et al. 2005, Ayotte, Yang and Fang 2010). Recent research linking specific chronic diseases with depression includes studies of cancer (Bodurka-Bevers et al. 2000, Kugaya et al. 2000), heart disease (Goodwin, Davidson and Keyes 2009, Katon, Lin and Kroenke 2007, Schnall et al. 2010), neurological disorders (Anderson et al. 2001), chronic pulmonary disease (Katon, Lin and Kroenke 2007, Omachi et al. 2009), migraines (Lipton et al. 2000), and diabetes (Kilbourne, Cummings and Levine 2009). Often difficulty persists in understanding the causal order between disease and depression.

The same is true for the causal order between gastrointestinal disorders and psychological distress. Some researchers describe the rate of comorbidity without concern for causal order (Koloski et al. 2003, Faresjo et al. 2007). Others suggest a common biological cause for both physical disease and depression. For example, an underlying biological predisposition causes patients without perineoclear anti nutriphil cytoplasmic antibody (PANCA), a condition resulting in the inflammation associated with ulcerated colitis. With this disease, psychological distress and symptom severity positively co-vary (Maunder et al. 2006). Other researchers view depression as an initiator or exasperator of gastrointestinal symptoms (Jones et al. 2006). Finally, many researchers place the physical disease or severity of symptoms causally prior to depression (Guthrie et al. 2002, Simren et al. 2002, Jones et al. 2006, Pajala et al. 2006). While recognizing the lack of universal acceptance for this last position, we tentatively use this position in the current study.

Many different gastrointestinal diseases result in CGD. While the underlying conditions vary, the outward expression of symptoms tends to be similar. Upper gastrointestinal disorders tend to be manifest as indigestion, heartburn, nausea, and upper abdominal pain. Lower gastrointestinal disorders result in symptoms including diarrhea, constipation, pain moving bowels, bloat, flatulence, and lower abdominal pain. Whether affecting the upper or lower gastrointestinal system, CGD impedes social life by making socializing difficult by impeding social events involving food or by creating embarrassing social situations. Such limitations suggest a social pathway for depression in addition to established biological pathways.

Religiosity, Physical Disease and Depression

Religiosity can be defined as an organized system of beliefs, practices, rituals, and symbols designed to facilitate closeness to the scared or transcendent (Koenig, 2001). Findings from multiple studies indicate that religiosity is positively and significantly associated with health and affects levels of depressive symptomology in the general population and among the chronically ill (Powell, Shahabi and Thorseen 2003).

One common typology separates internal aspects of religiosity that are primarily private practices and worldviews from public expressions of religious devotion that involve ritual observance and group worship. Private religiosity focuses on non-institutional religious beliefs and practices that take place in the home or in general daily life. Personal communication with God through prayer and meditation is an oft-cited illustration of private religiosity, as is the belief in an afterlife. Individual engagement with religious materials such as reading the Bible or other religious texts is another prominent aspect of private religiosity. Pubic religiosity, on the other hand, indicates involvement with formal religious institutions through specific behaviors such as attendance at church and participation in non-worship related events (Idler et al. 2003, Wink, Dillion and Larsen 2005). The social nature of public religiosity is often noted and is understood to be a major source of emotional and practical support by integrating individuals into the community through church activities and providing additional opportunities for friendship formation (George et al. 2000, Nooney and Woodrum 2002, Idler et al. 2003). Religious-based social support may include activities such as talking with friends about God, sharing the challenges of a religious life, and practical considerations such as receiving help or comfort in times of need.

Due to its complexity, the measurement of religion differs across empirical studies. While some researchers include just one discrete dimension of religiosity in their research others may include generic scales that combine items from multiple dimensions. Consequently, eminent scholars in this field have called for a systematic examination of the separate roles that various dimensions of religiosity play on individuals' mental health and health functioning (Idler et al. 2003). Despite the lack of a standardized rubric for operationalizing religiosity, however, past research using differing conceptual forms of religion commonly supports an inverse association between most religiosity and depression. Church attendance inversely affects depression for Whites, but not Blacks (Ellison 1995). However, Schnittker (2001) found no relationship between church attendance and depression for either race in a national probability survey. Rather than a direct effect of attendance on depression, Nooney and Woodrum (2002) found an indirect effect: higher church attendance increased social support, which in turn, decreased depressive symptoms. Various aspects of private religiosity also protect against depression (Nooney and Woodrum 2002, Salsman and Carlson 2005), but only in the face of stress (Eliassen, Taylor and Lloyd 2005). By contrast, Ellison (1995) reports that private religious activities are associated with higher levels of depression among individuals residing the Piedmont Epidemiological Catchment Area.

Research on the impact of religious factors on health has also focused on how religion provides resources or a worldview that enhances one's feelings of well-being and decreases feelings of depression. Studies utilizing a more generic operationalization of religiosity for the most part have found that religiosity has a beneficial impact on mental well-being in the face of chronic and acute health conditions. Wink, Dillon and Larsen (2005), for example, found that religiousness, defined as both religious beliefs and practices, buffered against depression associated with poor physical health. When examining the impact of religiosity (conceptualized as a combination of both private and public dimensions) on the association between psychological status and functional impairment, Cummings, Neff and Husaini (2003) found that religiosity provides a protective effect against the development of depression in disabled older adults. Likewise, results of an investigation of religiosity, operationalized as a combination of private, public, and intrinsic religiousness, among low-income Medicare recipients indicated that highly religious older individuals have lower levels of depression even when controlling for other factors such as physical health and social support (Roff et al. 2004).

As can been seen from this review, the existing literature sometimes reveals religiosity as a moderator for the relationship between health-related stress and depression. Although studies indicate that religiosity is a significant buffer against the development of depression among those with serious medical conditions, the small group of extant studies examining the impact of differing dimensions of religiosity on depression among the chronically ill have yielded conflicting results. Koenig (2007) explored the influence of both private and public religiosity on depressive symptoms among older medical inpatients. Aspects of private religiosity (prayer and reading scripture) were associated with lower levels of depression, while greater engagement in public religiosity (level of church attendance) was related to depression severity. Likewise, Contrada and colleagues (2004) studied the effects of private and public religiosity on patients recovering from heart surgery. Private religiosity (prayer and religious beliefs) was associated with fewer complications and shorter hospital stays. Public religiosity (attendance at religious services), however, was unrelated to post-surgery complications. The relationship between public religiosity and depression was again examined by Braam et al. (2004), who found that church attendance was negatively associated with depression among older adults even after controlling for physical health and that among those with functional impairment lower depression was found among those who attended church regularly. Yi et al. (2006), in their study of depression among those with AIDS, found on the other hand that neither personal nor public religiosity was related to depressive symptoms.

Attempts to clarify the impact of religiosity on depressive symptoms among the medically ill are clouded by the varying measures employed and by the range of medical populations studied. Public religiosity, measured as religious service attendance, lowered all cause mortality. Likewise, public religiosity, measured as religious strength and comfort, was associated with a significant reduction in all cause mortality (Schnall et al. 2010).

The present study is one more attempt to provide clarification and to answer the following questions:

1. Can the distinct dimensions of religiosity that appear in previous work be empirically identified within this sample?
2. Is there a significant bivariate relationship between CGD and psychological distress before and after adjusting for socio-economic factors, financial stress and acute life events?

3. Does any of the dimensions of religiosity impact depressive symptoms at the bivariate level and multivariate level (with CGD and adjustments for SES, financial stress and acute life events)?
4. Does social support mediate the inverse relationship between public religiosity and depressive symptoms?
5. Does any of the dimensions of religion buffer or moderate the relationship between CGD and depressive symptoms.

The Study

A combined sample was selected over a two-year period, drawing from a disadvantaged population within a mid-sized southern city. This included a community sample and a clinical population. The clinical sample was drawn from patients presenting themselves for primary care in Family Medicine and/or Internal Medicine Clinics. It was not feasible to approach each patient consecutively or in a random manner; so we used a quota sampling strategy where selection was structured to yield approximately equal numbers of participants of the following ages: 18–49, 50–64, and 65 years. For this chapter we included only women (n=501), given their greater vulnerability to psychological distress.

Design, Analytic Strategy and Variables

A cross-sectional design was employed to examine the associations among acute and chronic stressors, religiosity, social support, chronic gastro-intestinal disease, and level of depression within the pooled clinical and community sample. Data were collected through face-to-face survey interviews over a two-year period. Four types of analysis were employed: principal components analysis, descriptive statistics, difference of means or proportion tests, and multivariate linear regression.

Our three key constructs of interest are CGD, religiosity, and depressive symptoms. We measured CGD through five items from a checklist of 39 self-reported medical conditions: abdominal pain or chronic stomach problems, frequent diarrhea or colitis or spastic colon, hemorrhoids, stomach ulcer, and regular constipation or bowel problems. An index from the summed items had an alpha-reliability of 0.82. Depressive symptomology was measured using the CES-D scale. Some 22 items on the survey concerned religiosity.

Characteristics of women in this sample appear in Table 4.1. The sample was 70 percent African American relative to an underlying population that was 27 percent African American in the 2000 U.S. Census. Sixty per cent of the women experience difficulty paying their bills, 50 percent did not complete high school, and 80 percent were unmarried at the time of the survey. Half the women in this sample lived in households with earnings of $750 or less per month. These characteristics demonstrate the economic marginality of the sample. These women reported high levels of religiosity (for all the dimensions) and social resources. Finally, the mean CES-D score was 11.9. Scores of 12 through 15 on this measure indicate sub-clinical depression, and scores greater than 15 suggest clinical depression (Radloff 1977).

Table 4.1. Characteristics of Women With and Without CGD

	PERSONS REPORTING AT LEAST ONE CGD	PERSONS REPORTING NO CGD
CES-D	15.19 (12.22)	9.63 (10.79)***
Acute Events	3.64 (5.07)	2.98 (4.35)**
Financial Stress	0.61 (0.49)	0.68 (0.47)
Social Support	72.36 (7.46)	74.43 (7.42)*
Social Interactive Religiosity	8.59 (2.56)	8.23 (2.65)
Religious Attendence	4.32 (1.39)	4.21 (1.49)
Interiority	28.72 (7.96)	29.77 (7.24)
Pray	1.76 (0.61)	1.77 (0.59)
Religious Reading	7.07 (1.84)	7.07 (1.82)
Race	0.67 (0.47)	0.72 (0.45)
Marital Status	0.19 (0.40)	0.20 (0.40)
Age	49.74 (15.00)	47.22 (18.08)
Education	0.40 (0.49)	0.42 (0.49)
Income	0.57 (0.50)	0.53 (0.49)
N	150	351

Findings

The first question posed was whether we could identify distinct dimensions of religiosity. A principal components analysis of survey items concerning religiosity yielded five factors that met Eigen criteria of values greater than 1.0 and were substantively interpretable. The results of this analysis with orthogonal rotation (Varimax) appear in Table 4.2. The first dimension, religious reading, deals with questions about the frequency of reading a variety of religious material. Prayer includes two items that tap how regularly and frequently the respondent prays. Religious attendance also includes two items, participation in church activities and church attendance. Interiority measures how religion shapes cognitive processes; it includes eleven items previously identified by Idler (1994). Social interactive religion relies on four items. Each of these items measures the frequency of evangelizing or proselytizing as part of a person's social life.

Evidence for the bivariate relationship between depressive symptoms and CGD is displayed in Table 4.3. The group with CGD experiences did not significantly differ on most characteristics included in this study. They do differ significantly with regard to depressive symptoms, acute life events, and social support (more acute life events and less social support). In particular, they reported, on average, five more depressive symptoms than the non-CGD group. The average CES-D score for the CGD group is very near the threshold score of 16 for subclinical depression. The bivariate correlation for CGD and psychological distress is 0.30, significant at $p<0.001$ (not shown in these results). The adjusted correlations estimated using multivariate regression appear in Table 4.4 (Models 2–9.) The relationship between depressive symptoms and CGD remains significant, but significantly weaker (B=0.19), suggesting that some of the covariance is explained by financial and life event stress measures.

All the dimensions of religiosity have modest, but significant negative associations with psychological distress. Looking at standardized regression coefficients, Models 3–7 show that all the dimensions independently exert an equally modest, but significant effect on depression. Their additive inclusion in the models does not alter the association between CGD and psychological distress.

Some research suggests that social support mediates the inverse relationship between public religiosity and psychological distress. Based on Models 8 and 9, we find that social support mediates the

Table 4.2. Summary of the Dimensions of Religiosity

VARIABLE	ALPHA RELIABILITY	ITEMS INCLUDED	FACTOR LOADINGS
Religious Reading	0.81	How often do you read religious material?	0.90
		When faced with a decision, how often do you rely on religious texts?	0.77
		How often do you read the Bible?	0.89
Prayer	0.80	How often do you pray?	0.92
		Prayer is a part of my regular behavior.	0.92
Religious Attendence	0.80	How often do you attend church services?	0.91
		How often do attend church sponsored events other than services?	0.84
Interiority	0.98	Religion provides personal closeness to God.	0.91
		Religion gives you a sense of meaning and purpose in life.	0.93
		Religion gives you a sense of hope about the future.	0.92
		Religion helps you feel good about yourself.	0.90
		Religion gives you more of a sense of control about your life.	0.93
		Religion helps in improving yourself as a person.	0.92
		Religion helps in solving your problems.	0.90
		Religion gives you a sense of peace and comfort.	0.93
		Religion helps in expressing you feelings.	0.91
		Religion gives a sense of closeness and belonging with other people.	0.92
		Religion helps keep your emotions under control.	0.89
Social Interactive Religiosity	0.86	How often do you talk about religion with friends, neighbors or fellow workers?	0.88
		In talking with members of your family, how often do you mention religion or religious activities?	0.86
		How often in the last year have you shared with another church member the problems and joys of trying to live a life of faith in God?	0.85
		How often have you personally tried to convert someone?	0.75

Table 4.3. Description of Demographic, Key Independent Variables, and Dependent Variable (n=501)

VARIABLE	DESCRIPTION	MEANS, STANDARD DEVIATION IN PARENTHESS	RANGE
CES-D	20 item depression scale	11.9 (11.8)	0–60
CGD	Sum from a checklist of five chronic symptoms	0.6 (1.1)	0–5
Events	Sum from a checklist of 18 negative and acute events	3.2 (4.4)	0–18
Financial strain	Dummy variable coded one if respondent had difficulty paying bills	0.6 (0.5)	0–1
Interiority	11 item index	29.5 (7.5)	0–33
Prayer	2 item index	1.8 (0.6)	0–2
Religious Reading	3 item index	7.1 (1.8)	3–9
Social Interactive Religiosity	4 item index	8.4 (2.6)	4–12
Religious Attendance	2 item index	4.2 (1.5)	2–6
Social Support	24 item scale	73.8 (8.1)	24–96
Race	Dummy variable: 1 if respondent is African American, 0 if Caucasian	0.7 (0.5)	0–1
Marital Status	Dummy variable coded 1 if respondent is currently married; 0 if unmarried	0.2 (0.4)	0–1
Age	Age, in years	48.0 (17.2)	18–95
Education	Less education than high school coded 1	0.4 (0.4)	0–1
Income	HH earning < $751 per month coded 1	0.5 (0.5)	0–1

relationship between social interactive religiosity and level of depression (Model 9 versus Model 6), but only partially mediates the relationship between attending religious events and psychological distress (Model 8 versus Model 7).

Table 4.5 displays the results from split sample interactions that show any moderating or buffering by the dimensions of religion against

Table 4.4. Multiple Regression Coefficients Predicting Levels of Depressive Symptoms (CES-D), Metric Coefficients with Standardized Betas in Parentheses (n=501)

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8	MODEL 9
Age	−0.05	**−0.06****	−0.02	−0.03	−0.01	−0.02	−0.03	−0.04	0.04
	(−0.07)	**(−0.10)**	(−0.03)	(−0.04)	(−0.01	(−0.03)	(−0.02)	(−0.06)	(−0.06)
Race	−1.48	−1.17	−1.19	−1.17	−1.17	−1.08	−0.39	−0.57	−1.18
	(−0.06)	(−0.05)	(−0.05)	(−0.05)	(−0.05)	(−0.04)	(−0.02)	(−0.2)	(−0.05)
Income	**1.85***	**1.61****	1.35	1.14	1.10	1.10	1.15	0.39	0.34
	(0.08)	**(0.18)**	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)	(0.02)	(0.01)
Events	**0.17***	0.13	0.13	0.13	0.13	0.13	0.12	**0.18***	**0.20***
	(0.07)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)	**(0.07)**	**(0.07)**
Financial	**5.24*****	**4.77*****	**5.05*****	**5.23*****	**5.32*****	**5.38*****	**5.16*****	**4.97*****	**5.11*****
Strain	**(0.49)**	**(0.44)**	**(0.45)**	**(0.47)**	**(0.48)**	**(0.19)**	**(0.19)**	**(0.45)**	**(0.46)**
CGD		**2.05*****	**2.07*****	**2.06*****	**2.12*****	**2.12*****	**2.09*****	**1.94*****	**1.95*****
		(0.19)	**(0.19)**	**(0.19)**	**(0.19)**	**(0.19)**	**(0.19)**	**(0.18)**	**(0.18)**
Interiority			**−0.22*****						
			(−0.13)						
Prayer				**−2.23*****					
				(−0.11)					
Religious					**−0.69****				
Reading					**(−0.11)**				

Table 4.4. (*Cont.*)

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8	MODEL 9
Social Int						**−0.39****			−0.27
Religiosity						**(−0.09)**			(−0.17)
Religious							**−1.20*****	**−0.99*****	
Attend							**(−0.15)**	**(−0.12)**	
Social								**−0.25*****	**−0.27*****
Support								**(−0.12)**	**(−0.06)**
Adjusted R^2	**0.30*****	**0.33*****	**0.35*****	**0.35*****	**0.34*****	**0.34*****	**0.34*****	**0.38*****	**0.37*****

Table 4.5. Summary of Buffering Effects of Each Dimension of Religiosity on the CGD-depression Connection: Split Sample by Presence or Absence of CGD Symptoms

	NO CGDS	AT LEAST ONE CGD	P value for rejecting equal coefficients
Interiority	−0.12* (−0.09)	−0.33*** (−0.24)	P<0.001
Prayer	−1.05* (−0.10)	−2.43* (−0.13)	P<0.05
Religious Reading	−0.34 (−0.06)	−0.75 * (−0.12)	P<0.01
Social Interactive Rel.	−0.26 (−0.07)	−0.52* (−0.12)	P<0.05
Relgious Attendence	−1.00 ** (−0.15)	−1.09* (−0.12)	P< 0.05
N	351	150	

depressive symptoms. These data show significant coefficients for the religion variables and differences in the coefficients between the CGD group and non-CGD group. All five dimensions of religiosity are significant for the group reporting CGD, and coefficients on four variables differ significantly from those reported for the non-CGD group. The effects of religious attendance are significant for both groups, but do not differ. So, while religious attendance may be protective, it fails to buffer the effects of CGD in this sample. Interiority appeared to exert the strongest effect against depression, nearly twice that for the other dimensions of religiosity, and its effects were more than twice as strong in the CGD group relative to the non-CGD group.

Limitations and Conclusions

Several limitations plague this study. The cross-sectional data do not help clear up issues of causality in the relationship between CGD and depressive symptoms. Using existing data collected to evaluate a clinical intervention limited the measurement of stress, social support, CGD, and religiosity, although these concepts are covered in much more depth than a typical clinical study. Self-reports of CGD need to be confirmed via chart review. Also, some of the items included in the interiority dimension of religiosity may overlap with measures of

psychological well-being. Finally, the particularistic nature of the sample may limit the generalizability of our findings.

Despite these limitations, our results add to a growing literature on the beneficial effects of religion on mental and physical health. Moreover, the study helps to clarify the relationship between dimensions of religion and its effects among various aspects of the stress process model. Factor analysis identified five distinct dimensions of religion in this population: religious reading, prayer, religious attendance, interiority, and social interactive religion. We report strong evidence that CGD and depression co-vary together. However, these findings do not establish a particular causal order, but strongly suggest the efficacy of routinely screening patients reporting gastro-intestinal symptoms for depression and depression patients about the gastro-intestinal health.

This evidence suggests religiosity does not mediate the effect of CGD on depression, as religion is not correlated with CGD. Rather, each of the five dimensions of religion, in itself, provides a reserve capacity of well-being that attenuates psychological distress independent from the severity of CGD. These results also reveal that the five dimensions of religion exert a modest buffering effect against the depressive effects of CGD. Bradshaw and Ellison (2010) report a similar buffering effect of private religion (including belief in life after death, which is not measured in these data) against the effects of financial distress on depression.

While not the central focus of this study, a robust and positive relationship emerges between financial stress and psychological distress. The patterns of covariation among psychological distress, CGD, and financial stress suggest a partial common-cause relationship, with financial strain driving both physical disease and depressive symptoms. This fits into a growing body of literature that places individual health outcomes and micro-social interactions within the broader SES gradient. However, financial distress often lies outside the purview of the relationship between patients and health care professionals. In fact, the cost of this very interaction may be adding yet another bill that the patient has difficulty paying. These findings suggest that interventions that focus on the whole patient could potentially improve health outcomes, compared to an approach treating only physical and mental symptoms. Social work provides a model for this type of care. Clearly religion matters in mental health outcomes, both as an intra-personal resource and interpersonal resource. One way of thinking about this would focus on macro-micro linkages in social theory.

While financial stress was not the focus of our study, this variable remained the strongest predictor of level of depression in all multivariate models. This underscores the importance of developing resiliency among economically disadvantaged women (and men) by studying the characteristics of communities with favorable health outcomes despite high risk from poverty (Levine et al. 2007a, Levine et al. 2007b, Levine et al. 2008) and continuously working toward social justice in health outcomes.

Religion provides one asset for developing such resiliency. Religiosity exerted a modest protective effect against psychological distress through lowering distress for both individuals with and without CGD (an additive effect) and through buffering the CGD-depression connection. No evidence of mediating effects was revealed. All measures of religiosity were uncorrelated with CGD, a necessity for a mediating variable. Shared variance between social interactive religion and social resources made it impossible to identify a significant direct relationship between social interactive religion and depressive symptoms. Likewise, the effects of religious attendance fell dramatically after statistically controlling for an individual's social resources. These findings suggest that building community and fostering social connections, possibly in conjunction with religious institutions, may also help in developing resiliency against psychological distress.

References

Adler, Nancy, Archana Singh-Manoux, Joseph Schwartz, Judith Stewart, Karen Matthews, and Michael G. Marmot. 2008. "Social Status and Health: A Comparison of British Civil Servants in Whitehall-II with European- and African-Americans in CARDIA." *Social Science and Medicine* 66: 1034–45.

Anderson, Ryan J., Kenneth E. Freedland, Ray E. Clouse, and Patrick J. Lustman. 2001. "The Prevalence of Comorbid Depression in Adults with Diabetes." *Diabetes Care* 24: 1069–78.

Avison, William R. and R. Jay Turner. 1988. "Stressful Life Events and Depressive Symptoms: Disaggregating the Effects of Acute Stressors and Chronic Strains." *Journal of Health and Social Behavior* 29: 253–64.

Ayotte, Brian J., Francis M Yang and Richard N. Jones. 2010. "Physical Health and Depression: A Dyadic Study of Chronic Health Conditions and Depressive Symptomatology in Older Adult Couples." *Gerontology* 65B: 438–48.

Banks, James, Michael Marmot, Zoe Oldfield, and James P. Smith. 2006. "Disease and Disadvantage in the United States and England." *Journal of the American Medical Association* 296: 2037–45.

Bodurka-Beavers, Diane, Karen Basen-Engquist, Cindy L. Carmack, Mary A. Fitzgerald, Judith K.Wolf, Carl D. Moor, and David Gershenson. 2000. "Depression, Anxiety, and Quality of Life in Patients with Epithelial Ovarian Cancer." *Gynocological Oncology* 78: 302–08.

Braam, Arjan W., Erik Hein, Dorly J.H. Deeg, Jos W. R. Twisk and Aartjaan Van Tilberg. 2004. "Religious Involvement and 6-Year Course of Depressive Sypmtoms in Older Dutch Citizens: Results from the Longitudinal Aging Study Amsterdam." *Journal of Aging and Health* 16: 467–89.

Bradshaw, Matt and Christopher G. Ellison. 2010. "Financial Hardship and Psychological Distress: Exploring the Buffering Effects of Religion." *Social Science and Medicine* 71: 196–201.

Chatters, Linda M. and Robert J. Taylor. 2005. "Religion and Families." Pp. 517–22 in *Sourcebook of Family Theory and Research*, edited by V.A. Bengston, Al.C. Acock, K.R. Allen, P. Dillworth-Anderson, and D.M. Klein. Thousand Oaks, CA: Sage.

Contrada, Richard J., Tanya M. Goyal, Corine Cather, Luba Rafalson, Ellen L. Idler and Tyrone J. Krause. 2004. "Psychological Factors in Outcomes of Heart Surgery: The Impact of Religious Involvement and Depressive Symptoms." *Health Psychology* 23: 227–38.

Cummings, Sherry M., James A. Neff and Baqar A. Husaini. 2003. "Functional Impairment as a Predictor of Depressive Symptomatology: The Role of Race, Religiosity and Social Support." *Health and Social Work* 28: 23–32.

Eibner, Christine and Rolund Sturm. 2006. "US-based Indices of Area-level Deprivation: Results from HealthCare for Communities." *Social Science & Medicine* 62: 348–59.

Eliassen, Henry A., John Taylor and Donald A. Lloyd. 2005. "Subjective Religiosity and Depression in the Transition to Adulthood." *Journal for the Scientific Study of Religion* 34: 187–99.

Ellison, Christopher G. 1995. "Race, Religious Involvement and Depressive Symptomatology in a Southeastern U.S. Community." *Social Science and Medicine* 40: 1561–72.

Ennis, Nicole E., Stevan E. Hobfoll and Kerstin E. Schronder. 2000. "Money Doesn't Talk, It Swears: How Economic Stress and Resistance Resources Impact Inner-city Women's Depressive Mood." *American Journal of Community Psychology* 28: 149–73.

Everson, Susan A., Siobhan C.Maty, John W. Lynch, and George A. Kaplan. 2002. "Epidemiologic Evidence for the Relation between Socioeconomic Status and Depression, Obesity, and Diabetes." *Journal of Psychosomatic Research* 54: 891–95.

Faresjo, Aschild, Ewa Grodzinsky, Saga Johansson, Mari-Ann Wallander, Toomas Timka, and Ingemar Akerlind. 2007. "A Population-based Case-control Study of Work and Psychosocial Problems in Patients with Irritable Bowel Syndrome—Women are More Seriously Affected than Men." *American Journal of Gastroenterology* 102: 371–79.

Fiscella, Kevin and David R. Williams. 2004. "Health Disparities Based on Socioeconomic Inequities: Implications for Urban Health Care." *Academic Medicine* 79: 1139–47.

Gavin, Amelia R, Emily Walton, David H.Chae, Margarita Alegria, James S. Jackson, and David Takeuchi. 2010. The Associations between Socio-economic Status and Major Depressive Disorder among Blacks, Latinos, Asians and non-Hispanic Whites: Findings from the Collaborative Psychiatric Epidemiology Studies." *Psychological Medicine* 40: 51–61.

Gazmararian, Julie A., Sherman A. James and James M. Lepkowski. 1995. "Depression in Black and White women: The Role of Marriage and Socioeconomic Status." *Annals of Epidemiology* 5: 455–63.

George, Linda K., David B. Larsons, Harold G. Koenig and Michael McCullough. 2000. "Spirituality and Health: What We Know and What We Need to Know." *Journal of Social and Clinical Psychology* 19: 102–16.

Goodman, Renee D., Katrina W. Davidson and Katherine Keyes. 2009. "Mental Disorders and Cardiovascular Disease among Adults in the United States." *Journal of Psychiatric Research* 43: 239–46.

Guthrie, Elspeth, Judy Jackson, Jon Shaffer, David Thompsom, Barbara Tomenson, and Francis Creed. 2002. "Psychological Disorder and Severity of Inflammatory Bowel Predict Health-related Quality of Life in Ulcerative Colitis and Crohns Disease." *American Journal of Gastroenterology* 97: 1994–99.

Haider, Adil H., David C. Chang, David T. Efron, Elliott R. Haut, Marie Crandall, and Edward E. Cornwell. 2008. "Race and Insurance Status as Risk Factors for Trauma Mortality." *Archives of Surgery* 143: 945–49.

Idler, Ellen L., David A.Boulifard, Erich Ladouvie, Yung Y.Chen, Tyron J. Krause, and Richard J. Contrada. 2009. "Looking Inside the Black Box of 'Attendance at Services': New Measures for Exploring an Old Dimension in Religion and Health." *International Journal of Psychology and Religion* 19: 1–20.

Jang, Sung J. and Byron R. Johnson. 2004. "Explaining Religious Effects on Distress among African Americans." *Journal for the Scientific Study of Religion* 43: 239–60.

Jarvis, Martin J. and Jane Wardle. 1999. "Social Patterning of Individual Health Behavior: The Case of Smoking." Pp. 240–55 in *Social Determinants of Health*, edited by M. Marmot and R. Wilkinson. Oxford: Oxford University Press.

Jones, Roger, Radoslav Latonovic, Judith Charlton, and Martin Gulliford. 2006. "Physical and Psychological Co-morbidity in Irritable Bowel Syndrome: A Matched Cohort Study using the General Practice Database." *Alimentary Pharmacology & Therapeatics* 24: 879–86.

Katerndahl, David A. and Michael Parchman. 2002. "The Ability of the Stress Process Model to Explain Mental Health Outcomes." *Comprehensive Psychiatry* 34: 351–60.

Katon, Wayne, Elizabeth Lin and Kurt Kroenke. 2007. "The Association of Depression and Anxiety with Medical Symptom Burden in Patients with Chronic Medical Illness." *General Hospital Psychiatry* 29: 147–55.

Kessler, Ronald C. 2003. "Epidemiology of Women and Depression." *Journal of Affective Disorders* 74: 5–13.

_____, Patricia Berglund, Olga R.Demler, Robert Jin, Doreen Koretz, Kathleen R. Merikangas, A. John Rush, Ellen E. Walters and Phillip S. Wang. 2003. "The Epidemiology of Major Depressive Disorder." *Journal of the American Medical Association* 289: 3095–3105.

_____, Patricia Berglund, Olga R. Demler, Robert Jin, Kathleen R. Merikangas, and Ellen E. Walters. 2005. "Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey." *Archives of General Pyschology* 62: 593–602.

Kilbourne, Barbara J., Sherry M. Cummings and Robert S. Levine. 2009. "The Influence of Religiosity on Depression among Low-income People with Diabetes." *Health and Social Work* 34: 137–47.

Koenig, Harold G. 2007. "Religion and Remission of Depression in Medical Inpatients with Heart Failure/Pulmonary Disease." *Journal of Nervous and Mental Disorders* 195: 389–95.

Koloski, Natasha A., Nicholas J.Talley, and Philip M. Boyce. 2003. "Does Psychological Distress Modulate Functional Gastrointestinal Symptoms and Health Care Seeking? A Prospective, Community Cohort Study." *American Journal of Gastroenterology* 98: 789–97.

Krause, Neal and Keith M. Wulff. 2005. "Friendship Ties in the Church and Depressive Symptoms: Exploring Variations by Age." *Review of Religious Research* 46: 325–40.

Kristenson, Margareta. Hege, R.Eriksen, Judith K.Sluiter, Dagmar Starke, and Holger Ursin. 2010. "Psychobiological Mechanisms of Socioeconomic Difference in Health." *Social Science and Medicine* 58: 1511–22.

Kugaya, Akira, Tatsuo Okumyama, Toru Nakano, Ichiro Mikami and Hitoschi Okamura. 2000. "Prevalence, Predictive Factors and Screening for Psychological Distress in Patients with Newly Diagnosed Head and Neck Cancer." *Cancer* 88: 2817–23.

Levin, Jeff. 2002. "Is Depressed Affect a Function of One's Relationship with God?: Findings from a Study of Primary Care Patients." *Internationl Journal of Psychiatry in Medicine* 32: 379–93.

Levine, Robert S., Nathaniel C. Briggs, Danielle Hollar, Baqar A.Husaini, Charles H. Hennekens, and Barbara J. Kilbourne. 2007a. "Descriptive and Analytic Epidemiologic Studies to Identify Modifiable Determinants to Disparities in Mortality Rates between Blacks and Whites." *Ethnicity and Disease* 17: 280–83.

_____. 2007b. "Learning to Reduce Death Rates in African American Communities." *Ethnicity and Disease* 17: 416.

Levine, Robert S., Barbara J. Kilbourne, Peter A.Baltrus, Shanita Williams-Brown, Lee Caplan, Nathaniel C. Briggs, Baqar A. Husaini, and George E. Rust. 2008. "Black-White Disparities in Elderly Breast Cancer Mortality Before and After Implementation of Medicare Benefits for Screening Mammography." *Journal of Healthcare for the Poor and Underserved* 19: 103–34.

Lipton, Richard B., Sandra W. Hamelsky, Kenneth B. Kolodner, T.J. Steiner, and Walter F. Stewart. 2000. "Migraine, Quality of Life, and Depression: A Population-based Case-control Study." *Neurology* 55: 629–35.

Mair, Christina, Ana V. Diez-Roux and Jeffrey D. Morenoff. 2010. "Neighborhood Stressors and Social Support as Predictors of Depressive Symptoms in the Chicago Community Adult Health Study." *Health and Place* 16: 811–19.

Marmot, Michael G., Maniolis Kogevinas and Mary Ann Elston. 1987. "Social/economic Status and Disease." *Annual Review of Public Health* 8: 111–35.

Matheson, Flora, Rahim Mioneddin, James R. Dunn, Maria I.Creatore, Piotr Gozdyra, and Richard H. Glazier. 2006. "Urban Neighborhoods, Chronic Stress, Gender and Depression." *Social Science and Medicine* 63: 2604–16.

Maunder, Robert G., Gordon R.Greenberg, Johnathan J.Hunter, William J.Lancee, Hillary Stienhart, and Mark S. Silverberg. 2006. "Psychobiological Subtypes of Ulcerative Colitis: Panca Status Moderates the Relationship between Disease Activity and Psychological Distress." *American Journal of Gastroenterology* 101: 2546–51.

Mills, Terry L. and John C. Henretta. 2001. "Racial, Ethnic, and Sociodemographic Differences in the Level of Psychosocial Distress among Older Americans." *Research on Aging* 23: 131–52

Murray, Christopher J.L., Sandeep C.Kulkarni, Catherine Michaud, Niels Tomijima, Maria T. Bulzaccelli, Terrell J. Iandiorio and Majid Ezzati. 2006. "Eight Americans: Investigating Mortality Disparities across Races, Counties, and Race-counties in the United States." *PLOS Medicine* 3: 1513–24.

Nooney, Jennifer, and Eric Woodrum. 2002. "Religious Coping and Church-Based Social Support as Predictors of Mental Health Outcomes: Testing a Conceptual Model." *Journal for the Scientific Study of Religion* 41: 356–68.

Omachi, Theodore A., Patricia P.Katz, Edward H.Yelin, Steven E. Gregorich, Carlos Iribarren, Mark D. Eisner. 2009. "Depression and Health-related Quality of Life in Chronic Obstructive Pulmonary Disease." *American Journal of Medicine* 122: 778. e9–e15.

Pajala, M., M. Heikkinen, and J. Hintifikka. 2005. "A Prospective 1-year Follow-up Study in Patients with Functional or Organic Dyspepsia: Changes in Gatsrointestinal Symptoms, Mental Distress and Fear of Serious Illness." *Alimentary Pharmacology & Therapautics* 2005: 1241–46.

Pearlin, Leonard I., Morton Lieberman, Elizabeth Menaghan, and Joseph Mullan. 1981. "The Stress Process." *Journal of Health and Social Behavior* 22: 337–56.

Powell, Lynda H., Leila Shahabi and Carl E. Thorsen. 2003. "Religion and Spirituality: Linkages to Physical Health." *American Psychologist* 58: 36–52.

Radloff, Lenore S. 1977. "The CES-D Scale: A Self-report Depression Scale for Research in the General Population." *Applied Psychological Measurement* 1: 385–401.

Rios, Dean A., Dorina R.Abdulah, Jeanne Y. Wei, and Jeffrey M. Hausdorff. 2001. "Disparate Effects of Socioeconomic Status on Physical Function and Emotional Well-being in Older Adults." *Aging: Clinical and Experimental Research* 13: 30–37.

Roff, Lucinda L., Martha Crowther, Patricia S. Baker Richard M. Allman. 2004. "Depression and Religiosity in African American and White Community Dwelling Older Adults." *Journal of Human Behavior in the Social Environment* 10: 175–89.

Ross, Catherine E. 2000. "Walking, Exercising, and Smoking: Does Neighborhood Matter? *Social Science and Medicine* 51: 256–74.
_____ and John Mirowsky. 2001. "Neighborhood Disadvantage, Disorder and Health." *Journal of Health and Social Behavior* 42: 258–76.
Salsman, John M. and Charles R. Carlson. 2005. "Religious Orientation, Mature Faith, and Psychological Distress: Elements of Positive and Negative Associations." *Journal for the Scientfic Study of Religion* 44: 201–09.
Schnall, Eliezer, Sylvia Wassertheil-Smoller, Charles Swencionis, Vance Zemon, Lesley Tinker, Mary O'Sullivan, Linda Van Horn and Marjorie Goodman. 2010. "The Relationship between Religion and Cardiovascular Outcomes and All-cause Mortality in the Women's Health Initiative Observational Study." *Psychology and Health* 25: 249–63.
Schnittker, Jason. 2001. "When is Faith Enough? The Effects of Religious Involvement on Depression." *Journal for the Scientific Study of Religion* 40: 393–411.
_____. 2005. "Chronic Illness and Depressive Symptoms in Late Life." *Social Science & Medicine* 60: 13–23.
Shen, Jay J., T.T. Wan, and J.B. Perlin. 2001. "An Exploration of the Complex Relationship of Sociolecologic Factors in the Treatment and Outcomes of Acute Myocardial Infarction in Disadvantaged Populations." *Health Services Research* 36: 711–32.
Simren, Magnus, Jenny Axelsson, Rolf Gillberg, Hasse Abrahamsson, Jan Svedlund, and Einar S. Bjornsson. 2001. "Quality of Life in Inflammatory Bowel Disease in Remission: The Impact of IBS-like Symptoms and Associated Psychological Factors." *American Journal of Gastroenterology* 97: 380–96.
Slopen, Natalie, Tene T. Lewis, Tara L Gruenwald, Mahasim S. Mujahid, Carol D. Ryff, Michelle A. Albert and David R. Williams. 2010. "Early Life Adversity and Inflammation in African Americans and Whites in the Midlife in the United States." *Psychosomatic Medicine* 72: 694–701.
Smith, James P. 2004. "Unraveling the SES-health Connection." *Population and Development Review* 30: 108–32.
_____. 2007. *The Impact of SES over the Life Course*. Santa Monica, CA: Rand.
Stafford, Mai, Steven Cummins, Sally Macintyre, Anne Ellaway, and Michael Marmot. 2005. "Gender Differences in the Associations between Health and Neighborhood Environment." *Social Science and Medicine* 60: 1681–92.
Verhaak, Peter F.M., Monique J.W.M.Heijams, Loe Peters, and Mieke Rijken. 2005. "Chronic Disease and Mental Disorder." *Social Science and Medicine* 60: 789–97.
Wang, Jian L. 2004. "The Difference between Single and Married Mothers in the 12-Month Prevalence of Major Depressive Syndrome, Associated Factors and Mental Health Service Utilization." *Social Psychiatry and Psychiatric Epidemiology* 39: 26–34.
Weden, Margaret M., Richard M. Carpiano and Stephanie A. Roberts. 2007. "Subjective and Objective Neighborhood Characteristics and Adult Health." *Social Science and Medicine* 66: 1256–70.
Wheaton, Blair. 1983. "Stress, Personal Coping Resources, and Psychiatric Symptoms: An Investigation of Interactive Models." *Journal of Health and Social Behavior* 24: 208–29.
Wink Paul, Michele Dillon and Britta Larsen. 2005. "Religion as a Moderator of the Depression Health Connection." *Research on Aging* 27: 197–220.
Yi, Michael S., Joseph M. Mrus, Terrance J. Wade, Mona L. Ho, Richard W. Hornung, Sean Cotton, Amy H. Peterman, Christina M. Puchalski and Joseph Tsevat. 2006. "Religion, Spirituality and Depressive Symptoms in Patients with HIV/AIDS." *Journal of General Internal Medicine* 21: S21–S27.

CHAPTER FIVE

RELIGION AND HEALTH IN JAPAN: PAST RESEARCH, NEW FINDINGS, AND FUTURE DIRECTIONS

Michael K. Roemer

Research on intersections between religion and health has developed tremendously in recent decades. Scholars have introduced new measures and more sophisticated methods of analysis. One gap in the literature that remains significant, however, is the study of these associations outside of predominantly Christian influenced cultures. The purpose of this chapter is two-fold: to provide an overview of the few studies that have been conducted on this topic in Japan and to introduce new findings concerning associations between religion and physical health. As similar studies in other societies have revealed, there are both positive and negative associations. These latter effects, in particular, indicate important cultural distinctions concerning how religion and health intersect in Japan versus the United States, for instance. The chapter concludes with a comparison of several important studies of this topic within the Japanese context and a comparison with U.S.-based research, and I address some of the weaknesses in this field of research thus far.

Why Japan?

In some ways, Japan resembles the United States and many Western European nations because it is a highly modernized, democratic nation. For decades, Japan has had one of the largest economies in the world (China very recently replaced Japan as the second largest), and its political influence is global. On a more mundane level, throughout the world people are consuming Japanese goods made by such companies as Toyota (still the highest selling automobile manufacturer worldwide), Honda, Sony, Mitsubishi, and Toshiba, and such "soft culture" exports as sushi and entertainment products (e.g., *anime* and Wii™). Japan is not some remote, third world country with little influence over or connection with the West. Its international influence and close ties with the United States in particular, in conjunction with its different social structures and traditions, make it an appealing and

highly appropriate topic of research. This is especially the case with studies of religion.

Concerning religion, Japan varies dramatically from much of the West. For example, the most culturally influential religions in Japan are polytheistic, and Japanese religiousness can be characterized as a syncretistic blend of mainly Shintō, Buddhist, and folk rituals and beliefs that tend to intermingle with daily secular activities as "part of their culture" (Miller 1998: 368). Another important aspect is an emphasis on rituals over doctrines and theology. Although both Buddhism and Shinto have texts that are considered sacred, the average Japanese has limited knowledge of these texts, and very few people regularly attend worship services or listen to priests discuss them. Even more than doctrinally or theologically based beliefs, rituals are the most common expressions of religiosity in Japan (see Reader 1991, Yanagawa 1991, Traphagan 2004, 2005, Kawano 2005, Kisala 2006), and for these reasons, often Japan appears—falsely— much less religious than other societies (Okada 1994, Roemer 2010a).

It is also important to note that religious membership differs significantly from congregation- or church-based communities. The most recently published statistics reveal that, in 2006, there were approximately 163,050 officially registered Buddhist and Shinto temples, shrines and churches (Statistics Bureau 2010). Though there are many shrines and temples, affiliation with these places of worship is most often based on geography and heredity, rather than on one's religious motivations (Davis 1992, Traphagan 2004, 2005, Kisala 2006). Elsewhere I have published a study that indicates that approximately ten per cent of the adult population considers itself *personally* affiliated with an organized religion. This study combined four waves of data from national probability samples of Japanese adults to reveal that out of 10,195 respondents, only 951 claimed to be "individual" (as opposed to "family") affiliates of Buddhism, 325 were new religion members,[1] 86 were Christians, and 100 were "other" (including Shinto; see Roemer 2009: 304). Religious affiliation on the individual level is very low in Japan. Particularly noteworthy is that only 0.84 percent of this sample identified as Christian—a stark difference from the

[1] So-called "New Religions" include those that began from the 18th century through more recent years. They often include a blend of practices and beliefs from Buddhist, Shinto, and other traditions (see Reader 1991.)

76 percent of adults who claimed to be Christians in the United States in 2008 ("Self-Described Religious Identification").

Generally, Japanese are automatically claimed as members by their local Shinto shrine (as *ujiko*) simply because they reside within its district. Similarly, though many Japanese will state that they are affiliated with the Buddhist temple where their ancestral tomb is located, typically living household members did not choose this connection—their ancestors did. This is why the figures given above do not match statistics from Japan's Ministry of Internal Communications. The Ministry's statistics are based on reports from shrines, temples, and churches—not from individuals, and they are grossly inflated. Most Japanese do not consider themselves members of any shrine, temple or church, but they will visit various places of worship throughout the year based on their spiritual and practical needs. Buddhism and Shinto, in particular, have important cultural and social influence on Japanese society; however, Japan is not a "Buddhist" or "Shinto" nation in the sense that the United States is often termed "Christian." There are some key differences, therefore, between Japanese mainstream religiosity and the predominantly Christian populations that have been studied in the United States. Similar to most societies, though, religion remains an important social force in Japan (Reader 1991, Davis 1992, Martinez 2004, Traphagan 2004, Kawano 2005).

Religion and Health in Japan: Previous Studies

Concerning the intersection between religion and health, there are some measures that have been used in Japan that are common in U.S.-based research. For example, studies have included religious devotion and religious coping, and two studies (Krause et al. 1999, 2002) used a private religious index that included questions about reading sacred texts and watching or listening to broadcast religious shows. Health measures include general health, life satisfaction, happiness, mental and physical health, mortality, and social support. Scholars have also relied on more culturally sensitive measures, especially concerning religion (e.g., ancestor veneration, belief in Shinto deities, spirits, or gods [*kami*] and buddhas, and household rituals such as ancestor and Shinto altar rites). Religious attendance—perhaps the most frequently used measure in the United States—is rarely used in Japan for the reasons explained above. While including measures that are also used

in the United States allows us to make cross-cultural comparisons, the more culturally specific measures are particularly important because they give us a broader understanding of how religion and health may be associated, especially outside of societies that are historically primarily influenced by Christianity.

Following the publication of the John E. Fetzer Institute's "Multidimensional Measurement of Religiousness/Spirituality for Use in Health Research," John Traphagan, a Japan scholar who published a book in which he claims that Japanese religiousness is primarily about "the wellness of being" (2004: 19), wrote a response criticizing the use of this study for cross-cultural research (2005). He was concerned about the notion of using such measures of religion as "spirituality," the common Abrahamic notion of god as a single, omnipotent, loving, and forgiving god, other measures of belief, and religious preference. Such measures, he argued, do not make sense in the Japanese context because they are heavily influenced by American Christian interpretations of religion and religiousness. For Traphagan, because religiousness in Japan is most commonly about rituals and *doing* religion, more appropriate measures for this context should "focus on ritual" (2005: 415). Indeed, he asserts that all cross-cultural studies of religion and health need to give more attention to ritual than to any other religious dimension. While I agree with this logic to an extent, subsequent publications (see below) indicate that associations between health and religious preference and certain beliefs do exist in Japan. When it comes to cross-cultural research or studies outside of the West, however, it is essential that we include measures that are particular to the region(s) involved and not to only the West. That is where Traphagan's argument is most convincing.

At present, there are only a handful of studies that focus on the religion-health relationship in Japan.[2] Research on religion in Japan has included such discussions as a part of broader studies. For example, based on ethnographic research in 1979 and 1980, Ohnuki-Tierney (1984) described strong ties between ritual practices at Shinto shrines and Buddhist temples on the one hand and well-being on the other. Specifically, she provides examples of how many Japanese visit temples and shrines to pray for the health and personal safety of family and

[2] There are very few studies in Japanese that cover this in depth, hence this chapter focuses on English-language works (with the exception of Nishiwaki 2004).

friends. They also purchase different kinds of amulets (*omamori*) for themselves and for others for similar reasons. These religious institutions serve as places for individuals to show concern for others (Traphagan 2004) and to communicate with *kami* (gods, deities, spirits), buddhas, or the dead. Such interactions exemplify how Japanese can turn to religion for coping or in hopes of maintaining positive relationships and well-being.

In a recent discussion of rituals in Japan, Satsuki Kawano argues that Japanese religious rites reflect daily values and act as embodiments of moral order. The act of bowing at public or household shrines or altars, for example, is a physical embodiment of such values as respect and gratitude. She also describes how such ritual acts as cleaning and purification reflect the social importance of purity, and she addresses how making offerings to ancestors, buddhas, or *kami* are "deeply tied to the moral idea of mutual dependence and reciprocity" (2005: 44). Kawano also discusses how the emplacement of ritual objects or goods serves as a reflection of social norms and morals, and she concludes her book by stating, "Ritual bodies and environments crystallize a sense of good personhood" (2005: 120). Kawano's descriptions help us see how religion and health are connected in Japan by revealing links between rites and morals. Religious acts serve as good, just, proper, and moral behaviors, as well as good, just, proper, and moral thoughts.

One book that focuses on religion and health in Japan is Traphagan's *The Practice of Concern*. For Traphagan, Japanese religiousness functions in a way analogous to a Health Management Organization, or HMO, and he cites Reader and Tanabe (1998) by calling it a "total-care system." In other words, like an HMO, religious acts "engage in both preventative and curative activities aimed at insuring health and well-being" (2004: 20). Using Paul Tillich's notion of ultimate concern as a starting point, Traphagan explains that ultimate concern in the Japanese context is well-being. More specifically, Traphagan argues that Japanese religiousness is about the practice of concern for individual and collective well-being. Prayers, offerings, purchasing amulets, and other similar behaviors reveal the important ways in which religious practices and goods are used to show concern for family members and friends—both living and dead. Based on this theoretical argument—and the detailed empirical evidence Traphagan uses to support his claims—it is possible to see that religion and health are closely tied in contemporary Japan.

There are also studies that address religious healing and new religions. As Tatsuya Yumiyama (1995) has shown, healing has become a rather popular topic of interest in academia and in the media. These studies generally describe the rituals involved or provide hypothetical or theoretical explanations but do not assess religion's effectiveness concerning health outcomes. For instance, sociologist Winston Davis details healing practices of Sūkyō Mahikari, a new religion. Its members attribute to such practices the cure of a variety of illnesses and "mak[ing] people aware of Mahikari, the True Light, or God" (1980: 22). Similarly, Helen Hardacre's (1986) work on Kurozumikyō reveals the religion's focus on healing over modern medicine. As with other new religions (see also Arai 1996), Kurozumikyō teaches that medicine is "limited and shallow" and that members instead need to maintain harmony in terms of personal "diet and daily activity" and in their relationships with others (Hardacre 1986:88–89). Such healing practices as Mahikari's *okiyome* and Kurozumikyō's *majinai* vary by religion, but their intended outcome is the same: they seek to heal individuals of mental, physical, or emotional illnesses through rituals rather than with modern medicine.

In addition to healing in new religions, Pamela Winfield describes the process of *kaji*, a Shingon Buddhist ritual that aims at "the mutual empowerment between self and Buddha."[3] *Kaji* is an esoteric "hands-on healing technique" that, according to a Master Shingon priest Winfield interviewed, has cured a variety of illnesses, including leukemia, tumors, diabetes, ulcers, epilepsies, asthma and other chronic diseases (2005: 108–109). Her study highlights the doctrines, rituals, and historical and contemporary uses of *kaji*, though she does not assess its effectiveness beyond informant and historical testimonies. Winfield admits that her study is not an "attempt to validate or invalidate truth claims of those *kaji* practitioners or patients who were represented [in her study]" (2005: 127). Thus, as with the aforementioned works on Japanese new religions, it is hard to tell how effective these practices are, and we are left asking: *Is the religion-health relationship in Japan valid*?

The Religion-Health Relationship in Japan

Beyond theoretical, descriptive, or exploratory studies, there have been a select number of empirical studies over the past two decades that can

[3] Shingon is a branch of Japanese Buddhism that dates to the 700s c.e.

be used to assess the validity of the religion-health relationship in Japan currently as regards mortality, subjective well-being, social support, and psychological and physical health. These are briefly reviewed in the following paragraphs.

Religion and Mortality

Bryna Shatenstein and Parviz Ghadirian (1998) review a number of studies to assess the relationship between religion, diet, and health and mortality in several cultural contexts. They highlight two studies on Japan: one on Seventh-day Adventists and the other on Zen Buddhist priests. One publication they cite, by Kuratsune, Ikeda and Hayashi (1986), uses a sample of 6,450 Japanese Seventh-day Adventists to discover whether their diet of no meat or fish lowered their mortality rates in comparison with other Japanese. Though the authors admit that their findings are "weak and vague," they found that this sample had significantly lower rates of cancer of the stomach, in particular, and they attribute this difference—in theory at least—to the strict (and healthier) no meat or fish diet of Seventh-day Adventists. Ogata, Ikeda and Kuratsune (1984) make similar claims concerning mortality rates of male Zen priests: A no-meat, no-fish diet—among other health behaviors—was used to explain a significant association with lower mortality rates. In both cases, indirect religious effects, those of doctrine and practice, help explain these relationships.

One of the greatest weaknesses of these studies is that they are limited to particular religious groups, and both Seventh-Day Adventists and Zen monks make up small percentages of the overall population.[4]

Religion and Subjective Well-being in Japan

Another health outcome that has received only a little attention is that of subjective well-being. Using a national random sample of Japanese adults (20 and older), I found positive associations between life satisfaction and happiness and several measures of religiousness (Roemer 2010b). "Devotion" to a religion is positively and significantly associated with a five-item index of life satisfaction and with a single measure

[4] Using the Japanese General Social Surveys, I have elsewhere shown (forth.) that approximately 2.19% of the entire adult population consider themselves Zen (monks and laity), and less than 1% identify as Christian. Kuratsune et al. (1986: 114) claim that there were only 10,000 Adventists in the early 1980s.

of happiness. This study also reveals that those who identified as Christians, Buddhists, or new religion members were more likely than those who did not claim a religious affiliation to report higher levels of life satisfaction and happiness. Further, religious devotion appears to have buffering effects on unemployment, on life satisfaction and happiness, and on considering oneself "low class." In that article, I argue that being devoted to a religion may provide individuals with religious coping strategies that those who are less devoted or not at all devoted may lack. Because they are devoted, they are more likely to be familiar with the doctrines of these religions—all of which carry (generally) positive messages about the present life. These subjective and objective religious measures are associated with subjective well-being in a direction similar to the effects seen in U.S.-based research.

Religion and Social Support in Japan

One topic that has had more extensive research is the link between religion and social support in Japan. For instance, Krause and colleagues (1999) investigated associations between religion, social support, and general health among elderly Japanese. In this study, the authors used a nationally representative probability sample of Japanese 60-years-old and older and found that an index of religious practice (praying at home, reading sacred texts, and watching or listening to religious TV or radio programs) was positively and significantly correlated with giving social support only for men. They also reported similar positive associations between religion and self-rated health for men and women. In this case, religion appears to be related with positive moral behaviors (in this case, giving to others) and to general health.

These findings are useful and important, though I accept with reservation some of their explanations for how such associations exist. For example the authors claim, "giving social support to others is clearly a central part of religious life," and they list the "Good Samaritan" principle as an example (1999: 407). These ideas stem from Judeo-Christian influence and may not be applicable in Japan. To support their claims, they cite—among others—Yanagawa (1992), who describes Japanese religion as "a religion of human relationships"; Oda (1992), who discusses Shinto and Buddhist theologies; and Lebra, who addresses such values as kindness, compassion, and empathy (1976: 407, 411). My interpretation of Yanagawa's comment about "human relationships" is that it is more about the essentialness of human interaction

(both dead and living) in Japanese religiousness than the need to give to others without some form of reciprocity (see Davis 1992, Traphagan 2004, Martinez 2005). Concerning Oda's comments, doctrines are unlikely to have any direct impact on the average Japanese because most Japanese are unaware of such doctrines (see Reader 1991, Traphagan 2004). And although Lebra does note that many Japanese see the Buddha as "the ultimate embodiment of unlimited benevolence," it is difficult to conclude that such impressions of what most Japanese see as a distant being—the Buddha—are explaining acts of social support (1976: 411). These hesitations concerning their theoretical explanations notwithstanding, the empirical findings by Krause and colleagues are no doubt valid, and they are important additions to the development of religion-and-health studies in Japan.

Two other publications that study religion and social support in Japan focus on *receiving* support. Tagaya and colleagues assessed a sample of 1,956 Japanese ages 65 and older from two areas of Japan (Nagano and Hokkaido Prefectures) to assess links between social support and end-of-life issues. One relevant finding is that there is a significant difference concerning "death anxiety" and levels of social support groups among those who attend religious services: those who attend religious services and report low levels of support are more likely than those with higher levels of support to admit feelings of anxiety concerning death. They also reported that 82.7% of their sample, on average, prays, and that there is a significant difference between the percentage of those who pray and have low levels of support versus those who pray and have high levels (2000: 133–34). Those who pray have higher levels of support, on average.

Using ethnographic research methods, I have elsewhere (2007) discussed connections between religious practices and beliefs and social support among men in one of Japan's oldest and most famous Shinto festivals, the Gion Festival. Data were based on several weeks of formal semi-structured interviews with a dozen men who play some of the most important roles in this 1,147-year-old festival. Based on these interviews, I concluded that their participation in this annual festival has provided them with strong feelings of closeness with other neighbors and festival participants and with spiritual support from several *kami*, especially those of the festival. I explained these associations as a result of the hundreds of hours the men spend together each year (directly related and unrelated to festival events) and the close bonds that such time together generates. They also share common goals

(e.g., the success of the festival) and similar worldviews, in particular the efficacy of *kami* in protecting them and their families throughout the year, and these can be related to the powerful support systems they develop—in many cases over a lifetime.

These three studies rely on different methods of analysis, they survey individuals from different regions of Japan, and they focus on different measures of religion and support; thus we cannot make direct comparisons. However, findings from these methodologically distinct studies indicate a rather consistent, positive link between levels of social support and religiousness.

Religion and Psychological Health in Japan

Another health outcome that has been studied by more than one scholar is psychological distress. Using two samples of students at a Catholic-sponsored women's university in Tokyo, Nishiwaki tested for the effects of several religious belief measures with different measures of psychological health. In one year, he uncovered statistically significant correlations between an 8-item index of the existence and efficacy of *kami* and *hotoke* (ancestors and buddhas) and a 7-item index of the influence of religion in life with good psychological health (based on a 5-item Positive Spiritual and Mental Condition scale and several measures from a Value in Life scale). The *kami-hotoke* scale was also positively associated with two of Crumbaugh's (1968) Purpose in Life measures (2004: 204). However, the following year's sample (from the same Catholic-sponsored women's university) differed in that Nishiwaki reports statistically significant associations between the *kami-hotoke* index and the religion influence index with a Self-character and Self-support scale but not with the Positive Spiritual and Mental Condition scale. Results were also different between samples for links between the religion measures and the Purpose in Life Test and the Value in Life measures (2004: 213). This study was one of the first to examine religion's effects on psychological health in Japan; however, its sample is limited to young adult women at a Catholic-sponsored university, there are no socio-demographic or health controls in the models, and there is lack of reliability of the instruments among samples. Such limitations make it difficult for us to generalize these results to other populations in Japan.

In a multi-national study, Lavric and Flere compared cultural effects of religion on psychological well-being in Slovenia, Bosnia, Herzegovina,

Serbia, the United States, and Japan. Concerning Japan, they report that extrinsic religiousness ("I go to church mostly to spend time with friends; I go to church mostly because I enjoy seeing people I know; I go to church because it helps me make friends") is positively associated with negative affect (one factor of the State-Trait Anxiety Inventory) among their sample of 397 undergraduate university students in Sendai, Japan. The other religion measures—intrinsic and quest religiousness, religious attendance, and prayer are insignificantly associated. Similarly, an index of intrinsic religiosity, attendance, and frequency of prayer—were not correlated with psychological well-being for the Japanese sample (2008: 170–71). Though their finding that the relationship between religion and psychological well-being varies per culture is interesting, further development of theoretical explanations for their findings per culture would help us understand better why these relationship do (or do not) exist. Moreover, as with Nishiwaki's study discussed above, there are no sociodemographic or health controls in the models, and the samples are limited to young adults.

Religion and Physical Health in Japan

This section describes studies that have assessed associations between religion and physical health within the general population. In addition to the findings Krause et al. (1999) report concerning religion and social support, they also reveal significant, positive links between the private practices index and self-reported physical health for older men and women. In a separate study, Krause and colleagues (2002) used two waves of a nationally representative probability sample of Japanese elders to examine whether several measures of religiousness were associated with reduced hypertension after the recent death of a loved one. Based on a sample of 1,723, they found that individuals who conduct private religious practices frequently are *more* likely to develop high levels of blood pressure between survey waves than those who do these less often. This was the only religion measure of three to have any significant effects in the models, however, and compared to other controls, its effects are somewhat weak. On the other hand, the authors discovered that an interaction between "belief in life after death" and "death of a loved one" exerts a significant inverse influence on hypertension. After further analysis, they explain this finding in greater detail by stating, "when older Japanese do not believe in a good afterlife, the odds of reporting they have high blood pressure following the

death of a significant other increase by about 72%" (2002: S104). Based on further analysis, the authors conclude that the link between religion and high blood pressure stemming from the recent death of a loved one among elderly Japanese is most likely delayed and effects are unlikely to surface immediately. This is one of the only studies that uses a large, longitudinal national sample to examine possible connections between Japanese religiousness and physical health; so we while are left wondering about the initial negative effects on health, its contributions to the religion-health literature in Japan are particularly noteworthy.

New Research on Religion, Psychological and Physical Health in Japan

In a recent *Social Forces* article, I report associations between several measures of religion and psychological distress (based on a Japanese version of the Center for Epidemiological Studies Depression Scale; hereafter CES-D). For this study, I mailed self-administered surveys to a strategic random sample 600 adults living in Kyoto Prefecture (see Roemer 2010c for sample details). Briefly, this study revealed that reporting of CES-D symptoms is (1) positively associated with a religious coping index (*i.e.*, beliefs that religion or supernatural beings provide comfort, support, or protection), (2) associated in different directions with ownership of different household altars (positively for Shinto altars and negatively with ancestor altars), (3) negatively associated with frequency of ancestral grave visits, (4) positively associated with certain beliefs (e.g., in supernatural beings), and (5) generally does not differ per religious identification (only the "somewhat religious" differ from the "not religious").

The primary limitation of this study is the sample composition: The final sample size in all models after list-wise deletion is 269 respondents, and it is limited to adults listed in the telephone books in Kyoto Prefecture. On the other hand, it is the first study of its kind to test for the effects of a series of religion measures on a measure of psychological well-being that is commonly used both in Japan and in the United States It is also useful for assessing cultural differences in this topic of research. Specifically, this study reveals that religious coping and beliefs in the supernatural (*kami* and *hotoke*) are positively related to increased depression symptoms. Most studies in the United States reveal that increases in religiousness are negatively correlated with depression, except in cases of negative relationships within a congregation or

negative views of God, for example. This study also includes measures of Japanese religiousness that are specific to Japan. For instance, the study reveals that individuals who own an ancestor altar (*butsudan*) are less likely to report CES-D symptoms, and those who own a Shinto altar (*kamidana*) are more likely to report CES-D symptoms. In the article, I hypothesize that this difference is a result of how most Japanese interpret ancestors as generally helpful and caring but *kami* as abstract, more aloof beings that are more likely to cause harm. When we look at these two objects of attention separately (as opposed to together in the question about belief in *kami* and *hotoke*), we see a clear distinction of psychological health effects. Finally, this study benefits from its inclusion of important health and socio-demographic controls that previous studies have lacked—including a control for self-reported physical health and a sense of balance in life (both of which are highly associated with distress in all models).

This dataset also included findings concerning religion and physical health in Japan, which are reported here for the first time. Using the same controls as in that study, once again we see that religion can have both positive and negative effects on health. Table 5.1 includes weighted descriptive statistics for the main variables tested in this study.[5] The dependent variable, Physical health ("How would you describe your physical health right now?"), is coded so that a higher score indicates better health (scale = 1–5). The health control, Balance ("During the past month, how much balance in your life did you have concerning your free time [for hobbies, etc.] and other time [such as work and household responsibilities?"]), is coded on a similar scale. Another control, Psychological distress, is a logged mean for 10 items from the Japanese version of the CES-D, and a higher score indicates more symptoms of distress, or worse mental health. This was the dependent variable in the psychological distress study. Traumas is a dummy variable, and about 70% of the sample indicated that they had experienced at least one trauma in the past five years.

The religion measures in Table 5.1 range from beliefs to behaviors, and because they are highly correlated with one another, I tested each variable's effects in separate models. The variables that are significantly associated with physical health are religion and health, grave visits,

[5] Weights are based on the actual sex ratio and age ranges of the entire population in 2005 to reflect better the true population and improve the generalizability of these results.

Table 5.1. Weighted Descriptive Statistics of Study Variables

	Mean	S.D.	Range	N
Dependent Variable				
Self-rated physical health (Poor = 1, Good = 5)	3.460	1.103	1–5	301
Socio-demographics				
Gender (male = 1)	.431	.504	0–1	311
Age (in years)	50.474	18.522	23–94	311
Education (by levels)	2.926	1.075	1–5	305
Household income	5.267	1.916	1–9	303
Urban (urban = 1)	.416	.504	0–1	308
Married (married = 1)	.688	.472	0–1	309
Parent (1 or more child = 1)	.742	.446	0–1	305
Health Controls				
Psychological distress	.370	.359	.00–1.386	303
Balance (Lack = 1, Have = 5)	3.341	1.320	1–5	301
Traumas (1 or more traumas = 1)	.696	.472	0–1	301
Religious Measures				
Religion & health are related (Disagree = 1, Agree = 5)	3.058	1.255	1–5	309
Grave visits	2.721	1.122	1–5	309
Ancestor altar (own one = 1)	.537	.511	0–1	303
Shinto altar (own one = 1)	.396	.498	0–1	309
Ancestor & Shinto altar (own both = 1)	.300	.469	0–1	301

Notes:
This is an abbreviated version of the study variables table used in Roemer (2010c). Key variables to the present study are shown.

ancestor altar, and ancestor and Shinto altar. Religion and health ("religion and health are related") is a Likert-type scale question (disagree to agree, scale = 1–5), and grave visits is a measure of frequency of visits to respondents' relatives' gravesites (scale = 1–5, a higher score means more frequent visitations). Such visits are common in Japan, though few go more than once or twice a year. In this study, only 13.93% reported going "often." Ancestor altar is a measure of whether a respondent has an ancestor altar (*butsudan*) in his or her home. The variable, ancestor

and Shinto altars, indicates whether a respondent has both altars. Briefly, an ancestor altar is associated with Buddhist rituals and is a place in the home where family members can pay respects/gratitude to, make offerings for, make requests from, and communicate with the dead. The Shinto altar (*kamidana*) is generally seen as a sacred space for making similar acts of veneration for *kami* (see Roemer 2010c for more details concerning differences between these two altars). The latter measure is not discussed in the psychological distress article because it was insignificantly associated.

Findings

Table 5.2 shows the key findings from this new analysis. All models include the same controls as in the psychological distress study (including a standardized weight and an age-squared variable), but to conserve space only statistically significant associations are shown in the table. The sample across all models after list-wise deletion is the same as the previous study (N = 269). I used ordered logistic regression for the present analysis because the dependent variable is ordinal and has a short range (1–5). Standardized coefficients (Beta), odds ratios (OR), and standard errors (in parenthesis) are reported.[6]

Model 1 of Table 5.2 shows that those who agree that religion and health are related is positively correlated with physical health (Beta = .23, p = .001). Based on the odds ratio, with every unit increase in agreement with this statement, respondents are 39 percent more likely to report good physical health (OR = 1.39). Similarly, Model 2 reveals that those who visit the tombs of their relatives are more likely to report good physical health (Beta = .23, OR = 1.38, p = .002). The two variables that are negatively associated are ancestor altar (Model 3: Beta = −.19, OR = .51, p = .010) and ancestor and Shinto altar (Model 4: Beta = −.16, OR = .55, p = .026). Those who own an ancestor altar or both of these altars are slightly over 50% more likely to report poor physical health (ownership of a Shinto altar only is insignificantly related).

In comparison with the psychological distress study, there are some noteworthy findings concerning the religion variables. First, in both studies grave visits are positively related with good health. Those who make such visits often are likely to have better mental and physical

[6] Using the standardized coefficients allows us to compare effects of the variables in this form of regression analysis (see Krause et al. 2002: S103).

Table 5.2. Ordered Logistic Regression Standardized Coefficients and Odds Ratios for Predicting Physical Health

	Model 1		Model 2		Model 3		Model 4	
	Beta	OR	Beta	OR	Beta	OR	Beta	OR
Religion & Health	0.23*** (.10)	1.39						
Grave visits			0.23** (.10)	1.38				
Ancestor altar					−0.19** (.26)	0.51		
Ancestor & Shinto altar							−0.16* (0.27)	0.55
Male	−0.19** (.24)	0.52	−0.21** (.24)	0.51	−0.22*** (.24)	0.46	−0.21** (0.24)	0.48
Age	−2.40*** (.05)	0.79	−2.23*** (.05)	0.80	−2.03*** (.05)	0.82	−2.14*** (0.04)	0.81
Age-squared	1.61*** (.00)	1.00	1.50*** (.00)	1.00	1.38** (.00)	1.00	1.48*** (.00)	1.00
Parent	0.30*** (.36)	3.20	0.28** (.36)	3.00	0.27*** (.36)	2.90	0.29** (0.36)	3.03
Distress	−0.69*** (.47)	0.03	−0.58*** (.47)	0.05	−0.72*** (.47)	0.03	−0.68*** (0.47)	0.03
Balance	0.30*** (.11)	1.49	0.31*** (.11)	1.52	0.31*** (.10)	1.51	0.29*** (.10)	1.48
Traumas	−0.13* (.27)	0.58	−0.19** (.27)	0.52	−0.15* (.27)	0.57	−0.17* (0.27)	0.53
Max-Rescaled R^2	.54		.54		.53		.53	
−2 Log Likelihood	647.83		648.34		651.07		652.55	
LR χ^2 (df=12)	194.69***		194.18***		191.46***		189.97***	

Notes:
N=269
All models include controls for Education, Income, Urban, and Married.
Beta Standardized coefficient (Standard error in parenthesis)
OR Odds Ratio
*p<.05, **p<.01, ***p<.001

health, compared to those who do so less often. To my knowledge, this is the only measure that has been used in more than one study that has consistent positive effects on different measures of health in Japan. Second, while the belief that religion and health are related is only

marginally—but positively—associated with CES-D symptoms (Beta = .09, p = .064), it has more consistent and opposing effects on physical health. As Model 1 reveals, this measure is a robust indicator of good physical health. Third, there are several relationships between religion and psychological distress that are insignificantly correlated with physical health. The religious coping index, beliefs that *kami* and *hotoke* exist, and that it is important to respect ancestors do not have an effect on physical health, though they are all positive predictors of mental distress. As previous studies have shown, relationships between religion and health are complicated and multifaceted, and a comparison of these two studies makes this clear in the Japanese context as well.

Perhaps what is most interesting (and surprising) about these findings is that ownership of an ancestor altar is negatively associated with physical health. In the psychological distress study, this variable predicts positive health, and it is not immediately clear why such contrasting results are found. Rituals involved at these altars are by no means physically tasking—sometimes it is as simple as making an offering of a special food for an ancestor or uncooked rice for *kami*. Further, often one family member—usually the oldest female—is the only one who does these rituals. Even if one lives in a house with an altar, she or he may not have anything to do with it on a regular basis. While it is possible that those who are in poor health spend more time at home and are more conscientious of the altars (and thus may feel the need to carry out one's duties to one's ancestors and to *kami* at these altars), this does not necessarily explain the direction of this association. We cannot even assume, for example, that those who reported worse physical health are housebound or that they are the ones who are carrying out the altar rituals. More research is needed to understand this finding, especially in comparison with the previously discussed study on distress. Until then, these results are important because they highlight associations that require more empirical exploration and clearer theoretical explanations.

Discussion

From these few studies that focus on Japan we are able to get a sense of the many ways in which religion and health are related, and we are able to make some cross-cultural inferences. This chapter shows both positive and negative relationships, and in some cases these relationships are very similar with those of previous studies in the United States and

Europe. On the other hand, there are also important cultural distinctions that deserve our attention and that require further research.

For a specific summary of results, Table 5.3 provides an overview of the twelve main studies described in this chapter. For example, the table shows that Krause et al. (1999) discovered that a private practices index is positively associated with self-rated health and with social support for men. For comparative purposes, the table also shows basic characteristics of the studies (e.g., sample composition and size and what type of study it was—survey or ethnographic). In publications in which more than one religion variable was used and results varied, the plus/negative (+ / −) signs match the order in which variables are listed in the Religion measures row. Thus, Krause and colleagues (2002) reported a positive association between their private practices index and hypertension and a negative association between a cross-product variable (belief in life after death x recent death of a loved one) and hypertension. Depending on the health outcome, a positive sign (+) in this table may not indicate good health but a positive relationship with the health variable (e.g., in Krause et al. 2002, Lavric and Flere 2008, Roemer 2010c).

Of the 24 specific results in this table, there is a slight majority (16) of positive associations with good health. Some of the religion measures that appear to have consistent effects are types of religious affiliation (e.g., Ogata et al. 1984, Kuratsune et al. 1986, and Roemer 2010b), and for the most part ritual behaviors also appear to be healthy—with the exception of Krause et al. (2002).[7] Such religious beliefs as belief in the afterlife or in the supernatural have mixed effects. Krause et al. (2002) found a negative association with hypertension and their interaction term, which includes belief concerning the afterlife. In my study on distress (2010c), I found that belief in *kami* and *hotoke* and the belief that ancestors should be respected are positive predictors of psychological distress. Both these measures are insignificantly associated with physical health. Further, Nishiwaki (2004) reported positive effects of an index of beliefs concerning the supernatural. With the exception of the two studies I conducted, none of these measures are identical across studies; so we cannot make direct comparisons.

[7] Ownership of ancestor and Shinto altars are not good indicators of behavior. Frequency of rituals at these altars, a better indicator of behaviors, was insignificantly associated with both health outcomes.

Table 5.3. Summary of Reported Results

	Krause et al. (1999)	Krause et al. (2002)	Kuratsune et al. (1986)	Lavric & Flere (2008)	Nishiwaki (2004)	Ogata et al. (1984)	Roemer (2007)	Roemer (2010b)	Roemer (frthcmng b)	Roemer (present study)	Tagaya et al. (2000)	Traphagan (2004)
Religion measures	Private practices index	Private practices index; Belief in afterlife x recent deaths	Adventists	Extrinsic	Supernatural index; Influence of religion in life	Zen priests	Self-reported & observed religiousness	Devotion to religion; Religious affiliation	Religious coping; ancestor altar; Shinto altar; Importance of ancestor veneration; Belief in supernatural; Religious identification	Religious comfort; Religion & health are related; Grave visits; Ancestor altar; Ancestor & Shinto altar	Religious attendance; Pray/ worship	Private and public practices
Sample	60+ yrs old N=2153	60+ yrs old N=1723	Adults N=6450	Yng adults N=397	Female college students	Adults N=4352	Adult males	Adults N=11,000+	Adults N=269	Adults N=269	65+ yrs old N=1956	Elderly
Study type	Survey; National	Survey; National	Survey; National	Survey; Sendai	Survey; Tokyo	Survey	Ethnography; Kyoto	Survey; National	Survey; Kyoto	Survey; Kyoto	Survey; Nagano, Hokkaido	Ethnography; Akita

Table 5.3. Summary of Reported Results (Contd.)

	Krause et al. (1999)	Krause et al. (2002)	Kuratsune et al. (1986)	Lavric & Flere (2008)	Nishiwaki (2004)	Ogata et al. (1984)	Roemer (2007)	Roemer (2010b)	Roemer (frthcmng b)	Roemer (present study)	Tagaya et al. (2000)	Traphagan (2004)
General health												+
Mental health				+ (negative affect)	+ (several measures)				+ / − / + /+ / + / mixed (CES-D symptoms)			
Mortality			+			+						
Physical health	+ (self-rated)	+/− (hypertension)								+ / + / + / − / −		
Social support	+ (for men)						+				+ / +	
Subjective WB								+ / +				

It is also interesting to see how religious coping has differing effects among studies on Japan and in comparison to research in the United States. Among these publications on Japan, religious coping has no effect in the Krause et al. (2002) study or in the present analysis. On the other hand, it has rather robust, positive ties to distress symptoms (Roemer 2010c). In the United States, religious coping is generally positively associated with good physical and mental health. The exceptions to these are what some refer to as "negative" coping mechanisms, such as feeling forgotten by God, religious doubt, or doubt in God's love (see e.g., Pargament and Ano 2004). For the most part, it makes sense that such negative sentiments would correlate with poor health. In Japan, however, what we might consider positive feelings (e.g., religion provides comfort, praying purifies me, and *kami* and ancestors help and support me) can have negative effects.

In my study of psychological distress I postulate that the association is positive in Japan for several reasons. One interpretation is that those who are suffering psychologically may "turn to the gods in times of need," a famous Japanese expression. The data for this study are cross-sectional and we cannot claim causality; however, it is highly likely that precisely because they are suffering psychologically they are turning to religion (indicating that poor health is causing an increase in religiousness). Another explanation is that because beliefs in the presence and efficacy of *kami* and even ancestors are somewhat low, relying on such beings may be considered a sign of weakness, or the equivalent of a negative coping device in the West. For these individuals, religious coping (even when the measures appear "positive" in another culture) may have negative effects on health (indicating that religiousness is causing distress).

Despite such religio-cultural distinctions, there are also some important similarities between studies on Japan, the United States, Europe, and other areas. Both organized and subjective religion measures tend to have positive effects on life satisfaction and happiness. As in regions where Christianity is the most common religion, religion and social support are also highly and positively correlated in Japan. Because of the communal nature of Japanese society (including but not limited to religious influences), this is not surprising. The differences are the communities in which these relationships develop. Shinto and Buddhism, the two most culturally influential religions, do not have congregations that meet regularly like Abrahamic religions have. Instead, communities consist of smaller family units or local neighborhood

groups. There are exceptions to these—especially Christian churches and new religion groups in Japan; however, such exceptions are the minority. Social support in Japan, therefore, is not often tied to large communities and is not likely to result from specific religious doctrines.

Some more general conclusions we can draw about associations between religious participation and health in Japan are that the rituals tend to be more individual in terms of performance and collective in terms of objects of attention. In other words, when Japanese conduct these rites they often do them alone (at shrines or temples or at home). When they do them—which is not very frequently on average (see Roemer forth.)—they are most often for others, such as family, friends, and colleagues, rather than for themselves. Other than Christians and some new religion members, group worship tends to be limited to neighborhood festivals (see Roemer 2007) and to annual celebrations such as New Years and *Obon* (a celebration for the dead in August). This might have important effects on these associations in the sense that the underlying explanatory mechanism for positive relationships may be a general concern for others (see Traphagan 2004).

The religion-health relationship in Japan also tends to be much more about physical activities and less about doctrine-based ideas or theologies. Shinto values such as purity and Buddhist ideals such as the value of all living creatures may be relevant to many Japanese. On a daily basis, though, most individuals conduct these rites without a deep understanding of the sacred texts or theological ideals from which they may have originated. Instead, most describe their emotional and cognitive understandings of rituals as "cultural" or "traditional" and not as "Shinto" or "Buddhist." Most likely, Japan's centuries-old syncretistic blending of Shinto and Buddhist rites can explain this, in part. Regardless of how it came to be, religious rites are closely (albeit indirectly) connected to morality and concern, and well-being is at the heart of these social values.

Future Directions

To improve our knowledge of the religion-health link in Japan, more and better data are needed. Arguably, the main limitations to the studies discussed in this chapter are the datasets. Almost all are cross-sectional, many have small or local samples, and few contain more

than a handful of religion measures. Compared to this topic of research in the United States, studies in Japan are at least a decade behind. In the future, it is hoped that larger multi-wave datasets will become available for longitudinal analysis, and that these datasets will include a number of culturally-specific and cross-culturally comparative religion measures, as well as variables that allow us to test for possible selection effects (see Regnerus and Smith 2005, Musick and Worthen 2010). Failure to take these steps will hinder future research and hamper our ability to improve our overall understanding of how religion and health are related in Japan and in other societies.

Although there are not many studies on religion and health outside of predominantly Christian societies, the number has increased in recent years. As this volume reveals, most research has been on American samples, and there are a number being conducted in Europe. A few exceptions are Anson and Anson's (2000) research on the weekly cycle of mortality among Israeli Jews and Ghorbani and colleagues' (2000) study that employs a sample of Iranian Muslim college students to analyze ties between religious attitudes and psychiatric symptoms, among other outcomes. In Africa, Trinitapoli (2006) found that Malawian Christian and Muslim religious organizations are responding to the AIDS crisis in a number of ways that are helping their laity. Additionally, Regnerus and Salinas (2007) found that religious affiliation is linked to different attitudes toward persons-with-AIDS in six sub-Saharan African countries, and Garner (2000) discovered discrepancies among religious affiliation types and the prevention of extra- and pre-marital sexual acts.

In parts of Asia, Emavardhana and Tori (1997) discovered that Buddhist meditative practices in Thailand have positive effects on self-representation and coping skills, and Liu (2009) reported positive and negative effects of different measures of religion on sense of mastery in Taiwan. As a final example—though this is by no means exhaustive—Brown and Tierney (2009) used a large national sample of older Chinese and reported negative associations between participation at religious activities and life satisfaction. While these studies are useful for broadening our understanding of the religion-health relationship in general, we must be careful to avoid over-generalizing our results. Just as regions of the United States or countries in Europe and Africa vary in terms of religious effects on health, the same is true for Asia. What we can conclude is that religion is a complicated, multidimensional social force and that its associations with health vary and are important.

References

Anson, Jon and Ofra Anson. 2000. "Thank God It's Friday: The Weekly Cycle of Mortality in Israel." *Population Research and Policy Review* 19: 143–54.

Arai, Ken. 1996. "New Religions." Pp. 97–114 in *Religion in Japanese Culture: Where Living Traditions Meet a Changing World*, edited by N. Tamaru and D. Reid. Tokyo: Kodansha International.

Brown, Philip H. and Brian Tierney. 2009. "Religion and Subjective Well-being among the Elderly in China." *Journal of Socio-Economics* 38: 310–19.

Davis, Winston. 1980. *Dōjō: Magic and Exorcism in Modern Japan*. Stanford, CA: Stanford University Press.

_____. 1992. *Japanese Religion and Society: Paradigms of Structure and Change*. New York: SUNY Press.

Emavardhana, Tipawadee and Christopher D. Tori. 1997. "Changes in the Self-concept, Ego Defense Mechanisms, and Religiosity Following Seven-day Vipassana Meditation Retreats." *Journal for the Scientific Study of Religion* 36: 194–206.

Ghorbani, Nima, P. J. Watson, Ahad Framarz Ghramaleki, Ronald J. Morris, and Ralph W. Hood, Jr. 2000. "Muslim Attitudes Towards Religion Scale: Factors, Validity, and Complexity of Relationships with Mental Health in Iran." *Mental Health, Religion & Culture* 3: 125–32.

Hardacre, Helen. 1986. *Kurozumikyō and the New Religions of Japan*. Princeton, NJ: Princeton University Press.

Kawano, Satsuki. 2005. *Ritual Practice in Modern Japan: Ordering Place, People, and Action*. Honolulu: University of Hawaii Press.

Kisala, Robert. 2006. "Japanese Religions." Pp. 3–13 in *Nanzan Guide to Japanese Religions*, edited by P.L. Swanson and C. Chilson. Honolulu: University of Hawaii Press.

Krause, Neal, Berit Ingerstoll-Dayton, Jersey Liang, and Hidehiro Sugisawa. 1999. "Religion, Social Support, and Health among the Japanese Elderly." *Journal of Health and Social Behavior* 40: 405–21.

Krause, Neal, Jersey Liang, Benjamin Shaw, Hidehiro Sugisawa, Hye-Kyung Kim, and Yoko Sugihara. 2002. "Religion, Death of a Loved One, and Hypertension among Older Adults in Japan." *Journal of Gerontology: Social Sciences* 57: S96–S107.

Kuratsune, Masanori, Masato Ikeda and Takaharu Hayashi. 1986. "Epidemiologic Studies on Possible Health Effects of Intake of Pyrolyzates of Foods, with Reference to Mortality among Japanese Seventh-Day Adventists." *Environmental Health Perspectives* 67: 143–46.

Lavric, Marin and Sergej Flere. 2008. "The Role of Culture in the Relationship between Religiosity and Psychological Well-being." *Journal of Religion and Health* 47: 164–75.

Lebra, Takie Sugiyama. 1976. *Japanese Patterns of Behavior*. Honolulu: University of Hawaii Press.

Liu, Eric Y. 2009. "Beyond the West: Religiosity and the Sense of Mastery in Modern Taiwan." *Journal for the Scientific Study of Religion* 48: 774–88.

Martinez, D.P. 2004. *Identity and Ritual in a Japanese Diving Village: The Making and Becoming of Person and Place*. Honolulu: University of Hawaii Press.

Miller, Alan. S. 1998. "Why Japanese Religions Look Different: The Social Role of Religious Organizations in Japan." *Review of Religious Research* 39: 360–71.

Musick, Marc A. and Meredith G.F. Worthen. 2010. "Religion and Physical Health among U.S. Adults." Pp. 248–72 in *Religion, Families, and Health: New Directions in Population-based Research*, ed. C.G. Ellison and R.A. Hummer. New Brunswick, NJ: Rutgers University Press.

Nishiwaki, Ryō. 2004. *The Japanese Religious View of Nature: An Empirical Survey of Attitudes*. Kyoto: Minerva Shobo.

Oda, Susumu. 1992. "Japan's New Religion: A Psychopathologist's Observations." Pp. 31–39 in *Religion in Japan Today*, edited by K. Yanagawa, K. Morioka, T. Yamaori, S. Oda, and Y. Abe. Tokyo: Foreign Press Center.
Ogata, M., M. Ikeda and M. Kuratsune. 1984. "Mortality among Japanese Zen Priests." *Journal of Epidemiology and Community Health* 38: 161–66.
Ohnuki-Tierney, Emiko. 1984. *Illness and Culture in Contemporary Japan: An Anthropological View*. Cambridge: Cambridge University Press.
Okada, Shigekiyo. 1994. *Approaches to Japanese Religion*. Osaka: Toho Shuppan.
Pargament, Kenneth I. and Gene G. Ano. 2004. "Empirical Advances in the Psychology of Religion and Coping." Pp. 114–40 in *Religious Influence on Health and Well-Being in the Elderly*, edited by K. W. Schaie, N. Krause, and A. Booth. New York: Springer.
Reader, Ian. 1991. *Religion in Contemporary Japan*. Honolulu: University of Hawaii Press.
_____ and George Tanabe. 1998. *Practically Religious: Worldly Benefits and the Common Religion of Japan*. Honolulu: University of Hawaii Press.
Regnerus, Mark D. and Viviana Salinas. 2007. "Religious Affiliation and AIDS-based Discrimination in Sub-Saharan Africa." *Review of Religious Research* 48: 385–400.
Regnerus, Mark and Christian Smith. 2005. "Selection Effects in Studies of Religious Influence." *Review of Religious Research* 47: 23–50.
Roemer, Michael K. 2007. "Ritual Participation and Social Support in a Major Japanese Festival." *Journal for the Scientific Study of Religion* 46: 185–200.
_____. 2009. "Religious Affiliation in Contemporary Japan: Untangling the Enigma." *Review of Religious Research* 50: 298–320.
_____. 2010a. "Atheism and Secularity in Modern Japan." Pp. 23–44 in *Atheism and Secularity* v. 2, edited by P. Zuckerman. Santa Barbara, CA: Praeger Press.
_____. 2010b. "Religion and Subjective Well-being in Japan: Do Religious Devotion and Affiliation Affect Life Satisfaction and Happiness?" *Review of Religious Research* 51: 411–27.
_____. 2010c. "Religion and Psychological Distress in Japan." *Social Forces* 89: 559–84.
"Self-Described Religious Identification of Adult Population: 1990 to 2008." 2008. American Religious Identification Survey. *http://www.census.gov/compendia/statab/2010/tables/10s0075.pdf*.
_____. Forth. "Japanese Survey Data on Religious Practices and Beliefs in the 21st Century." *The Handbook of Contemporary Japanese Religions*, edited by J.K. Nelson and I. Prohl. Boston: Brill.
Shatenstein, Bryna and Parviz Ghadirian. 1998. "Influences on Diet, Health Behaviours and their Outcome in Select Ethnocultural and Religious Groups." *Nutrition* 14: 223–30.
"Statistics Bureau." Ministry of Internal Communications Web site. *http://www.stat.go.jp/english/data/nenkan/1431–23.htm*.
Tagaya, Akira, Shigeyo Okuno, Masae Tamaru, and Anne J. Davis. 2000. "Social Support and End-of-Life Issues for Small Town Japanese Elderly." *Nursing and Health Science* 2: 131–37.
Traphagan, John W. 2004. *The Practice of Concern: Ritual, Well-being, and Aging in Rural Japan*. Durham, NC: Carolina Academic Press.
_____. 2005. "Multidimensional Measurement of Religiousness/spirituality for Use in Health Research in Cross-cultural Perspective." *Research on Aging* 27: 387–419.
Trinitapoli, Jenny. 2006. "Religious Responses to AIDS in Sub-Saharan Africa: An Examination of Religious Congregations in Rural Malawi." *Review of Religious Research* 47: 253–70.
Winfield, Pamela D. 2005. "Curing with *Kaji:* Healing and Esoteric Empowerment in Japan." *Japanese Journal of Religious Studies* 32: 107–30.

Yanagawa, Kei'ichi. 1991. *Religion among the Contemporary Japanese*. Kyoto: Hozokan.

_____. 1992. "Religious Views of the Japanese and their Characteristics." Pp. 7–12 in *Religion in Japan Today*, edited by K. Yanagawa, K. Morioka, T. Yamaori, S. Oda, and Y. Abe. Tokyo: Foreign Press Center.

Yumiyama, Tatsuya. 1995. "Varieties of Healing in Present-day Japan." *Japanese Journal of Religious Studies* 22: 267–82.

CHAPTER SIX

RELIGION AND MENTAL HEALTH IN CHINA

Eric Y. Liu

Over the past several decades, the sociology of religion has experienced a major shift in paradigm from secularization theories to rational choice theories (Warner 1993, Young 1997). Amid this transition, scholarly debates have been focused on four crucial themes: (1) whether religion is doomed to decline and perish; (2) whether religion is viewed as fundamentally psychological rather than as a property of groups or collectivities; (3) whether religion is merely an epiphenomenon that reflects more fundamental social phenomena; and (4) whether religion is false or harmful because it impedes rationality and sanctifies tyrants (Stark and Finke 2000: 28–30). Secularization theorists hold positive perspectives regarding each of these themes; in contrast, rational choice theorists propose the precise opposite of each (for a comprehensive review see Stark and Finke 2000). For instance, while proponents of secularization theories argue that science and modernization cause irreversible declines in individual piety (Wallace 1966, Wilson 1975, Voye and Dobbelaere 1994), advocates of rational choice theories dispute this claim by showing ample facts that religious and spiritual vitality persists in modern times (Stark 1999). Whereas there is little doubt that rational choice theories have been increasingly popular among sociologists of religion (Sherkat and Ellison 1999), the battle between the old and new paradigms seems to be far from over, as diehard secularizationists arm themselves with revised versions of the theory (e.g., Chaves 1994, Yamane 1997, Dobbelaere 1999).

Recently, a farewell message to secularizationists has been sent from Chinese society. In both mainland China and Taiwan, religion has been reviving and its influence ascending in almost all of the major societal domains, from culture and education to economy and politics, and from individual and family life to domestic affairs and international relations. Since the late 1970s, when the communist state began

to carry out the "reform and open door" policy, mainland China has been rapidly progressing toward modernization. During this period of time, religion has gained tremendous growth both in size and diversity; in sharp contrast, there has been a general loss of confidence in the secular authority of Marxism-Maoism among the Chinese masses. Thus, as religion has begun to fill the ideological vacuum, its social consequences cannot be overestimated. Chan, for example, observes: "All these areas [religious and nonreligious sectors] of religious influence are not part of the programme of the official religious institutions, yet their influence can be far-reaching especially in terms of social values and ideas. Every sign suggests that such influence is beginning to gain momentum" (2005: 102, cf. Overmeyer 2003).

In Taiwan too, religions have been flourishing over time, especially since martial law ended in 1987 (Novotney 1978, Pas 1979, 1996, Jones 1999, Stark 1999, Weller 2000, Tamney and Chiang 2002, Katz 2003, Chao 2006, Chiu 2006, Madsen 2007, Kuo 2008). In fact, there has been little empirical evidence in Taiwan that modernization has led to declines in religion or declining spheres of influence of religious authority structures. Quite to the contrary, religion has remained a powerful social force in modern Taiwan. Katz (2003: 395) notes that a

> striking facet of religion in Taiwan is that economic growth and technological development have not resulted in the decline of religious practice; on the contrary…Religion continues to play an integral role in individual, family and community life, and temple cults in particular have retained their importance as sites for daily worship, community service and massive festivals.

Despite the rapidly growing body of literature on the revitalization of religion on the two sides of the Taiwan straits, the religious influence in many domains of Chinese society has yet to be studied systematically. In particular, previous theory and research on the effects of religious beliefs and behavior on mental health outcomes in Chinese society has been meager. This is largely because that (1) the overall importance of research on religious phenomena in Asia has been underestimated (Lang 2004); (2) previous theories built on Western traditions may not be readily applied to Chinese religions, unless they are refined or customized as appropriate for cross-cultural comparison; and (3) the lack of nationally representative sample data or the lack of capacity for discovering existing data and analyzing them with sophisticated quantitative methods has postponed the research agenda and hindered academic development.

Religions in Chinese Society

Due to changes in the strictness of the state regulation of religion, the contour of mainland China's religious landscape has changed dramatically since 1949 when the Communists took power. In the post-Mao era (1976-present), China's constitution has recognized freedom of religious belief, and governmental control of religion has been relaxed as the state has shifted the focus from political campaigns to economic reforms (Potter 2003). Consequently, religion has been on the rise in the country (Overmyer 2003). Present religions in mainland China include Buddhism, Confucianism, Taoism, Chinese popular religions, Protestantism, Catholicism, Islam, Russian Orthodoxy, Judaism, Mormonism, Baha'i, and such new religious movements as Qigong and Falun Gong. Among them, only Buddhism, Taoism, Islam, Catholicism, and Protestantism have been officially recognized by the Chinese government. While Buddhism has remained the largest tradition, it is Christianity in general and Protestantism in particular that represents the fastest growing religious category in the nation (Chan 2005). By the mid-1990s, the number of Chinese Protestants had already reached fifty million, without "underground church" members being counted; this number is about 50–70 times that in 1949 (Bays 2003, Yang 2005). "Today, on any given Sunday there are almost certainly more Protestants in church in China than in all of Europe" (Bays 2003:488). Overall, it has been estimated that in mainland China one hundred million Chinese belong to the state-sanctioned religions, two hundred million engage in illegitimate religious beliefs and practices, and around 80% of the total Chinese population remain open to the supernatural (Yang 2006: 113–14).

By contrast, Taiwan has been characterized by higher levels of religious freedom, diversity, and vitality in the post-war period (Katz 2003). As of 2007, 26 religions were registered with the government, including Baha'i, Buddhism, Catholicism, Chinese Heritage and Moral Sources (玄門真宗), The Chinese Holy Religion (中華聖教), The Church of Jesus Christ of Latter-day Saints, The Church of Scientology, Confucianism, Hai Tze Tao (亥子道), Holy Spirit Association for the Unification of World Christianity (世界基督教統一神靈協會), The Huang Chung (黃中), I-Kuan Tao (一貫道), Islam, Ism (大易教), Li-ism (理教), Maitreya Great Tao (彌勒大道), Pre-cosmic Salvationism (先天救教), Protestantism, Sekai Mahikari Bunmei Kyodan (世界真光文明教團), Xuan Yuan Jiao (軒轅教), Taoism, Tibetan

Buddhism, Tiender (天德教), Tienti Teachings (天帝教), The Tenrikyo (天理教), and Universe Mealler Faith (宇宙彌勒皇教) (*Republic of China Yearbook* 2008). Religious freedom as guaranteed by the Constitution and laws not only contributes to the diversity but also to the prosperity of religious groups in Taiwan. The number of Buddhist and Taoist temples grew steadily from 3,661 in 1930 to 9,707 (registered) in 2001 (Katz 2003: 90); they, together with folk religion temples, have attracted a huge following that represents about 75 to 80% of the Taiwanese population (Chiu 1997). According to the Department of Statistics of the Ministry of the Interior of Republic of China (Taiwan), the number of registered religious organizations soared from 78 in 1986 to 1,062 in 2004. In addition to traditional Chinese religions, approximately 5% of the Taiwanese belong to Christian groups, and 4% claim membership in new religious movements (Chiu 1997). The phenomenal growth of religious organizations has resulted in only 10% of the Taiwanese reporting no religious affiliation (Chiu 1997). Even among the unaffiliated, many remain active in spiritual seeking (see Chiu 2006, Vermander 1997).

Religions in Chinese society differ widely in the conception of the supernatural. Orthodox Buddhism, Taoism, and Confucianism each hold that the truth is discerned within the "natural" order rather than revealed by supernatural beings (Weber 1951, Yang 1961). The core concept in orthodox Buddhism (e.g., Zen Buddhism) is "karma," wherein deeds by all forms of sentient beings create life circles and consistently influence past, present, and future experiences. "Tao" in orthodox Taoism and "Heaven" in orthodox Confucianism refer to the paramount force behind the natural order that keeps the universe ordered and balanced (Weber 1951). Because the supernatural essences and forces—when perceived as impersonal, remote, and unconscious—are not suitable partners in human relationships of exchange, these non-theistic, orthodox beliefs only inspire meditation, ritual, and magic (Stark 2001). Nevertheless, during the course of cultural evolution in Chinese history, popular beliefs in a pantheon of gods and deities have been incorporated into and mutually shared among Buddhism, Confucianism, and Taoism (Weber 1951, Yang 1961, Shahar and Weller 1996). For example, the Pure Land School of Chinese Buddhism centers upon the conviction of faith in Amitahba Buddha and Bodhisattvas, and its followers believe that chanting Buddha names will evoke divine responses to requests for life-problem solving and spiritual liberation upon death (Perry 1982). Similarly, the

gods and deities in popular Taoism and Confucianism constitute part of a heavenly hierarchy that mirrors the political bureaucracy of Imperial China (Weber 1951, Dean 1993, 1998, Shahar and Weller 1996), and many of them indeed are historical figures (Pas 1996). However, compared with the all-powerful Allah and the Lord in the Judeo-Christian-Islamic tradition, the Chinese gods and deities are merely functional, limited to their own spheres of jurisdiction and competence—e.g., the money god, the stove god, and the door gods (Eberhard 1966, Shahar and Weller 1996). Chinese gods and deities often fail to perform a task, but even when they succeed, Chinese gods and deities do not offer rewards so valuable as to justify a demand for an exclusive relationship of exchange with human beings (Stark 2001). Moreover, since many Chinese gods and deities lack moral concerns, those who worship, pray, and make sacrifices to them are interested primarily in worldly benefits and rewards rather than morality and salvation (Yang 1961, Shahar and Weller 1996; Stark 2004; Chiu 2006).

While religion is a powerful socialization force and social institution across cultures and societies (Sharot 2001), there is a great deal of variation in religions' organizational characteristics (Stark 2004). Stark, Hamberg and Miller (2005) argue that by structural characteristics, religions break into two broad categories: churched religions and unchurched religions. Churched religions refer to religions with a relatively stable, organized congregation of lay members who acknowledge a specific set of religious beliefs (e.g., Judaism, Christianity, and Islam). Unchurched religions lack a congregational life, being based only on loose social networks of like-minded people who are *not* required to assent to a specific religious creed. Buddhism, Taoism, and Chinese folk religions fall into the second category because they seldom require exclusive membership or regular group participation (Iannaccone 1995, Stark 2004). Indeed, Chinese temples exist primarily as physical places for individual religious services rather than as communities for congregating fellow believers (see Liu 2006). Without congregations, Chinese temples lack the ability to generate a strong sense of religious identity or form close bonds of trust and friendship among irregular visitors. For the same reason, Chinese temples cannot exert social pressure to observe moral order, even if they maintain a creed (Stark 2004).

Accordingly, religious beliefs, practices, and organizations in Chinese society are highly diverse in terms of purpose, content,

method, structure, and context. Thus, important questions come into view: What is the role of religion in Chinese society? Does religion influence Chinese individuals' attitudes, behaviors and well-being in the society, and if so, how?

Previous Research on Religion and Mental Health in Mainland China

Previous research in mainland China has focused primarily on the relationship of religion to suicide and depression. Zhang and colleagues (2004), for instance, identify religiosity as one of several culture-specific risk factors of suicide. Data were collected from psychological autopsy interviews in two rural counties in Dalian, Liaoning Province, China, during 2001 and 2002. Some 132 respondents, divided into control and case groups, were asked whether they believed in god or in an afterlife. Results showed that while belief in god was not statistically associated at a significant level with completed suicides, the estimated net effect of belief in an afterlife was negative and statistically significantly linked with completed suicides.

A second study was focused on religion and suicide intent among rural Chinese women (Zhang and Xu 2007). This study sought to examine whether religion is a contributing factor to women's higher suicide intent than men in China. The 74 subjects for study were serious attempters of suicide hospitalized in emergency rooms in six randomly selected hospitals in Dalian, Liaoning Province, China. Four items on religion were included in the study: religious affiliation (e.g., None, Buddhism, Daoism, Islam, Protestantism, Catholicism, other), self-rated religiousness, belief in an afterlife, and belief in superstition. All of the religious measures were statistically significant for women and explain more variance in suicide intent for women than for men.

A third study was a cross-cultural comparison of religion and suicide ideation between American and Chinese colleague students (Zhang and Jin 1996); 452 American students from one university in the Rocky Mountain area and 320 Chinese students from four universities in Beijing were selected. University classes were used as data collection sites. Specific classes were chosen by the researchers through requests to instructors to administer the survey instrument. All respondents were asked "How close do you feel to God or deity most of the time?" "How often do you attend religious services?" The Chinese respondents were also asked "Do you consider yourself a

religious person?" and "How important is religion in your life?" and "Do you believe in an afterlife?" Results show that personal religiousness was negatively associated with suicide ideation for American college students. By contrast, the observed effect of personal religiousness was positive—significant for Chinese students in terms of both depression and suicide ideation.

Moreover, Qiu and Li's (2008) study identifies religion as one of the coping strategies of stroke caregivers that were significantly correlated with levels of depression among the caregivers, although religion is a relatively weak predictor of depression when compared with denial, self-blame, planning, and stroke survivor's functional status. The sample was small, with 92 stroke survivors and their caregivers.

On the other hand, some research has been focused on religion and positive mental health outcomes. A study by Wang et al. (2008) suggests that a spiritual orientation that consisted of a sense of tranquility, resistance to disorientation, and resilience is positively associated with general mental health among 167 Chinese older adults who had vision impairment. Brown and Tierney (2008) examined the relationship between religion and subjective well-being among the elderly in China. Data were from the Chinese Longitudinal Healthy Longevity Survey, conducted among 11,199 Chinese elderly persons in 22 provinces. Religiosity was measured with a single item asking how often survey respondents participate in religious activities at present. They report a strong negative relationship between religious participation and life satisfaction, net of statistical controls. In addition, religion has a larger effect on life satisfaction for men than for women. Religious participation is more important than education, limitations in activities of daily living, frequent visits by non-resident children, and private sources of income in determining life satisfaction.

Chen and colleagues (2006) examined predictors of life satisfaction in China. Their sample included 359 college students in three universities in Wuhan. Data are cross-sectional. Respondents were asked whether "all things in the universe have been determined" and "belief in a religion makes people good citizens." Results showed that belief in predetermined fate was positively associated with life satisfaction, while belief in a religion making people good citizens had little significant effect.

Another study focused on 86 Chinese heroin-addicted men from different stages of a gospel drug rehabilitation program, including the pre-conversion stage, post-conversion stage, halfway house stage, and

peer leaders stage. Participants were asked to respond to instruments assessing their mental health status such as depressive symptoms, sense of hopelessness, and purpose in life. Findings showed (a) a decrease of depressive symptoms, (b) a decrease of hopelessness symptoms, and (c) an increase of purpose in life through the different stages of the gospel drug rehabilitation program.

There are a few other studies that include religion as a control variable. In their study of 732 inhabitants in Beijing, Cheung and Leung (2004) found that having no religious faith was positively associated with life satisfaction in the age cohort 60–66. Religion showed no significant effect on life satisfaction for other age cohorts. Using data from the 2002 Chinese Household Income Project with a focus on urban residents, Appleton and Song (2008) found that belief in religious tolerance had a positive, significant relationship to life satisfaction among the respondents.

A Case Study: Fatalistic Voluntarism and Life Satisfaction in Mainland China

Fatalism has long been recognized by such founders of sociology as Durkheim and Weber as a basic type of cognitive state of mind (Weber 1951, Durkheim 1968). According to Durkheim, fatalism refers to an individual's feeling of powerlessness, hopelessness, and vulnerability due to his social experience of oppressive regulation. For Weber, however, fatalism is but a psychological consequence of theology—that the cosmological forces control man's life outcomes and events. Whether fatalism results from empirical regulation by society or from the theological imagination of control by the supernatural (see Elder 1966, Lockwood 1992), scholars generally agree that fatalism is a central concept in social psychology as well as anthropology (Goodwin and Allen 2000, Acevedo 2005).[1]

Recent debates on fatalism revolve around the way theological fatalism influences individual and social well-being. Proponents of the Weberian tradition assume that individuals are passive and argue that theological fatalism perpetuates misery among the unprivileged in a

[1] In many instances, fatalism is conceptualized as contrasting with the sense of mastery, self-efficacy, and locus of control (see Wade 1996, Jacobson 1999, Goodwin *et al.* 2002, Acevedo 2008b).

society by making them so submissive as to accept unconditionally whatever social status and duties society assigns them. In contrast, advocates of the rational choice perspective (Stark and Bainbridge 1985, 1987, Warner 1993, Stark and Finke 2000) argue that individuals are rational actors in pursuit of secular and otherworldly benefits and that belief in control by fate produces the willed experience of achieving these benefits (Acevedo 2008a, 2008b).

While the notion of empirical fatalism provides a powerful tool for understanding oppressed social groups in communist and post-communist societies (Goodwin and Allen 2000, Goodwin et al. 1999, Goodwin et al. 2002),[2] the sociological implications of theological fatalism in these authoritarian societies characterized by excessive regulation have been little studied. Nevertheless, there is some evidence that voluntarism that is based on belief in control by fate cushions the adverse influences of social constraints and helps individuals develop active, positive, and optimistic orientations toward life and society, thus leading to increased levels of life satisfaction (see Chen et al. 2006). My study seeks to address this largely overlooked research topic in previous literature by examining the relationship between fatalistic voluntarism and life satisfaction among a mainland population.

Fatalism has been termed "the very essence" of the Chinese mentality and temperament (Abbott 1970), and the first predominant value of Chinese culture (Chu and Hsu 1979). As Arthur Smith, an early Christian missionary to Empire China, once observed, "Nothing is more common than to hear an especially unfortunate Chinese man or women remark, 'It is my fate'" ([1894] 2008: 164). Prior to the economic reform of mainland China that began in the late 1970s, the Communist state had broken down the fatalism of traditional Chinese society (Terrill 1979). After thirty years of economic reform, however, fatalism has been reawakened by the rapid religious revival in China (Humphrey 1983), which has accompanied a general loss of confidence

[2] A growing body of research in the former Soviet Union, for example, shows that high levels of empirical fatalism originated in the communist oppression of individual agency (European Commission 1997, Schwartz and Bardi 1997, Markova et al. 1998), with a harmful and enduring social influence in the post-communist era (Goodwin and Allen 2000, Goodwin *et al.* 2002). In Russia, Belarus, the Ukraine, and Georgia fatalism has diminished emotional support, deteriorated (indirectly) mental health (Goodwin *et al.* 2002), dampened political activism (Goodwin and Allen 2000), and weakened the willingness to participate in reciprocal social exchanges (Goodwin *et al.* 1999).

in the secular authority of Marxism-Maoism (Overmyer 2003, Chan 2005, Yang 2006).

My study contributes to prior literature in four ways. (1) It focuses on the theological dimension of fatalism; (2) examines the relationship between fatalistic voluntarism and life satisfaction; (3) analyzes the effects on life satisfaction of such other religious factors as religious belief, subjective religiosity, and religious behavior and affiliation; and (4) draws on data from a nationally representative sample of Chinese citizens, the 2007 Empirical Study of Values in China (ESVIC), to look into the general Chinese population.

Fatalism as a Sociological Concept

In his well-known discussion of slavery prior to the Civil War of the United States, Durkheim argues that fatalism results from the social experience of a person's actions being subjected to intense and oppressive regulation. For fatalists, "futures [are] pitilessly blocked and passions violently choked by oppressive discipline" (Durkheim [1897] 1968: 276). Grounded in Durkheim's works, Frank Pearce indicates that "it is likely that in the period prior to the Civil War the outlook of many slaves was fatalistic—the condition under which they lived seemed to be 'unavoidable facts of life' and no alternative seemed conceived" (1989: 129). Thus, sociologists generally agree that fatalism refers to an individual's feeling of powerlessness (or helplessness), hopelessness, and vulnerability caused by undue regulation from a source of external authority having total control over the individual (Dohrenwend 1959, Lockwood 1992, Acevedo 2005).

Another line of sociological inquiry on fatalism has transcended the boundaries of Durkheim's structural regulation theory to incorporate Weber's theological explanation of fatalism (see Acevedo 2008a). In *The Religion of India*, Weber ascribes fatalism to theology—for instance, beliefs in cosmological forces such as karma and reincarnation shaping individuals' fatalistic attitudes and orientations (1996: 132). Put in a different way, belief in the supernatural injects a fatalistic, submissive feeling among adherents that fate and destiny are not dictated by themselves but by supernatural forces and essences. As with Durkheim, Weber conceptualizes fatalism as a type of inner feeling associated with an external source of authority. Unlike Durkheim, however, Weber considers the external authority as being otherworldly oriented rather than based in this world. Moreover,

fatalistic worldviews provide a person with comprehensive otherworldly explanations of why circumstances are beyond personal control (Lockwood 1992: 44). Weber, for instance, regards the karma doctrines in Indian society as the "most consistent theodicy ever produced by history" that places an Indian person "within a clear circle of duties and offer[s] him a well-rounded, metaphysically-satisfying conception of the world" (1996: 121–32).

Summing up Durkheim and Weber's viewpoints, Elder suggests that fatalism be understood as a multidimensional mental construct that includes both the "empirical fatalism" identified by Durkheim as a result of structural regulation and "theological fatalism" attributed by Weber to supernatural beliefs. Specifically, the empirical aspect of fatalism means "a belief that empirical phenomena occur for no comprehensible reason, and they cannot be controlled," and the theological dimension of fatalism is based on "the belief that God or some moral order such as karma controls man's destiny and the outcome of his actions" (Elder 1966: 229). Elder's systematic typology of fatalism permits separate analyses of the two conceptually discrete types of fatalism, without one negating the other. In addition, the clearly defined category of "theological fatalism" extends Weber's account of Eastern faiths to include the omnipotent God of monotheism.

The Submission Thesis vs. the Voluntarism Thesis

More recently, a rational choice approach to theological fatalism has emerged in the sociology of religion (see Lockwood 1992, Stark and Finke 2000, Acevedo 2008 a, b). This approach diverges from Weber, who insists that religion is harmful because it hinders voluntarism and sanctifies tyrants. Weber regards karma doctrines—that life condition is an effect of deeds committed in past lives—as the core spirit of the caste system of Indian society. The very reason the caste system survived for many centuries would be because belief in karma would persistently produce subservient character in the Indian masses (Weber 1996). Likewise, Weber points out that in Imperial China, Buddhism—a religion imported from India that also relies on beliefs in karma and reincarnation—was taken advantage of by the ruling class as a means to "tame" the Chinese masses (Weber 1951).

On the contrary, rational choice theory rejects Weber's argument on the nature of theological fatalism and proposes the precise opposite of it. While admitting that the supernatural's control of fate and life

outcomes and events is fundamental to religious beliefs, it proposes that theological fatalism by no means connotes complete submission or irrationality (Acevedo 2008a). Instead, fatalistic worldviews empower active motivations for inducing desirable changes in life condition and stimulate voluntary actions to achieve secular and otherworldly benefits (Elder 1966, Acevedo 2008a). An excellent example is the Calvinist idea of predestination and free will: "man may be powerless in terms of the outcome of any specific action… [but] over a longer time span man *can* shape his identity by being virtuous, carrying out God's will, or accumulating merit" (Elder 1966: 228). As in Christianity, a rational mentality and voluntarism is intrinsic to Islam too (Esposito 1997, 2002, Stark and Finke 2000, Belo 2006, Acevedo 2008a).

Chinese fatalism is a *direct* development from the ancient theocratic concepts in traditional Chinese religions, including Buddhism, Confucianism, and Taoism (Rees 1906, Cheng 1952, Hjellum 1998). As with Hindus, Chinese Buddhists believe that karma is a chain of causes and effects in the endless life-cycle that determines life outcomes and events in this world (Ch'en 1964). For Confucians, *Tian* (usually translated as "Heaven") is a supernatural authority who intervenes the secular world and gives commands to humans, and fate (*ming*) is determined by the heavenly commands (Munro 1969, Hansen 1999). When it comes to Taoism, *Tao* is "the divine All-One of which one can partake" (Weber 1951: 181–82). Since *Tao* is the unchangeable force that keeps the universe ordered, the goal of Taoists is to live in harmony with nature, in which living beings are interdependent on one another (Needham 1956, Coward 1996).

What is most notable about Chinese religion is its characteristic of "fatalistic voluntarism" (Lee 1985, Lee and Cheung 1995). Fatalistic voluntarism is a combination of efforts to change the situation and fatalistic acceptance of the way things are (Lee 1985). As with the Calvinist doctrine of predestination, Chinese belief in the supernatural "in spite of its deterministic character—no, *because of it*—did not fall into simple fatalism but rather gave an enthusiastic faith to the masses" (Sumiya 1970: 193). Schaberg (2005) argues that Chinese religions combine acceptance of fate with strong anti-fatalism and well-developed notions of strategy or maneuvering room within its decrees.

For example, Buddhist believers in karma argue that if "a person is reborn in human shape, fate determines only the social starting point and his physical and mental endowment, not his whole life. Man has a

chance to change his fate through morally good or, for that matter, bad actions" (Eberhard 1966: 152–53). Similarly, belief in Tao is "not resignation, but a desire for a different kind of freedom. Laozi focuses on how we free ourselves from social control or distortion of our natural action impulses" (Hansen 1999: 30). The same comes to be true of Confucianism. Confucians exalt the high position of man in the cosmic order and believe that man, albeit subordinate to Heaven, has power to ward off evil spirits and avoid life adversities so long as he remains morally qualified: "While relying on the concept of fate to steel themselves in the face of momentous crises or to help them resolve conflict in life situations, the Confucians reserved for [it] an important role in the shaping of fate. In this reservation lay the realism and positive spirit of Confucian mentality toward life" (Yang 1961: 272).

Recent empirical research has confirmed that theological fatalism promotes voluntarism, boosts self-control, and generates high levels of religious commitment that mitigate the jeopardizing effect on individual well-being of structural regulation (Acevedo 2008a, b). Moreover, there is evidence that intimate collaboration with supernatural beings enhances feelings of personal mastery and reduces life uncertainty (Gorsuch and Smith 1983, Pargament et al. 1988, Ellison 1993). Moreover, scholars generally agree that perceived control has a positive effect on life satisfaction (Diener 1996). The feeling of control over life enables individuals to cope effectively with life affairs and adversities and thereby enhances life satisfaction (Lefcourt 1991). Further, locus of control of reinforcement is closely tied to religious belief in fate control. According to Leung et al. locus of control means "the belief whether one can control the events happening to oneself" and belief in fate control taps an "additional theme that events are both predetermined and predictable" (2002: 295). Thus, religious belief in fate combines three elements: locus of control, predictability, and fatedness (Chen et al. 2006).

Previous empirical research on the relationship between theological fatalism and life satisfaction among the Chinese has been scant. To the best of my knowledge, the only study on this topic was based on a small sample of 359 Chinese college students in a city of Central China (Chen et al. 2006). The respondents were asked to what extent they believe "all things in the universe have been determined." Results were supportive, showing that the more the respondents believed in fate control, the more satisfied they were with life in general. Moreover, it is the components of predictability and predeterminability within the

belief in fate control that account for the positive, significant relationship to life satisfaction (Chen et al. 2006: 32).

A New Study

Whereas prior literature contributes to our understanding of the association between theological fatalism and life satisfaction among Chinese, it has at least four weaknesses. First, the importance of theological fatalism for life satisfaction has been somewhat understated in prior literature. Second, past research has been limited to college students, so that these findings may not be generalized to the general population. Third, the non-random sample may lead to biases in previous findings. Fourth, little has been said about the effect that fatalistic voluntarism, one of the core elements in belief in fate control, has on life satisfaction. The goal of this study is to address these limitations.

Hypothesis

According to my earlier discussion on fatalistic voluntarism and its relationship to life satisfaction, I submit the hypothesis that *fatalistic voluntarism will be associated positively with levels of life satisfaction among those who believe in fate control*. The theoretical expectation here will more closely side with previously cited literature that adopts the rational choice approach to theological fatalism, suggesting that fatalistic voluntarism is a spiritual enhancer of life satisfaction. For this hypothesis to be verified by the Chinese data, fatalistic voluntarism should display a positive correlation with the life satisfaction measure and its effect remain statistically significant when holding constant the relevant covariates that are commonly used to predict life satisfaction. Moreover, while using the data sample to evaluate the merits of the fatalistic voluntarism perspective, I expect that the empirical evidence from the present study will not only confirm the fatalistic voluntarism thesis but that this investigation can also be viewed as a further contribution to a more comprehensive reappraisal of the religious effect on subjective well-being.

Data and Method

My data come from the Empirical Studies of Values in China (ESVIC 2007), a national representative survey of 7,021 Chinese in mainland

China. To the best of my knowledge, the ESVIC is the most recent national survey on religiosity and spirituality for the Peoples Republic of China. After two pre-tests, the formal survey (rendered in Chinese) was administered in 2007 in 56 geographic locales in the country, including 3 metropolitan cities, 6 province-level capital cities, 11 region-level (*diji*) cities, 16 small towns, and 20 administrative villages. The multi-stage probability sampling method was employed to select metropolitan cities and towns. The KISH grid randomly selected one respondent from each household for a face-to-face in-home interview. In rural areas, one or two administrative villages for each town, and one or two "natural units" for each village were sampled. The interviewers had received professional training before the survey was conducted, and a post-survey team double-checked by telephone over 20% of the interviews. I chose a subsample of 1,354 respondents from the rural sample who reported belief in fate control (1=yes, 2=no). The percentage of Chinese believers in fate control is 25.68%.

Variables

Life satisfaction, the dependent variable, is assessed by a 4-point Likert scale. Respondents were asked "In general, how satisfied are you with your life as a whole these days? Would you say you are very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied?" I use this single global measure of life satisfaction, because while there is no item on domain-specific life satisfaction in the ESVIC, it is a standard practice in previous literature to focus on global life satisfaction (Ellison and Gay 1990).

Participants in the ESVIC were asked "Some people think that they have a total control over their own fate and fortune, while others believe that it is impossible to change or escape from predetermined fate and fortune. What is your view on your own fate and fortune?" Responses were rated on an ascending 10-point scale to indicate the extent to which the respondents felt they had freedom of choice and control over their fate and fortune (1="none at all," 10="a great deal").[3]

[3] Since the 2007 ESVIC did not include an item that directly measures the concept of fatalistic voluntarism, I had to choose a subsample of respondents who believed in fate control for my analysis. Munro (1969:85) says of fatalism: "[A]lthough certain specific events, qualities, and things are caused by supernatural intervention in human and natural affairs, not all are. The actual number of predetermined events is relatively small. Therefore, man is usually able to use his evaluating mind and to act in

According to Ellison and his associates (Ellison, Gay and Glass 1989, Ellison and Gay 1990), religion contributes to subjective well-being in at least four ways: (1) religious beliefs and values provide a source of ideational coherence and meaning; (2) devotional activity (e.g., prayer, meditation, and religious salience) bolsters self-esteem and personal efficacy and enables individuals to cope better with routine daily affairs, life problems, and stressors; (3) religious participation (e.g., church attendance) forms friendships, increases social support, and reinforces individuals' private beliefs and religiosity; and (4) affiliation unifies individual members into an integrated religious community by emphasizing dogmatic homogeneity, shaping distinctive lifestyles, and influencing individual assessments of life quality. This makes a number of additional variables relevant.

A set of the survey items asked respondents if they believed in God, Heaven/God of Heaven (*Tian*), laws of Karma, and Chinese gods and deities (1= yes, 2= no). I recoded the responses and created separate dummy variables for each of these belief items, respectively. Non-believers serve as the contrast group.

Respondents were asked whether they had prayed to the supernatural in the past year (1=yes, 2=no) and if so, how frequently they had prayed (1=once or twice a year, 2=once or twice per month, 3=once a week, 4=several times per week, 5=everyday, 6=occasionally). Since most respondents indicated that they had never prayed, two dummy variables were included to measure frequency of prayer: more frequent prayer ("once a week," "several times per week," and "everyday") and less frequent prayer ("once or twice a year" and "once or twice per month"). Persons who never pray are coded as the contrast category.

Besides the measure of frequency of prayer, an additional dummy variable is constructed to assess the effect of religious devotion. The ESVIC includes a series of items taping a wide variety of religious practices such as reading religious texts, worshiping Buddha, chanting Buddha names, sitting meditation, burning incense, worshiping ancestral spirits, having vegetarian meals, and other activities of such kind. Responses indicating that the respondents were involved in any of

---

accordance with its dictates; and when men in general act this way, there is usually nothing to prevent the formation of a well-ordered society."

these religious practices in the last twelve months were recoded 1, and negative responses 0.

The ESVIC instructed participants to self-evaluate the importance of religion in their lives on a 4-Likert scale (1=very important, 4=not important at all). Most of the responses fall into the "not important" and "not important at all" categories. In order to allow for the emergence of curvilinear effects of the affective dimension of devotion, I created two dummy variables that gauge subjective religiosity: "religion is very important" and "religion is somewhat important" (1=yes, 0=no). Those who claim that religion is "not important" or "not important at all" serve as the comparison group.

Respondents were asked if they had attended church/mosque activities or visited temples in the past year (1=yes, 2=no) and if so how frequently they had done so. Since the vast majority of the participants reported nonparticipation (66.1%), it seems less meaningful to differentiate participants quantitatively by frequency of attendance. Conceptually, social ties are usually denser and stronger in churches and mosques than in temples, since the former require regular group participation while the latter do not (Stark 2004). For these reasons, I constructed two dummy variables using them to measure religious participation qualitatively: church/mosque attendance and temple visit. Nonparticipants are used as the contrast category.

In the ESVIC, an item asked participants: "With which of the following religions do you identify?" (1=Buddhism, 2=Daoism, 3=Confucianism, 4=Protestantism, 5=Catholicism, 6=Islam, 7=others, 8=no affiliation). Among the respondents, Buddhists (16.5 %) and Protestant Christians (2.2%) represent the two largest religious groups, while other religious groups together stand for around only one percent of the sample. Finally, I dummy-coded the responses to identify four major categories: Buddhism, Protestantism, other religions (Catholicism, Islam, Taoism, and others), and non-affiliation. Respondents who failed to identify with any of the four categories serve as the comparison group.

Control variables included *age* (coded in years), *age squared*, *gender* (1=female), *ethnic minority* (1=ethnic minority), *marital status* (1=married), *party membership* (1=communist), *rural migrant* (1=migrant), and duration of current residence (coded in years). Moreover, a set of dummy variables controlled for such life stressors as

divorce (1=divorced), *widowhood* (1=widowed), *poor health* (1=yes), and *unemployment* (1=unemployed). I also control for *sociability.* Respondents were asked if they had participated in any social activities in the past year, such as others' weddings, volunteering activities, community services, community-level entertainment and other activities, group travel with family members, friends or coworkers, political activities held by the Party, and going to cinema (1=yes, 0=no). The justification for the use of the sociodemographic, life stressor, and sociability variables has been well documented in previous literature (e.g., Ellison and Gay 1990, Cheung and Leung 2007, Appleton and Song 2008).

Socioeconomic status measures were education and household income. *Education* was measured using a 7-point scale. Responses were recoded as "less than elementary school degree" (0), "elementary school degree" (1), "middle school degree" (2), "high school or secondary professional school degree" (3), "Associate's Degree (2–3 years)" (4), "Bachelor's Degree" (5), and "post graduate-advanced degree (MA, PhD)"(6). The percentages in the SLSOCR are as follows: 2.52% have less than an elementary degree, 7.15% an elementary school degree, 29.83% a middle school degree, 37.18% are high school or secondary professional school graduates, 14.81% have an Associate's degree, 8% are college graduates, and 0.51% have a graduate degree.

Household income was measured by a 16-point summary scale. Respondents were asked "By your best estimate, what was your total household income (in *Renminbi*) last month?" Household income categories were recoded as: (0) "no income or stable income," (1) "500 or less," (2) "501–1,000," (3) "1,001–2,000," (4) "2,001–3,000," (5) "3,001–4,000," (6) "4,001–5,000," (7) "5,001–6,000," (8) "6,001–7,000," (9) "7,001–8,000," (10) "8,001–9,000," (11) "9,001–10,000," (12) "10,001–12,000," (13) "12,001– 5,000," (14) "15,001–16,000," and (15) "20,001 or above." The median income falls in the "1,001 – 2,000" range. I imputed the median household income category for the respondents who reported missing values on this item, and created a "missing income" category (1= missing, 0= non-missing) to adjust potential bias for missing values in the analyses. Household income was logged for normalization. Preliminary analyses showed that the log income model appeared to be the better-fitting model. Table 1 presents the variables used in this study.

Table 6.1. Descriptive Statistics for Variables Used in the Analyses

Variables	Coded variables	%	Mean	*S.D.*
Life Satisfaction	*Range*:1–4		3.04	.80
Fatalistic Voluntarism	*Range*: 1–10		6.90	2.17
Belief in Christian God	1= Yes	18.92		.39
Belief in Heaven	1= Yes	22.38		.42
Belief in Karma	1= Yes	47.97		.50
Belief in Chinese Deities	1= Yes	36.19		.48
Church Attendance	1= Yes	1.18		.11
Temple Visit	1= Yes	29.17		.45
More Frequent Prayer	1= Yes	5.76		.23
Less Frequent Prayer	1= Yes	15.81		.36
Chinese Religious Practice	1= Yes	48.67		.50
Religion is Very Important	1= Yes	4.21		.20
Religion is Some Important	1= Yes	14.84		.36
Protestant	1= Yes	2.90		.17
Buddhist	1= Yes	30.65		.46
Other Religions	1= Yes	.52		.07
No Religion	1= Yes	71.57		.45
Female	1= Yes	55.54		.50
Age	*Range*: 16–75		38.74	13.07
Ethnic Minority	1= Yes	4.21		.20
Married	1= Yes	76.22		.43
Widowed	1= Yes	2.14		.14
Divorced	1= Yes	1.99		.14
Poor Health	1= Yes	3.84		.19
Communist	1= Yes	8.29		.28
Education	*Range*: 0–6		2.80	1.10
Logged Household Income	*Range*: 0–2.83		1.33	.44
Missing Income	1= Yes	1.40		.12
Unemployed	1= Yes	6.50		.25
Rural Migrant	1= Yes	32.64		.47
Sociability	1= Yes	74.67		.44
Duration of Current Residence	*Range*: less than 1 year -74		13.16	13.51

NOTE: Ns rage from 1,310–1,354

Analysis

Following standard practice in previous literature on life satisfaction (e.g., Ellison and Gay 1990), I employed ordinary least squares (OLS) regression to assess the focal relationship between fatalistic voluntarism and life satisfaction. I analyzed whether levels of life satisfaction increase as the sense of fatalistic voluntarism grows among the Chinese believers in fate control. My analyses included three steps. Model 1 of Table 2 regresses life satisfaction on the measure of fatalistic voluntarism. Model 2 adds the measures of religious beliefs, devotion, participation, and affiliation in order to estimate the effect of fatalistic voluntarism on life satisfaction, net of these religious factors. Model 3 adjusts for sociodemographic and background variables for a stricter examination of the associations among fatalistic voluntarism, religious commitment, and life satisfaction.

As can be seen in Model 1 of Table 2, the measure of fatalistic voluntarism displays a statistically significant estimated net effect on life satisfaction. Among the believers in fate control, those who report more freedom of choice and self-control seem to be more satisfied with life in general. The size of the coefficient of fatalistic voluntarism declines only slightly in Model 2 and 3, when holding constant the measures of religious commitment, sociodemographics and background variables. The coefficient of fatalistic voluntarism remains statistically significant, demonstrating the largest influence in these models, adjusting for the religion factors and other relevant covariates. Thus, these findings provide strong support for my hypothesis that fatalistic voluntarism leads to increased levels of life satisfaction.

Model 2 incorporates a variety of measures of religious commitment such as beliefs in the supernatural, religious devotion, religious participation, and religious affiliation. Among these variables, only belief in karma, belief in Chinese gods and deities, temple visits, and Chinese religious practice show a significant estimated net effect on life satisfaction, while the coefficients of other religion measures are not statistically significant. Individuals who believe in laws of karma, attend religious services at temples, and engage in varied traditional Chinese religious practices including sitting meditation, worshiping Buddha, reading religious texts and other devotional activities of such kind appear to be more satisfied with life than others. By contrast, those who believe in Chinese gods and deities seem less satisfied with life than others. Moreover, it is noteworthy that the religious affiliation variables as a block do not significantly enhance levels of life satisfaction.

Table 6.2. OLS Regression Estimates*
The Effect of Fatalistic Voluntarism and Covariates on Life Satisfaction in China

Variables	I	II	III
Fatalistic Voluntarism	0.06/0.01**	0.06/0.01**	0.05/0.01**
Religious Beliefs			
Belief in Christian God		−0.01/0.06	−0.01/0.06
Belief in Heaven		−0.03/0.06	−0.04/0.06
Belief in Karma		0.13/0.04**	0.11/0.04
Belief in Chinese gods and deities		−0.13/0.06*	−0.09/0.06*
Private Religiosity			
More Frequent Prayer		0.10/0.10	0.19/0.10
Less Frequent Prayer		−0.01/0.06	−0.02/0.06
Chinese Religious Practice		0.14/0.05**	0.13/0.05**
Subjective Religiosity			
Religion is very important		0.01/0.11	−0.00/0.11
Religion is somewhat important		−0.13/0.07	−0.10/0.06
Religious Participation			
Church Attendance		−0.11/0.23	−0.11/0.24
Temple Visit		0.11/0.05*	0.07/0.05
Religious Denomination			
Protestant		−0.05/0.15	−0.12/0.15
Buddhist		0.06/0.08	0.08/0.08
Other Religion		0.07/0.26	0.11/0.25
No Religion		−0.08/0.08	−0.05/0.08
Socio-Demographic Variables			
Female			0.06/0.04
Age			−0.04/0.01**
Age Squared			0.00/0.00**
Ethnic Minority			0.16/0.16
Married			0.18/0.08*
Widowed			0.02/0.22

(*Continued*)

Table 6.2. OLS Regression Estimates* (Contd.)

Variables	I	II	III
Divorced			−0.41/0.18*
Poor Health			−0.37/0.12**
Communist			0.33/0.09**
Education			−0.00/0.02
Logged Household Income			0.17/0.05**
Missing Income			0.21/0.25
Unemployed			−0.06/0.09
Rural Migrant			0.01/0.05
Socialization			0.06/0.05**
Duration of Current Residence			−0.00/0.00**
Intercept	2.53/0.07**	2.53/0.12**	3.12/0.28**
N	1,340	1,186	1,145
Adjusted R^2	0.02	0.03	0.11

NOTES:
*Unstandardized coefficients/standard errors.
*P < .05. **P < .01.

Model 3, the full model of my analyses, includes the sociodemographic and background variables. Of these control factors, age, marital status, divorce, poor health, party membership, household income, and duration of current address are associated significantly with the life satisfaction scale. Married persons who are also members of the Chinese Communist Party and report higher household income seem more likely to be satisfied with life than others. Divorced individuals with older age, poor health condition, and longer duration of current residence tend to report lower levels of life satisfaction than other respondents in the sample. Finally, the coefficients of belief in karma and temple visits decline in size and lose statistical significance in the full model, controlling for the sociodemographics and other relevant covariates of life satisfaction.

Discussion

Ongoing, vigorous religious revival of post-socialist China has attracted increasing scholarly attention (Yang 2006). In view of this phenomenal

religious change, one cannot underestimate its social consequences in China. The central purpose of this study is to address the largely neglected relationship between fatalistic voluntarism and general life satisfaction in previous literature, using a nationally representative sample of Chinese residents. Moreover, I reassess the associations of multi-faceted religiosity and subjective well-being in the context of China's Marxist-atheist monopoly. The results presented in this chapter bear on several current debates.

First, my findings confirm the significant, strong and positive influence of fatalistic voluntarism on life satisfaction. Indeed, the measure of fatalistic voluntarism accounts for more variation in general life satisfaction among the Chinese than the entire block of variables tapping religious commitment. Evidence here suggests the critical importance of fatalistic voluntarism for subjective well-being. It challenges the Weberian contention that religions, particularly Eastern religions, form pessimistic attitudes and cause negative psychological experiences that lead to individuals' docile acceptance of social inequality. In fact, my observations remain consistent with the new paradigm perspective on theological fatalism (e.g., Yang 1961, Eberhard 1966, Munro 1969, Sumiya 1970, Lee 1985, Hansen 1999; Chen et al. 2006, Acevedo 2008 a, b). In all, the findings of this investigation highlight that voluntarism is a core component of the religious belief in fate control and that individuals with higher levels of fatalistic voluntarism tend to display positive subjective well-being.

Moreover, this study shows different patterns of the associations between the measures of religious commitment and life satisfaction. First, I identify a negative estimated net effect on life satisfaction of belief in Chinese gods and deities, where other explanatory variables are equal in the full model. It is common that Chinese popular religions and heterodox forms of Chinese Buddhism, Confucianism and Taoism embrace a pantheon of gods, deities, and spirits (Weber 1951, 1958). However, compared with the all-powerful Lord or Allah in the Judeo-Christian-Islam tradition, the smaller Chinese gods and deities are merely functional, each being limited in its own sphere of jurisdiction and competence (Weber 1951, Eberhard 1966; Shahar and Weller 1996), thus lacking power to shape the individual (Stark 2001). As a result, when a Chinese person counts little on the help of gods and deities, he or she tends to bargain with, offend or even fight against them for better life chances (Eberhard 1966). In addition, most popular Chinese religions lack a specific creed, being unable to grant adherents a strong sense of internal order and logic to everyday life (Stark 2004).

For these reasons, belief in Chinese gods and deities may diminish subjective well-being.

I was unable to find any significant relationship among religious participation, religious affiliation and life satisfaction, while controlling for sociodemographic and secular factors. This outcome is largely consistent with previous literature from China, suggesting that the failure of religious participation and affiliation to have a positive impact on subjective well-being is either due to religion's deviant, nonconventional cultural status in China's Marxist-atheist monopoly (Cheung and Leung 2004, Yamaoka 2008) or because of the state persecution or control of religion (Cheung and Leung 2007, Brown and Tierney 2009). Nevertheless, I do uncover a strong, positive influence that private religiosity has on life satisfaction. Individuals who engaged in meditation, reading religious texts, chanting Buddha names, having vegetarian meals, and other kinds of devotional activities reported higher levels of life satisfaction than others. This is perhaps because the restrictive state regulation of the religious market in post-socialist China has been focused mainly on religious suppliers rather than individual consumers, and religious activities in private sphere are especially difficult to control (Potter, 2003,Yang 2006). At any rate, the way that religious commitment influences the subjective well-being of the Chinese masses may be contingent heavily on the strictness of the state regulation against religion in China.

Turning finally to the sociodemographic and other secular predictors of life satisfaction, we see that consistent with prior research, my study confirms that life satisfaction is associated positively with income, marriage and party membership (Appleton and Song 2008), but negatively with age, duration of residence (Cheung and Leung 2004, 2007), poor health condition and divorce (Appleton and Song 2008); by contrast, life satisfaction's relationship to education, unemployment (Cheung and Leung 2004, 2007)[4] and sociability (Chen et al. 2006) is statistically insignificant. In addition, I note that ethnic minority and rural migrants are no less likely to be satisfied with life in general than others. In post-socialist China, equal rights to ethnic groups are guaranteed by the Constitution, and laws have been passed to promote economic growth and cultural development of ethnic minority

[4] Cheung and Leung (2004, 2007) find a significant, negative effect of unemployment on life satisfaction only for the ownership class, not for the middle and working classes. In my subsample, I identify few who belong to the ownership class.

groups. Ethnic minority persons are not only exempt from the One-Child Policy, they also enjoy relative religious freedom, compared with their Han majority counterparts. Although rural migrants to urban cities have encountered many life difficulties, they have formed self-sustained migrant communities to improve living conditions and increase life chances (Carillo-Garcia 2004).

The absence of cross-sectional data makes it impossible to draw a definite conclusion about the causal order of the relationship between fatalistic voluntarism and life satisfaction; nevertheless, previous literature has underscored the important role of fatalistic voluntarism in predicting subjective well-being (e.g., Lee 1985; Lee and Cheung 1995; Chen et al. 2006) and that, more generally, it is dissatisfied persons who are more inclined to be religious than others (Stark 2004: 57–59). Thus, well-formed theoretical frameworks and sophisticated methodologies are required to examine the reversed causal ordering effectively.

This study is among the first to evaluate the theological dimension of fatalism in communist and post-communist societies, using nationally representative data from the Peoples' Republic of China. Recent research, however, has also shown religious revitalization in the former Soviet Union (Froese 2001, 2004). Future studies should further investigate the patterns and dynamics of the associations between empirical and theological fatalism and individual/social well-being in societies that have been affected by communism. In terms of post-socialist China, longitudinal studies are needed to analyze how and to what extent religious influence permeates the everyday life of Chinese people over time periods.

Conclusion

As is well recognized, the Chinese religious system has remained innately diverse, complex and integral to the everyday life of the Chinese people. Compared with the Judeo-Christian-Islamic tradition, Chinese religion presents a jumble of non-theistic and polytheistic beliefs, assorted religious and spiritual practices, and various combinations of individual and group actors. The continuing revival and unique characteristics of Chinese religion jointly provide a rare opportunity for sociologists to inquire further about the ascending social role and functions of religion in modern times.

Unfortunately, thus far scholarly attention has been limited primarily to the religious revival itself and the church-state relationship in

Chinese society, while other aspects of religious and social consequences of religion in the society have been largely understudied. Moreover, most of the prior literature has been based on ethnographic studies in the absence of quantitative research. For these reasons, this chapter examines the largely neglected religious influence in Chinese society, with a focus on life satisfaction. Recent debates on fatalism have revolved around the way that theological fatalism influences individuals' well-being. Moreover, fatalism is the first predominant cultural value of Chinese society (Chu and Hsu 1979), but has been little studied. Using recent data from the 2007 ESVIC, I investigate the linkage of fatalistic voluntarism—the core characteristic of Chinese religions—and life satisfaction in China's Marxist-atheist monopoly. Results show that fatalistic voluntarism has a significant and positive estimated net effect on life satisfaction among Chinese persons.

I have emphasized the necessity of doing cross-cultural research on religion among Chinese societies. For instance, religion may lead to different social consequences in mainland China from those in Taiwan due to variations in the strictness of state regulation between these two culturally connected but politically divided societies. While the importance of comparative research among Chinese societies is self-evident, there is an urgent need for more cross-cultural analyses beyond the Chinese context. A comparative perspective will prevent a universal phenomenon from being mistaken for something specific to a certain environment, a culture-specific phenomenon from being exaggerated as a universal trend, and more profound social dynamics and mechanisms from being buried undetected under superficial facts (Stark 2008).

There are several pitfalls in quantitative comparative research on religion between Chinese/Asian and Western societies. The first concerns the use of the definition of religion. While the term *religion* draws a clear boundary between the mundane and the divine in the Western context, it never existed in traditional Chinese culture until the late nineteenth century, when it was imported from Japan where the coining of *religion* in Japanese was a result of translations of European works and terminology (Ching 1993, Paper 1995). Thus, although Chinese and Japanese societies abound in supernatural beliefs and practices that are inextricable from everyday life of the ordinary people, when asked "Do you have a religion?" most Chinese and Japanese respondents, especially the elderly, would answer "No," either because they simply do not recognize this alien term or because they are not

sure about what it is to which "religion" specifically refers (Ching 1993, Paper 1995, Stark 2004). Therefore, it would be absurd to say that Chinese and Japanese are irreligious just because they claim no religion. Often this is a problem of the survey designers and researchers, not that of the respondents. Future comparative research involving Chinese and Asian religions should first substitute measures of specific supernatural beliefs and practices for the general items on "religion" and "religiousness."

The second pitfall is associated with a series of assumptions about religion that are based entirely on the Western experience. In the West, it is usually assumed that monotheism is a moral value, God is omnipotent, priority should be given to sacred texts, faith must remain the focus, the mundane and the sacred are clearly divided, religious traditions have founders, the goal of religion is transcendence, the church should separate from the state, denominational affiliation is exclusive, religion and magic are opposed to one other, and so on (Pas 1979, Ching 1993, Paper 1995). However, most of these assumptions about Western religions are violated in the Chinese context as well as many other Asian nations. According to China specialists (e.g., Weber 1951, Yang 1961, Jochim 1986, Overmyer 1986, Ching 1993, Shahar and Weller 1996, Chiu 2006), for example, orthodox Chinese beliefs are non-theistic; the universe is governed by metaphysical laws such as karma, Tao, and Heaven; Chinese gods and deities are like humans and are thus subordinated to karma, Tao, and Heaven; some Chinese religions are creedless and have no ethical codes; religion is concerned primarily with secular affairs and benefits; practice is emphasized over doctrine; many religious groups such as popular cults do not have a founder; neither exclusive membership nor regular group participation is required; religion is diffused into virtually all social institutions from family to state; and magic and "religion" are inseparable. The differences in assumptions about religion between the West and the East can make cross-cultural comparisons both difficult and challenging.

The third pitfall in comparative research on religion between Chinese/Asian and Western societies is the biased selection and use of religion variables. For example, conventional measures of the Judeo-Christian-Islamic tradition include denominational affiliation, church membership, frequency of worship service attendance, frequency of prayer, reading sacred texts, self-evaluated religiousness, religious salience, and the like. However, these religion measures have a strong

Western bias for Chinese religions. As already discussed, most Chinese traditions do not require exclusive affiliation or sustain a membership system, and "religion," "religious," and "religiousness" are ambiguous terms in the Chinese culture. While prayer and scripture reading are also regular Chinese ritual activities, they by no means fully capture the notion of Chinese "religiosity," because in addition to prayer and reading sacred texts, there are a variety of other religious activities such as food offering, burning incense, reciting Buddha names and mantras, meditation, ancestor worship, exorcism, geomancy, spirit-medium and so on (Overmyer 1986). These Chinese culture-specific religion variables seem to be lacking in comparable counterparts in the Western tradition. Although researchers still can choose to conduct cross-cultural analyses based on a few religion items that are common among different traditions (e.g., prayer and reading scriptures), the contents and purposes of such religious activities could be quite different. Thus, caution must be exercised when analyzing data and interpreting the results, which at best paint a partial picture of the truth. The matter of incomparability may be less problematic for cross-culture studies within the same cultural blocs (e.g., China, South Korea, and Japan).

This chapter reveals a robust connection in mainland China between religion and mental health. My findings generally add to our knowledge about religion in contemporary Chinese society and help form a comprehensive view of the religion-health connection there. Nevertheless, caution should be exercised when these findings are generalized to other cultures and societies. On the one hand, it would be fruitful to extend this research to study religion in various Asian nations and elsewhere that share the same or similar religious and cultural elements with Chinese society. On the other hand, it would be misleading to force the use of arbitrary religious measures and methods in cross-cultural research, without taking into account culture-specific variations. As discussed, it is urgent for future open-minded researchers to continue to explore religious differences between Eastern and Western societies.[5]

---

[5] The research reported in this chapter is based upon my Ph.D. dissertation, "Beyond the West: Religion, Conformity, and Subjective Well-being in Contemporary Chinese Society," Baylor University (2009). This study was supported in part by China's National Natural Science Foundation (Project 70973132) and the John Templeton Foundation.

References

Abbott, Kenneth A. 1970. *Harmony and Individualism: Changing Chinese Psychosocial Functioning in Taipei and San Francisco*. Taipei: Orient Cultural Service.

Acevedo, Gabriel A. 2005. "Turning Anomie on its Head: Fatalism as Durkheim's Concealed and Multidimensional Alienation Theory." *Sociological Theory* 23: 75–85.

_____. 2008a. "Islamic Fatalism and the Clash of Civilizations: An Appraisal of a Contentious and Dubious Theory." *Social Forces* 86: 1711–52.

_____. 2008b. "The Fatalistic Imagination and the Continued Salience of Religion in the Modern World: A Test of Resource Compensation/Resource Amplification Hypotheses Using Cross-national Data." *Sociological Spectrum* 28: 602–24.

Appleton, Simon and Lina Song. 2008. "Life Satisfaction in Urban China: Components and Determinants." *World Development* 36: 2325–40.

Bays, Daniel H. 2003. "Chinese Protestant Christianity Today." *China Quarterly* 174: 488–504.

Belo, Caterina 2006. "Ibn Rushd on God's Decree and Determination (Al-Qada Wa-l-Qadar)." *Al-Qantara* 27: 245–64.

Brown, Philip H. and Brian Tierney. 2009. "Religion and Subjective Well-being among the Elderly in China." *Journal of Socio-Economics* 38: 310–19.

Carrillo-Garcia, Beatriz. 2004. "Rural-urban Migration in China: Temporary Migrants in Search of Permanent Settlement." *Portal* 1: 1–26.

Chan, Kim-Kwong. 2005. "Religion in China in the Twenty-first Century: Some Scenarios." *Religion, State & Society* 33: 87–119.

Chao, Hsing-Kuang. 2006. "Conversion to Protestantism among Urban Immigrants in Taiwan." *Sociology of Religion* 67: 193–204

Chaves, Mark 1994. "Secularization as Declining Religious Authority." *Social Forces* 72: 749–74.

Chen, Sylvia Xiaohua, Fanny M. Cheung, Michael Harris Bond, and Jin-Pang. Leung 2006. "Going Beyond Self-esteem to Predict Life Satisfaction: The Chinese Case." *Asian Journal of Social Psychology* 9:24–35.

Ch'en, Kenneth 1964. *Buddhism in China: A Historical Survey*. Princeton, NJ: Princeton University Press.

Cheng, Cheng-Kun. 1952. *The Dragon Sheds its Scales*. Cape Town: New Voice Publishing.

Cheung, Chau Kiu and Kwan-Kwok Leung. 2004. "Forming Life Satisfaction among Different Social Groups during the Modernization of China." *Journal of Happiness Studies* 5:23–56.

_____. 2007. "Enhancing Life Satisfaction by Government Accountability in China." *Social Indicators Research* 82: 411–32.

Ching, Julia. 1993. *Chinese Religions.* Maryknoll, NY: Orbis.

Chiu, Hei-Yuan. 1997. *Social Political Analysis of Religious Change in Taiwan*. Taipei: Gui-Guan Press.台湾宗教变迁的社会政治分析

_____. 2006. *Religions, Occults, and Social Change.* Taipei: Gui-guan Publishing House.宗教、術數與社會變遷

Chu, Godwin C. and Francis L.K. Hsu (eds.). 1979. *Moving a Mountain: Cultural Change in China.* Honolulu: University Press of Hawaii.

Coward, Harold 1996. "Taoism and Jung: Synchronicity and the Self." *Philosophy East and West* 46: 477–95.

Dean, Kenneth. 1993. *Taoist Ritual and Popular Cults of Southeast China*. Princeton, NJ: Princeton University Press.

_____. 1998. *Lord of the Three in One.* Princeton, NJ: Princeton University Press.

Diener, Ed. 1996. "Traits Can be Powerful, but Are Not Enough: Lessons from Subjective Well-being." *Journal of Research in Personality* 30: 389–99.

Dobbelaere, Karel. 1999. "Towards an Integrated Perspective of the Processes Related to the Descriptive Concept of Secularization." *Sociology of Religion* 60: 229–47.
Dohrenwend, Bruce P. 1959. "Egoism, Altruism, Anomie, and Fatalism: A Conceptual Analysis of Durkheim's Types." *American Sociological Review* 24: 466–73.
Douglass, Bruce R. and Ross Terrill. 1970. *China and Ourselves: Exploration and Revisions by a New Generation*. Boston: Beacon Press.
Durkheim, Émile. 1968. *Incest: The Nature and Origins of the Taboo*. New York: Lyle Stuart.
Eberhard, W. 1966. "Fatalism in the Life of the Common Man in Non-communist China." *Anthropological Quarterly* 39: 148–60.
Elder, Joseph W. 1966. "Fatalism in India: A Comparison between Hindus and Muslims." *Anthropological Quarterly* 39: 227–43.
Ellison, Christopher G. 1993. "Religious Involvement and Self-perception among Black Americans." *Social Forces* 71: 1027–55.
_____ and David A. Gay 1990. "Region, Religious Commitment, and Life Satisfaction among Black Americans." *Sociological Quarterly* 31: 123–47.
_____, David A. Gay and Thomas A. Glass. 1989. "Does Religious Commitment Contribute to Individual Life Satisfaction?" *Social Forces* 68: 100–123.
European Commission. 1997. *Central and Eastern Eurobarometer.* Brussels: European Commission, Directorate General for Information, Communication, and Culture.
Esposito, John L. 1997. *Islam: The Straight Path*. New York: Oxford University Press.
_____. 2002. *What Everyone Needs to Know about Islam*. New York: Oxford University Press.
Froese, Paul. 2001. "Hungary for Religion: A Supply-side Interpretation of the Hungarian Religious Revival." *Journal for the Scientific Study of Religion* 40: 251–68.
_____. 2004. "Forced Secularization in Soviet Russia: Why an Atheistic Monopoly Failed." *Journal for the Scientific Study of Religion* 43: 35–50.
Gombrich, Richard. 1975. "Buddhist Karma and Social Control." *Comparative Studies in Society and History* 17: 212–20.
Goodrich, Anne Swann. 1981. *Chinese Hells: The Peking Temple of Eighteen Hells and Chinese Conceptions of Hell.* Sankt Augustin: Monumenta Serica.
Goodwin, Robin and Peter Allen. 2000. "Democracy and Fatalism in the Former Soviet Union." *Journal of Applied Social Psychology* 30: 2558–74.
Goodwin, Robin, Peter Allen, George Nizharadze, Tatiana Emelyanova, Nina Dedkova, Yuri Saenko, and Irena Bugrova. 2002. "Fatalism, Social Support, and Mental Health in Four Former Soviet Cultures." *Personality and Social Psychology Bulletin* 28: 1166–71.
Goodwin, Robin, George Nizharadze, Lan Ahn Nguyen Luu, Eva Kosa, and Tatiana Emelyanova. 1999. "Glasnost and the Art of Conversation: A Multilevel Analysis of Intimate Disclosure across Three Former Communist Cultures." *Journal of Cross-Cultural Psychology* 30: 72–90.
Gorsuch, Richard L. and Craig S. Smith. 1983. "Attributions of Responsibility to God: An Interaction of Religious Beliefs and Outcomes." *Journal for the Scientific Study of Religion* 22: 340–52.
Hansen, Chan 1999. "Chinese Confucianism and Daoism." Pp. 25–33 in *A Companion to Philosophy of Religion*, edited by P.L. Quinn and C. Taliaferro. Oxford: Blackwell.
Hjellum, Torstein 1998. "Is a Participant Culture Emerging in China?" Pp. 216–50 in *Reconstructing Twentieth-century China: State Control, Civil Society, and National Identity*, edited by K.E. Brodsgaard and D. Strand. Oxford: Clarendon Press.
Humphrey, Peter. 1983. *Religious Suppression in Mainland China.* Taipei: World Anti-Communist League, China Chapter.
Iannaccone, Laurence R. 1995. "Risk, Rationality, and Religious Portfolios." *Economic Inquiry* 33: 285–95.

Jacobson, Cardell K. 1999. "Denominational and Racial and Ethnic Differences in Fatalism." *Review of Religious Research* 41: 9–20.
Jochim, Christian. 1986. *Chinese Religions: A Cultural Perspective.* Englewood Cliffs, NJ: Prentice-Hall.
Jones, Charles Brewer. 1999. *Buddhism in Taiwan: Religion and the State, 1660–1990.* Honolulu: University of Hawaii Press.
Katz, Paul R. 2003. "Religion and State in Post-war Taiwan." *China Quarterly* 174: 395–412.
Kuo, Cheng-Tian. 2008. *Religion and Democracy in Taiwan*. Albany: State University of New York Press.
Lang, Graeme. 2004. "Challenges for the Sociology of Religion in Asia." *Social Compass* 51: 99–109.
Lee, Rance Pui Leung. 1985. "Social Stress and Coping Behaviour in Hong Kong." Pp. 193–214 in *Chinese Culture and Mental Health*, edited by W.S. Tseng and D.Y.H. Wu. New York: Academic Press.
_____ and Yuet W. Cheung. 1995. "Health and Health Care." Pp. 59–112 in *Indicators of Social Development: Hong Kong 1993*, edited by S.K. Lau, M.K. Lee, P.S. Wan, and S.L. Wong. Hong Kong: Chinese University of Hong Kong.
Lefcourt, Herbert M. 1991. "Locus of Control." Pp. 413–99 *Measures of Personality and Social Psychological Attitudes*, *Vol. 1*, edited by John Paul Robinson, Phillip R. Shaver and Lawrence S. Wrightsman. San Diego, CA: Academic Press.
Leung, Kwok, Michael Harris Bond, Sharon Reimel de Carrasquel, Carlos Muñoz, Marisela Hernández, Fumio Murakami, Susumu Yamaguchi, Günter Bierbrauer, and Theodore M. Singelis. 2002. "Social Axioms: The Search for Universal Dimensions of General Beliefs about How the World Functions." *Journal of Cross-Cultural Psychology* 33: 286–302.
Liu, Eric Y. 2006. *Expanding the New Paradigm: Winners and Losers among Exclusive and Nonexclusive Religious Firms in the Chinese and Japanese Communities in the United States, 1850–1945*. Unpublished Master's thesis, Baylor University.
Lockwood, David. 1992. *Solidarity and Schism: The Problem of Disorder in Durkheimian and Marxist Sociology*. New York: Oxford University Press.
Madsen, Richard 2007. *Democracy's Dharma: Religious Renaissance and Political Development in Taiwan*. Berkeley: University of California Press.
Marková, Ivana, Eleanor Moodie, Robert M. Farr, Ewa Drozda-Senkowska, Ferenc Erös, Jana Plichtová, Marie-Claude Gervais, Jana Hoffmannová, and Olga Mullerová. 1998. "Social Representations of the Individual: A Post-Communist Perspective." *European Journal of Social Psychology* 28: 797–829.
Munro, Donald J. 1969. *Concept of Man in Early China*. Stanford, CA: Stanford University Press.
Needman, Jacob. 1956. *Science and Civilisation in China*. Cambridge: Cambridge University Press.
Novotney, J. 1978. "Religious Freedom in Taiwan." *Church and State* 31: 15–19.
Overmyer, Daniel L. 1986. *Religions of China: The World as a Living System*. San Francisco: HarperSanFrancisco.
_____. 2003. "Religion in China Today: Introduction." *China Quarterly* 3: 307–16.
Paper, Jordan. 1995. *The Spirits are Drunk: Comparatives Approaches to Chinese Religion.* Albany, NY: SUNY Press.
Pargament, Kenneth I., Joseph Kennell, William Hathaway, Nancy Grevengoed, Jon Newman, and Wendy Jones. 1988. "Religion and the Problem-solving Process: Three Styles of Coping." *Journal for the Scientific Study of Religion* 27: 90–104.
Pas, Julian F. 1979. "Religious Life in Present-day Taiwan: A Preliminary Report." *Journal of the Hong-Kong Branch of the Royal Asiatic Society* 19: 176–91.
_____. 1996. "Religious Life in Present Day Taiwan; A Field Observations Report: 1993–1994." *Journal of Chinese Religions* 24: 132–50.

Pearce, Frank. 1989. *The Radical Durkheim.* Boston: Unwin Hyman.
Perry, Elizabeth J. 1982. "Folk Buddhist Religion: Dissenting Sects in Late Traditional China." *Peasant Studies* 10: 59–66.
Potter, Pitman B. 2003. "Belief in Control: Regulation of Religion in China." *China Quarterly* 174: 317–37.
Qiu, Yanru and Li Sijian. 2008. "Stroke: Coping Strategies and Depression among Chinese Caregivers of Survivors During Hospitalisation." *Journal of Clinical Nursing* 7: 1563–73.
Rees, J.Lambert. 1906. "The Three Religions of China and Their Influence on Character." *The East and The West*: 301–20.
Republic of China Yearbook. 2008. Taipei: Republic of China.
Schaberg, David. 2005. "Command and the Content of Tradition." Pp. 23–48 in *The Magnitude of Ming: Command, Allotment, and Fate in Chinese Culture*, edited by C. Lupke. Honolulu: University of Hawaii Press.
Schwartz, Shalom H. and Anat. Bardi. 1997. "Influences of Adaptation to Communist Rule on Value Priorities in Eastern Europe." *Political Psychology* 18: 385–410.
Shahar, Meir and Robert P. Weller. 1996. *Unruly Gods: Divinity and Society in China.* Honolulu: University of Hawai'i Press.
Sharot, Stephen 2001. *A Comparative Sociology of World Religions*. New York: New York University Press.
Sherkat, Darren E. and Christopher G. Ellison. 1999. "Recent Developments and Current Controversies in the Sociology of Religion." *Annual Review of Sociology* 25: 363–94.
Smith, Arthur Henderson. 2008. *Chinese Characteristics*. Whitefish, MT: Kessinger.
Stark, Rodney 1999. "Secularization: R.I.P." *Sociology of Religion* 60: 249-74.
_____. 2001. *One True God: Historical Consequences of Monotheism*. Princeton, N.J.: Princeton University Press.
_____. 2004. *Exploring the Religious Life.* Baltimore: Johns Hopkins University Press.
_____ and William Sims Bainbridge. 1985. *The Future of Religion*. Berkeley: University of California Press.
_____ and William Sims Bainbridge. 1987. *A Theory of Religion*. Bern: Peter Lang.
_____ and Roger Finke. 2000. *Acts of Faith: Explaining the Human Side of Religion*. Berkeley: University of California Press.
_____, Elizabeth Hamberg and A.S. Miller. 2005. "Exploring Spirituality and Unchurched Religions in America, Sweden, and Japan. "*Journal of Contemporary Religion* 20:1–21.
_____ and Jared Maier. 2008. "Faith and Happiness." *Review of Religious Research* 50: 120–25.
Sumiya, Kazuhiko. 1970. "The Long March and the Exodus: 'The Thought of Mao Tse Tung' and the Contemporary Significance of 'Emissary Prophecy,'" Pp. 189–223 in *China and Ourselves: Explorations and Revisions by a New Generation*, edited by R.B. Douglass and R. Terrill. Boston: Beacon Press.
Tamney, Joseph B. and Linda Hsueh-Ling Chaing. 2002. *Modernization, Globalization, and Confucianism in Chinese Societies*. Westport, CT: Praeger.
Terrill, Ross. 1980. *The China Difference*. New York: Harper & Row.
Vermander, Beniot. 1997. "Religions in Taiwan: Between Mercantilism and Millenarianism." *Inter-Religio* 32: 63–75.
Voye, Liliane and Karel Dobbelaere. 1994. "Roman Catholicism: Universalism at Stake." Pp. 83–113 in *Religions sans frontires?*, edited by R. Cipriani. Rome: Dipartimento per L'Informazione e Editoria.
Wade, Joel. 1996. "An Examination of Locus of Control/Fatalism for Blacks, Whites, Boys, and Girls Over a Two Year Period of Adolescence." *Social Behavior & Personality* 24: 239–47.
Wallace, Anthony F.C. 1966. *Religion: An Anthropological View*. New York: Random House.

Wang, C.W., C.L.W. Chan, S.M. Ng, and A.H.Y. Ho. 2008. "The Impact of Spirituality on Health-Related Quality of Life Among Chinese Older Adults with Vision Impairment." *Aging and Mental Health* 12: 267–75.
Warner, R. Stephen. 1993. "Work in Progress toward a New Paradigm for the Sociological Study of Religion in the United States." *American Journal of Sociology* 98: 1044–93.
Weber, Max 1951. *The Religion of China: Confucianism and Taoism*. Glencoe, IL: Free Press.
_____. 1958. *The Protestant Ethic and the Spirit of Capitalism*. New York: Scribners.
_____. 1963. *The Sociology of Religion*. Boston: Beacon.
_____. 1996. *The Religion of India: The Sociology of Hinduism and Buddhism*. Glencoe, IL: Free Press.
Weller, Robert P. 2000. "Living at the Edge: Religion, Capitalism, and the End of the Nation-State in Taiwan." *Public Culture* 12: 477–98.
Wilson, Bryan R. 1975. "The Debate Over Secularization: Religion, Society, and Faith." *Encounter* 45:77–84.
Yamane, David. 1997. "Secularization on Trial: In Defense of a Neosecularization Paradigm." *Journal for the Scientific Study of Religion* 36: 109–22.
Yamaoka, Kazue. 2008. "Social Capital and Health and Well-being in East Asia: A Population-based Study." *Social Science & Medicine* 66: 885–99.
Yang, C.K. 1961. *Religion in Chinese Society*. Berkeley: University of Californian Press.
Yang, Fenggang. 2005. "Lost in the Market, Saved at McDonald's: Conversion to Christianity in Urban China." *Journal for the Scientific Study of Religion* 44: 423–41.
_____. 2006. "The Red, Black, and Gray Markets of Religion in China." *Sociological Quarterly* 47: 93–122.
Young, Lawrence A. (ed.). 1997. *Rational Choice Theory and Religion: Summary and Assessment*. New York: Routledge.
Zhang, Jie and H.L. Xu. 2007. "The Effects of Religion, Superstition, and Perceived Gender Inequality on the Degree of Suicide Intent: A Study of Serious Attempters in China." *Omega 55*: 185–97.
Zhang, Jie and Shenghua Jin. 1996. "Determinants of Suicide Ideation: A Comparison of Chinese and American College Students." *Adolescence* 31: 451–67.
Zhang, Jie, Conwell Yeates, Li Zhou, and Chao Jiang. 2004. "Cultural Risk Factors and Suicide in Rural China: A Psychological Autopsy Case Control Study." *Acta Psychiatrica Scandinavica* 110: 430–37.

CHAPTER SEVEN

RELIGIOUS INVOLVEMENT AND LATINO IMMIGRANT HEALTH

Ephraim Shapiro

Whereas it was thought only several decades ago that the role of religion in the lives of individuals and society would rapidly diminish in the face of modernity (Berger 1967), scholars now agree that religion is here to stay (Wuthnow 1992, Casanova 1994). Church attendance can affect members of a religious community in many ways beyond religious ones, including health-related impacts. A large body of evidence suggests that religiosity is associated with better health, with church attendance being the measure of religiosity most strongly associated with health outcomes (Koenig et al. 2001, Powell et al. 2003). The communal form of religious practice is especially important for immigrants in the United States, for whom churches play multiple roles (Min 1992, Warner and Wittner 1998, Yang and Ebaugh 2001, Foley and Hoge 2007).

There is little research, however, on the relationship between religious involvement, typically measured by church attendance, with the health and health behaviors of Latino immigrants in the United States. The vast majority of studies related to religious communities, immigration and health examine either the relationship of immigration with health without considering religion as a factor (Leclerc 1994, Landale et al. 1999, Lara, et al. 2005, Markides et al. 2005) or religion with health without considering immigration status (Chatters 2000, Koenig et al. 2001, Levin 2001, Powell et al. 2003). This study examines the intersection of the three areas: religious involvement, Latino immigrants to the United States, and health outcomes, using quantitative methods with a random national sample of immigrants. The research is theoretically driven, drawing from concepts in the field of sociology, for both social and religious factors, to examine whether religious involvement is associated with health status and health behaviors among Latino immigrants. Sociology is especially well suited to the study of religion through its focus on such conceptual categories as

institutions, ritual and norms, which are integral to understanding the role of religion for social life (Ellison and Sherkat 1995).

An examination of the relationship between religious involvement and health may be especially significant for Latinos as their health typically worsens as they become acculturated. Efforts to target the needs of immigrant populations in faith communities and take their varying characteristics into account may be important strategies for potentially counteracting the process of Latino immigrant health declining with longer residency in the United States.

Religion and Health

To adapt Peter Berger's phrase, religion can serve as a "protective canopy" in terms of health; a protective effect can be found in terms of both mortality and morbidity, although there can be negative influences of religion on health as well (Koenig et al. 2001, Levin 2001). A range of religious dimensions and measures have been used in research, but the strongest evidence of an association is through participation in a religious group as measured by church attendance (McCullough 2000, Powell et al. 2003, Levin 2009).

There are many theories underlying the relationship between religious involvement and health. Potential causal mechanisms of the association between health and participation in religious communities involve multidimensional constructs. I group key mechanisms through which religious involvement can impact health into three categories: social resources, social capital magnified, and religious capital.

Social Resources

Religious communities can perform social functions for immigrants that are associated with improved health (Putnam 2000, Hirschman 2004). In general, membership in groups and the concomitant increase in social resources that typically accompanies them are associated with improved health outcomes (Emmons 2000, Kawachi and Berkman 2000, Putnam 2000). This is the case with attendance at churches as is true of membership in other groups (Emmons 2000). Social resources such as social capital, cohesion and support seem to have an especially large presence in religious communities (Putnam 2000, Hirschman 2004). The importance of social resources was observed long ago. Durkheim (1951) showed that social groups, including religious ones,

can possess characteristics based on social factors that have important implications for behaviors affecting individuals' health.

Related to social cohesion and networks is social capital. Although there are a number of definitions of social capital, it typically involves the accumulation of social resources that inhere in social relationships (Bourdieu 1986, Coleman 1988, Putnam 2000). It has been estimated that church attendance is the largest source of social capital in the United States (Putnam 2000).

Perhaps the most commonly used form of social capital is ties within communities, or "bonding social capital" (Putnam 2000). The social support provided by a trustworthy network may exchange information that can affect health, provide both material and psychological support, and encourage or reinforce healthy behaviors (Berkman and Kawachi 2000, Portes 1998). Social capital that can be built across communities, which is called "bridging capital" (Muntaner et al. 2001), can also influence health. It can help a community access more resources and advance its socioeconomic status, thus potentially improving the health status of its members (Sherkat and Ellison 1999, Putnam 2000).

While social resources can be expected to be associated with better health overall, they can also have negative effects on health. Whereas networks normally have positive effects, they can also be abusive (Menjivar 2000). As Portes (1998) makes clear, social capital can be negative as well as positive. When group beliefs discourage healthful behaviors or encourage harmful behaviors, behavioral conformity can have a negative impact and the social resources can be harmful.

Social Capital Magnified

It is not simply that religious communities have larger quantities of social capital; their intensity of social capital is different as well. The mechanisms by which social capital can improve health can work especially well in the context of a religious community. I use the phrase *social capital magnified* to refer to this increased effect of social capital in a religious community. The power and significance of believing in the same god(s) or in a shared set of religious values also helps unify members into a strongly cohesive group (Weber 1963). Shared values and norms of a religious community can facilitate factors such as trust and reciprocity that increase social capital. Religious participants feel more confident that others in the group can be counted on and that

credits accrued through their actions will be reciprocated in the future (Portes 1998, Ellison 1999, Krause 2006). Church attendance has been associated with increased levels of anticipated social support (Krause 2006).

Whereas social capital typically involves expectations of reciprocal rewards from others, this is less so with religious capital, potentially leading to more support from others in the religious community. For members of religious communities, the most valuable of all rewards are often otherworldly, and rewards can even include actions against one's self-interest (Stark and Finke 2001).

Members of religious communities and institutionalized religion in general can magnify social capital through normative socialization and social control as described by classical sociologists. Durkheim (1995) thought beliefs and practices unite adherents into one single moral community called a church. Moral authority can regulate individuals' behaviors (Durkheim 1951). Both religious leaders and fellow congregants can play important roles in magnifying the effect of social capital on health. In ways that often differ from leaders of secular organizations, religious leaders can influence the behaviors of congregants (Kaplan et al. 2006, Hernandez et al. 2006). This type of community can exercise control over its members through use of an external source of authority in ways that an ordinary community may not be able to.

Religious Capital

It is important to go beyond looking merely at the role of religion in social networks to the specific content of the religion itself. Critics of the relationship between religion and health argue that there is nothing distinctive about religion in explaining health outcomes (Sloan 1999, Bagiella et al. 2005, Sloan 2006); rather, they argue, religious participation is merely a source of a social network with its associated benefits, similar to that of non-religious organizations. There are distinctive aspects of religion, however, such as beliefs, rituals, and meaning that can affect health (Iannacone 1990, 1994); these have been given less attention than social capital or are incorrectly attributed to social capital.

It is these types of changes in health outcome associated with the content of religion that I refer to as *religious capital*, a term more often used in an economic context (Iannacone 1990). Religious as well as

social factors can affect health and health behaviors (Ford and Kadushin 2002). The specific content of a religion's beliefs matters, as those who emphasize the substantive definitions of religion make clear (Berger 1974, Stark and Finke 2001). Religious doctrines can lead to a perspective on human nature and society that leads to attitudes associated with better physical and mental health outcomes (Chatters 2000).

Religion is not simply a set of social activities but is based on critical underlying ideas from oral and written traditions that affect attitudes and influence behaviors (Weber 1963, Stark and Finke 2001). An important aspect of participation in religion is that it is not merely a discrete activity like bowling or volunteering but part of a distinct perspective and worldview that often permeates thoughts and behaviors even when not performing religious acts, thus reinforcing their impact (Geertz 1973). Religion can be an orienting motivating force (Hill and Pargament 2003), and religious knowledge and familiarity increases the capital necessary to do this.

The importance of rituals also make religious communities distinctive, although there can also be rituals in non-religious settings. They strengthen individuals' bonds to society, often through collective activities of a group (Durkheim 1957, Stark and Finke 2001). The activities experienced together help put a common focus on God (Stark and Finke 2001). For example, dietary laws concretize doctrines about eating and animals and thus insert the sacred into a mundane activity.

Religious involvement can also affect health through behavioral influences, as specific religious beliefs can have generally protective benefits that serve as part of the canopy (Berger 1967, Ford 2006). Religious teachings can affect behaviors associated with health status such as smoking, substance abuse, risky sex, nutrition, and exercise (Ellison 1995, Levin 1996, Chatters 2000, Levin 2001).

Religious capital does not always have a positive impact on health. Adherence to religious explanations for illness, such as sin, and reliance on divine intervention for a cure may interfere with medically appropriate care seeking. The most extreme example of this is Christian Scientists, who discourage resort to physicians even when such an intervention seems medically necessary by objective measures.

There can also be interactions between social and religious capital. Although a distinct mechanism, religious capital is theorized to work with social resources to influence health as religious orientations and practices are reinforced and supported in a religious communal context (Ellison and Larson 2002, George 2002).

Religion and Immigrants

The connection between religion and health is an especially important topic in the study of immigrants. Congregations are very important for immigrants and can play a pivotal role in affecting their health. Religion should not be studied in isolation from sociocultural environments, which can affect both the needs of immigrant groups and health care system utilization (Payer 1989, Stark and Finke 2001, Nicholson et al. 2009). Compared to other organizations, religious institutions can play an especially important role in the lives of immigrants (Warner and Wittner 1998, Cadge and Ecklund 2007, Foley and Hoge 2007). Religious institutions often are the initial point of entry for immigrants into U.S society and serve multiple functions, including health related ones (Ford 2002, Arredondo 2005, Foley and Hoge 2007). Religion plays a particularly critical role for Latino immigrants. For example, among Mexicans, immigration is "permeated at every step by the presence of religion" (Portes and Rumbaut 2006: 331).

Religion and ethnic identities are often intertwined (Ebaugh and Chafetz 2000, Yang and Ebaugh 2001, Avalos 2004, Badillo 2006, Foley and Hoge 2007), yet the relationships between religious and ethnic identities have been insufficiently explored (Cadge and Ecklund 2007, Foley and Hoge 2007). These identities are many-sided, fluid and interconnected, and they may be affected by issues distinctive to immigrant groups such as language and culture (Yang and Ebaugh 2001, Avalos 2004, Cadge and Ecklund 2007). A structured organization such as a church can enable religious communities to preserve ethnicity as well as cultural capital.

Religious communities can be the primary source of social capital for new immigrants (Foley and Hoge 2007). This social capital can take the form of bridging or bonding capital. Depending on the church, religious communities may provide networks with other congregants or linkages to other communities (Menjivar 2000, Foley and Hoge 2007). Some religious communities may encourage church friendships to the exclusion of others (Scheitle and Adamczyk 2009).

Country of birth can affect the impact of religious involvement on health. The extent to which a given religious community is composed of individuals from the same country could impact attitudes and behaviors that affect health directly or indirectly (Avalos 2004, Badillo 2006, Foley and Hoge 2007). Values and cultural characteristics shared with church members can facilitate social capital and sharing of

support and resources, with positive effects on health. Attending church with a large proportion of countrymen may heighten ethnic identity, which is associated with a higher level of integration into society (Foley and Hoge 2007).

Evidence

A review of the literature reveals substantial evidence of a protective and beneficial effect of religion on health for the U.S. population in general. As far back as 1835, studies linked religion and health (Brigham), but it is only within the last two decades that a large body of evidence has been developed. Although religiosity can be assessed in numerous ways, by far the strongest relationship between religion and health is found in studies of involvement in a religious community using a measure such as church attendance (McCullough 2000, Levin 2001, Strawbridge 2001, Powell et al. 2003).

Not all agree that there is conclusive evidence of the association between religious involvement and health (Bagiella et al. 2005, Sloan 2006). Critics assert the association is confounded by market density of a religious denomination, or the proportion of an area that shares the same religion (Gruber 2005, Sloan 2006). At minimum, however, there is highly suggestive evidence that frequent attendance at religious services is associated with better health in general and a range of such health indicators as mortality, health status, and morbidity. There is also a link between religious involvement and promotion of healthy behaviors (Levin 2001). Religious participation such as church attendance is associated with decreased mortality and health status in numerous studies, and reviews of the literature consistently report evidence of such a relationship (Dwyer 1990, Koenig 2001, Levin 2001, Powell et al. 2003). In general, religious involvement is also associated with decreases in such risky behaviors as smoking and drinking and increased positive behaviors such as nutritious eating habits and exercise (Ellison and Sherkat 1995, Chatters 2000, Hill et al. 2007). There are variations in results and in strength of relationship across studies, however, as the relationship between religion and health can be complex and multifaceted (Schlundt 2008).

Although the published literature finds substantial evidence of an association between church attendance and health status, there are few studies and mixed evidence on the relationship between church attendance and health among Latinos. An early study found that

church attendance was associated with better self-rated health status in a study of three generations of Mexican-American Catholics (Levin 1986), but the association was largely explained by such confounding factors as physical functioning ability. Another study comparing race and ethnicity found some evidence of an association, but it was inconsistent across demographic groups (Drevenstedt 1998). A study that focused exclusively on Latino immigrants did not find a relationship between church attendance and health status, only health behaviors (Arredondo 2005); however, the sample size was small.

There is some evidence that religious involvement is associated with health behaviors among Latinos. In one study (Hill et al. 2007), religious involvement was associated with a healthy lifestyle index that included various health behaviors. The association held among whites, African Americans, and Mexicans, the only Hispanic group in the sample. Religious involvement has been associated with both more protective and less risky health behaviors among Latinos (Arredondo 2005, Gillum 2005).

Research Questions and Hypotheses

The primary objective of this research is to determine whether there is a relationship between religious involvement and the health status of immigrants. A secondary objective was to analyze whether there is a relationship between religious involvement and the health-related behaviors of immigrants. The study also examined the extent to which health-related behaviors, including smoking, drinking, and exercise, mediated or explained the relationship, if any, between church-attendance and health status.

One hypothesis is that there is a positive relationship between religious involvement and better health status for Latino immigrants. As noted above, there exists an extensive theoretical and evidentiary basis for a relationship between church attendance and self-reported health status. The mechanisms of social resources, social capital magnified, and religious capital are theorized to operate among Latino immigrants, leading to better health status. It is expected that both current- and prior-country church attendance as well as denomination can influence health because underlying mechanisms may vary among them. It is expected that country of birth will be related to health outcomes because of differing characteristics related to health, including culture and resources. Based on theory and the evidence presented, it is

also expected that religious involvement will be related to all four health behaviors in this study. However, the evidence is clearer for smoking and drinking than for exercise and weight; therefore, it is expected that the relationship with the risky behaviors will be stronger.

At least some of the same mechanisms, including social capital, adherence to religious doctrines, and beliefs and norms apply to both health behaviors and health status, although other mechanisms such as such as environment, genetics, and health care access may affect health status. So it is expected that health behaviors will mediate the relationship between church attendance and health status, although only partly.

Methods

This study involved a cross-sectional secondary data analysis of a national survey of immigrants to the United States, the New Immigrant Survey (NIS). Immigrants admitted to legal permanent residence between May and November of 2003 were included in the survey. The NIS is based on nationally representative samples of administrative records, compiled by the U.S. Immigration and Naturalization Service. It includes both newly arrived immigrants with proper documents and immigrants residing in the United States but with a temporary visa or no visa at all. Data from the first wave collected in 2003 are publicly available through *nis.princeton.edu*. The geographic sampling design includes all top 85 Metropolitan Statistical Areas (MSAs). The survey response rate was 69 percent.

The study population consisted of adult first generation immigrants from Mexico, El Salvador and Guatemala who self-identify as members of a Christian denomination. Latinos are now the largest ethnic minority group in the United States (Guzmán 2001). Furthermore, data from the 2000 U.S. Census indicate that immigrants from Latin America comprise about half (52%) of the total foreign-born population in the United States. Mexicans comprise by far the highest proportion (54%) of foreign-born Latin Americans, with Salvadorans and Guatemalans as the next two largest groups of Latino immigrants in the NIS. Due to differences in characteristics of the ethnic group, resources, context of reception, and context of the home country, results could vary by country of birth. Including multiple countries in the analysis allows us to examine whether or not Latino countries are a monolithic group.

Very recent immigrants, those who had moved to the United States within 6 months of the survey administration, were excluded from the sample since their initial level of church attendance may be atypical of ongoing churchgoing patterns. The sample included 1,232 Mexicans, Guatemalans, and Salvadorans aged 18 and over, who self-identified as Christian. The weighted sample size was 1,525. The sample included 742 Mexicans, 356 Salvadorans, and 134 Guatemalans. It included 1007 Catholics, 64 Orthodox Christians, 61 Evangelical-Pentecostal Protestants, and 100 Protestants from other denominations.

There were five outcome measures (Table 1). The primary outcome of interest was health status. Health status was measured through self-report answers to a single item 5-point scale with responses ranging from poor to excellent. Respondents were asked "Would you say your health is excellent, very good, good, fair, or poor?" Health behaviors, which prior studies have shown to be associated with a range of health outcomes (Koenig et al. 2001, Hill 2006), were analyzed as intermediate outcome measures. These include smoking, binge drinking, and exercise, as well as whether or not the respondent was obese.

The study determined whether there is an association between health status and health behaviors with a number of immigrant and religious characteristics. Religious involvement was measured through church attendance. In particular, the primary religion-related moderating variables included denominational affiliation and home country church attendance. The religion-related control variable was extent of

Table 7.1. Outcome Measures: Health Status and Health Behaviors

Variable	Description	Categories
Health Status	Self-report of current health	Excellent/Very good, Good, Fair/Poor
Smoking	Currently a smoker	Yes/No
Alcohol Use	Had 4 or more alcoholic drinks at least once in last 90 days	Yes/No
Physical Activity	Performed light or vigorous types of activity	No physical activity, light activity, light or vigorous activity
Obesity	BMI of 30 or more	Yes/No

church coethnicity.[1] The primary immigrant-related moderating variable was ethnicity. Immigrant-related control variables included level of English proficiency, type of visa, and length of stay in the U.S. Other control variables included age, gender, race, marital status, household size, education, occupation, income, education, skin color, geographic location, health insurance, and health care utilization.

Univariate and bivariate analyses as well as mediation were performed using SPSS version 17. Multivariable analyses and data recoding were performed using SAS version 9.2. The sample was weighted by visa type.[2] Descriptive statistics were produced to characterize study participants and to evaluate the distribution of key independent and outcome variables. Regression analyses were run and models constructed for each of the dependent variables and best fits determined.

Because outcome variables were all categorical, regression using a logit model was run for each outcome rather than ordinary linear regression (OLS), whose underlying assumptions no longer applied. Unlike OLS, the estimates in a logit model no longer represent a coefficient related to an expected change in frequency but rather an estimate that can be used to compare relative odds of the outcome occurring versus not occurring between different values of each variable. Odds ratios above 1 therefore indicate a greater likelihood of the outcome variable than the comparison category. The comparison of odds or odds ratio is what is listed in the regression results below. Where there were more than two categories and they were ordered, a multinomial ordered logistic regression was performed so that results compared odds for multiple categories.

The general process for each analysis involved adding groups of variables to the model, starting with the variables of greatest interest based on the hypotheses associated with each aim. This allowed for more control over and more transparency in the process than an automated stepwise method. Variables that were not statistically significant using

---

[1] Respondents were asked, "Approximately what percent of adults in the church that you attend most often come from your country of origin?" Respondents were coded in one of three categories: 1 = do not attend church, 2 = attend a church where the majority is not coethnic 3 = attend a church where majority is coethnic.

[2] Weighting enables each respondent to represent more accurately a proportion of the sampling frame. For example, immigrants who became legal permanent residents by acquiring an employment-based visa were oversampled, because they are a small percentage of all immigrants, but there is great interest in them. Weighting reduces their proportion in the sample so as not to bias it.

a threshold of $p < .05$ were dropped from the model unless there was a strong theoretical basis for inclusion. Variables with a strong theoretical basis were current church attendance, prior church attendance, denomination, and country of birth. Age and gender were also included in all models as they are standard, widely used control variables. Adjusted odds ratios were calculated from the final model estimates. Standard errors and confidence intervals were produced for all variables.

Because of the large number of variables, almost all of which were initially categorical, variables were converted to a continuous form when feasible in order to create as parsimonious a model as possible. Overall, there was a relatively low proportion of missing data with all but five variables not missing data or under one percent missing. Three variables, however—income, coethnicity of church, and skin color—had over 10% missing. As a result, missing data were imputed for these variables prior to being added to the model using multiple imputation (Allison 2001).

A statistical tolerance analysis was performed to examine covariability among variables. Because those who do not attend church were coded as 1 for both the church attendance and coethnic church variables, there is some multicollinearity between the two variables on account of this overlap. The tolerance was about 40%, which is low, but still above the 20% threshold often used. No other variables showed low tolerance.

The Baron and Kenny methodology (1986) was used to test for mediation of health status by health behaviors. To determine whether the change in effect size was statistically significant and to calculate a confidence interval, the bootstrapping method of testing mediation was used (Preacher and Hayes 2008).

Results

Most of the sample, 51%, responded that they were in excellent or very good health, with 35% giving a response that they were in good health, while only 14% were in fair or poor health (Table 2). While a minority of the sample, there were still an important number of people with poor health behaviors. At least 10% of the sample had negative smoking behaviors and 13% had negative drinking behaviors. Over 20% of the sample was obese, and almost a quarter didn't exercise at all (Table 2).

Church attendance was defined as number of times a person attended religious services since time of legal permanent residence (LPR)

Table 7.2. Health Status and Behaviors Prevalence

Measure	Category	Unweighted Sample	Weighted Percent
Current Health Status	Excellent/Very Good	616	51%
	Good	424	35%
	Fair/Poor	192	14%
Current Smoker	Yes	110	10%
Binge Drinker	Yes	151	13%
Physical Activity	None	259	22%
	Light Activity	586	47%
	Vigorous Activity	386	31%
Obesity	Yes	267	23%

divided by the number of weeks between the time of interview and date of permanent residence. Almost 20% of the sample attend church "frequently," at least once a week or more (Table 3). Of those who attend frequently, over half attend multiple times per week. Over a quarter of the sample, 27%, never attended church since LPR. The remainder went to church occasionally. Although they attended less than weekly, the majority of the occasional churchgoers attended at least monthly.

Church attendance patterns in the prior country differed from church-attendance since LPR. The majority attended at least weekly, but only 6% never went to church in the prior country. The sample is predominantly Catholic, with 83% identifying as Catholic. The majority of the other respondents were of a Protestant denomination. Over half the people attended a church where the majority of congregants were from the same country of birth (Table 3).

In terms of immigrant characteristics, almost two-thirds of the sample is Mexican with another 25% having been born in El Salvador and 10% Guatemala. The overwhelming majority of the sample had limited English proficiency, and while most of the sample had been in the U.S. under 15 years, only 17% of the study population had been in the United States under 5 years (Table 2).[3]

[3] Limited English proficiency (LEP) is a term defined by the U.S census as speaking English less than very well.

Table 7.3. Religion and Immigrant Variables

Church Attendance	None	304	27%
	Less than weekly	655	54%
	Weekly or more	234	19%
Church Attendance in Prior Country	None	72	6%
	Less than weekly	393	33%
	Weekly or more	749	61%
Church Coethnicity	Non-Church attender	298	30%
	Church attenders from same country under 50%	214	19%
	Church attenders from same country >= 50%	538	52%
Denomination	Catholic	1007	83%
	Orthodox	64	5%
	Evangelical-Pentecostal	61	5%
	Other Protestant	100	8%
Country of Birth	El Salvador	356	25%
	Guatemala	134	10%
	Mexico	742	65%
Length of Stay in US	<5 Years	175	17%
	5–14 Years	631	53%
	15 Years and more	426	31%
Visa Type	Family	573	58%
	Legalization	465	31%
	Other	120	10%
English Proficiency	Very Well	216	17%
	Well	206	17%
	Not well	494	42%
	Not at all	304	23%

The sample was largely under 50 years in age and disproportionately female. The sample had low socioeconomic status, with roughly two-thirds having less than 12 years of education and a similar percentage

Table 7.4. Key Demographic Variables

		Sample N	Percent
Gender	Male	687	44%
	Female	545	56%
Age	18–34	535	49%
	35–49	505	38%
	50–64	134	9%
	65+	54	4%
Marital Status	Married/Partner	901	78%
	Widowed/ Divorced/Sep	102	7%
	Single, never married	229	15%
Household Income	0–$5,000	327	41%
	$5,001–10,000	204	27%
	$10,000–19,999	162	20%
	$20,000 or more	94	13%
Education	<=8 Years	459	35%
	8–11 Years	346	29%
	12 Years	191	16%
	13 or more	235	20%

having average income per household member under $20,000. Over three quarters of the sample was married or lived with a partner (Table 4).

Table 5 provides a summary of the study's findings about the relationship of church attendance and health status when controlling for other religious, immigration, and demographic variables. Note that while in the logistic regression results, one category is typically chosen to serve as a reference group against which the odds for other categories for that variable are compared, I have also included comparisons between categories that are not reference groups in my tables instead of using a single reference group, as these comparison results are a key point in my study.

Church attendance was associated with health status ($p < .05$). Non-attendance (OR=.70) and occasional church attendance (OR=.62) were associated with lower odds of being in better health; their odds were only about two-thirds of those for regular church attendance.

Table 7.5. Final Model for Health Status Latino Immigrants in the U.S.

Variable	Category	Comparison	Odds ratio (95% CI)	p value
N=1232 (weighted =1525)				
Church Attendance				**
	None	Regular	.70(.50,.97)	*
	Occasional	Regular	.62(.46,.82)	***
	None	Occasional	1.12(.88,1.45)	
Prior Country Church Attendance				
	None	Regular	.66(.42,1.06))	+
	Occasional	Regular	.99(.79,1.25)	
	None	Occasional	.67(.41,1.08)	+
Denomination				
	Catholic	Other Protestant	1.28(.85,1.93)	
	Orthodox	Other Protestant	2.09(1.12,3.9)	*
	Protestant Evangelical	Other Protestant	1.16(.63,2.16)	
Country of Birth				+
	El Salvador	Mexico	1.32(1.01,1.73)	*
	Guatemala	Mexico	.95(.66,1.39)	
	Guatemala	El Salvador	72(.48,1.07)	+
Length of US Stay	Each year in country		.97(.96,.99)	**
English Proficiency	Each proficiency level		1.16(1.07,1.26)	***
Age	Each 5 years		.92(.87,.98)	**
Gender	Female	Male	.79(.63,.98)	*
US Region of LPR				***
	California	Other States	.61(.49,.77)	***
	New York	Other States	.48(.28,.84)	**
	Texas	Other States	1.12(.51,2.46)	
Household Income	Each $1000 per person		1.02(1.00,1.03)	**
Education	Each additional year		1.07(,1.04,1.10)	***
Doctor Visits				***
	None	Multiple Visits	2.25(1.76,2.86)	***
	Single	Multiple Visits	1.78(1.24,2.56)	**

N= 1232 *** = p value < .001 ** = p value < .01 * = p value < .05 + = p value < .10

There was no difference in odds for better health status between non-attendance and regular church attendance. No other religion variables showed an association with health status, although some individual contrasts were at least marginally significant.

Country of birth was marginally significant. The contrast between immigrants from El Salvador and Mexico was significant, with Salvadorans' odds of being in better health over 30% higher than that of Mexicans. Each additional year spent in the United States was associated with a decrease of 3% for the odds of being in better health. Each additional point in the English proficiency scale going from worst to best was associated with a 16% decrease in likelihood of being in better health. Other significant predictors of health status were age, gender, U.S. region at time of LPR, income, education, and doctor visits. Being male, having more education, having more income, being outside of California and New York, and having fewer doctor visits were all associated with better health.

The secondary research question involved examining the relationship of religious involvement and health behaviors. Religious involvement, as measured by church attendance, was associated with a positive outcome for three of the four health behaviors: current levels of smoking, binge drinking, and physical activity; the results for binge drinking were only marginally significant. No relationship was found between church attendance and obesity status. A summary of the relationship between religious involvement and each of the health behaviors is summarized in Table 6 below.

Church attendance was associated with current smoking. Other predictors of current smoking were religious denomination, church coethnicity, country of birth, gender, and doctor visits. The association between church attendance and binge drinking was marginally significant ($p < .10$). Other significant variables in the binge drinking model included religious denomination, English proficiency, gender, U.S. region, and health insurance status. The association between church attendance and physical activity level was statistically significant; other significant variables included prior country church attendance, English proficiency, gender, U.S .region, and education. No relationship was found between church attendance and obesity status. The only variables that were significant or approached significance in the obesity model were age, gender and education.

The Baron and Kenny methodology was used to test for mediation as described in the methods section earlier. An association was found

Table 7.6. Summary of Contrasts Table for Church Attendance and Health Behaviors

	Current Smoker	Binge Drinker Status	Better Physical Activity	Obese
Church Attendance Overall Effect	**	+	***	None
None vs Regular Odds Ratio	15.32**	1.74+	.66**	1.21
Occasional vs. Regular Odds Ratio	1.43	1.73*	1.02	1.21
None vs. Occasional Odds Ratio	10.68**	1.01	.64***	1.02

N= 1232 *** = p < .001 ** = p < .01 * = p < .05 + = p < .10

($p < .05$) for smoking status, alcohol status, and physical activity with church attendance. I then regressed health status on each health behavior, with an association found for physical activity and obesity status. This provided evidence of requisite associations for health behaviors to meet the first two conditions of the Baron and Kenny process (1986); associations were found between church attendance and health behaviors and between health behaviors and health status.

Health status was then regressed on church attendance using the original model (Table 5) and adding in the four health behavior variables that were hypothesized to serve as mediators. A comparison of results between the unmediated and the mediated model with health behaviors is shown in Table 7. There was a reduction in effect size for the relationship of church attendance with health status, albeit a very small one, indicating at least a minimal degree of partial mediation. The odds ratio for the contrast between occasional and regular churchgoers increased from .62 to .65, and the odds ratio for the contrast between never and regular churchgoers changed from .70 to .71. Several of the probability values also increased in the mediated model so that level of significance decreased for church attendance overall and for each contrast (Table 7).

Using the bootstrapping method, the overall effect size change was found to be statistically significant, although the change was very small. Of health behaviors tested on church attendance, alcohol and physical

Table 7.7. Mediation Results

Variable	Category	Unmediated Odds ratio (95% CI)	p value	Mediated Odds ratio (95% CI)	p value
N=1232					
Church			**<.01**		**.02**
Attendance					
	None	.70(.50,.97)	**.03**	.71(.50,1.01)	**.06**
	Occasional	.62(.46,.82)	**<.001**	.65(.48,.88)	**<.01**
	Regular	Reference		Reference	

activity were found to be statistically significant mediators through indirect effects of the relationship between church attendance and health status.

Discussion

The results were generally consistent with study hypotheses about the relationship of religious involvement with health status and health behaviors for immigrants. When associations were found, there was typically a modest effect size. The exception was smoking, where there was a double-digit odds ratio, despite having a small incidence.

The directions of the effects were as predicted, with regular church-goers always having better outcomes than those who never attended church (Table 5). The odds of being in better health for those who never attended church and those who attended only occasionally were about a third less than regular church attendees. It is not surprising that regular church goers had the best results as expected, given the theoretical mechanisms described and results of prior studies (Koenig et al. 2001, Levin 2001, Powell et al. 2003).

Interestingly, there was a threshold rather than a dosage effect, meaning that church attendance didn't have an impact until it reached a certain level; the threshold level varied based on outcome measure. For health status, there was no statistical difference between those who never attended church and those who attended occasionally; a connection between church attendance and better health was found only among those who attended regularly, at least weekly; this is evidence of a threshold effect for positive health status with regular church attendance.

This threshold was observed for binge drinking as well. There was no difference between those who never attended church and those who attended occasionally; a connection between church attendance and binge drinking was found only among those who attended regularly. In the case of physical activity and smoking, however, the threshold for a relationship between church attendance and positive outcomes was occasional attendance as both occasional church attendance and regular church attendance were associated with lowered odds of smoking and increased odds of physical activity, relative to non-attendance. No association was found between church attendance and obesity.

The findings of an association between church attendance and health status are consistent with and lend support, in general, to the theoretical framework laid out initially. Note, however, that this study could not directly test the theoretical mechanisms of social resources, social capital magnified, or religious capital: because of the cross-sectional study design, only an association between religious involvement and better health could be demonstrated, not causality of religious involvement for better health.

That there was no difference between the never and occasional churchgoers for health status is surprising, however. Perhaps the leading criticism of the validity of an association between religious participation and health is that church attendance is merely a proxy for social capital (Bagiella et al. 2005, Sloan 2006). There is evidence of a gradient between social capital and health, however, as additional quantities of capital improve health outcomes regardless of level (Emmons 2000). If social factors are the only mechanism accounting for the relationship between church attendance and health, and attending helps one attain more resources, we would have expected to find that each additional attendance level leads to a larger effect, with occasional church-goers expected to have improved odds of better health than non-churchgoers, but this did not occur.

Although the individual social and religious theoretical mechanisms underlying a relationship were not tested separately, the finding of a threshold of regular attendance being required for better health is consistent with the hypothesis that religious capital is a necessary if not sufficient factor in the positive relationship between church attendance and health status. Whereas it cannot be determined conclusively for this study sample, it is reasonable to assume that, relative to those who attend less frequently, those who attend church at least weekly are, on average, more likely to be religious, as indicated by their more ongoing

commitment. The religious capital accumulated through the theorized mechanisms by attending church regularly may contribute to their improved odds of better health than occasional and non-churchgoers.

Unlike church attendance in the United States, prior country church attendance was not associated with health status. This finding was contrary to expectations. In addition, the individual contrasts among levels of church attendance differed between U.S. and prior country church attendance. These results support the idea that context matters for any relationship found between religious involvement and outcome. Context of the country where the religious involvement occurs should be taken into account when conducting research and interpreting results. For example, differences in degree of country religiosity, alternative forms of social capital, or government actions among countries may affect health (Nicholson et al. 2009). It is also surprising that denomination was not associated with health status, hence it is possible that the aspects of religion that influence health status do not vary significantly across denominations.

The only congregational variable available for study in the NIS data set was the per cent of coethnics in the church attended. It could be expected that this would be associated with better health because coethnics can provide a beneficial context of reception (Menjivar 2000) and information about medical care (Menjivar 2002). This church coethnicity variable was not associated with health status, however, contrary to expectations. It is possible that the hypothesized mechanisms are less necessary for churchgoers. For example, because of the high level of trust in a religious community, information and support can be obtained as easily from other ethnicities, and there may be fewer conflicts than expected, especially since 95% of the study sample who attended church went to Spanish-language services.

Salvadorans had increased odds of being in better health than both Mexicans and Guatemalans, the latter relationship only marginally significant. This was contrary to expectations. Mexicans were hypothesized to have better health status than immigrants from the other two countries because they are the dominant minority and have more resources, are likely to be in a coethnic church, and are less likely than other groups to have gone through stressful political upheavals in their home country. It is unclear why results showed that Salvadorans were in better health, but the finding may be linked to more representation of all parts of society in Salvadoran immigrants and their important social networks (Menjivar 2002). In addition, because coethnic

churches were less important than hypothesized, they were likely not to confer an advantage to the dominant ethnic group, Mexicans.

English proficiency was negatively associated with health status, possibly because it can impede interaction with the non-Latino community who can provide resources and curtail ability to use the health care system, especially when qualified interpreters are not available (Woloshin et al. 1995). However, this study found that another acculturation measure, increased number of years in the U.S., was associated with lower odds of being in better health. This finding, which replicates that of other studies (e.g., Zsembik and Fennel 2005), may be related to worsened behaviors related to health status, which have been associated with length of time in the U.S. (Abraído et al. 2005; Lara et al. 2005). However, it is likely that other factors also play a role in health status.

The findings of an association between church attendance and positive health behaviors were as expected as well, though the varying threshold effects were surprising. The finding of lower smoking and binge drinking rates among the religiously involved was as expected, given prior studies (Ford 2006; Hill et al. 2007). The strong finding for smoking is especially noteworthy because smoking can affect health negatively in numerous ways (ACS 2009). The findings are consistent with hypothesized theoretical mechanisms such as social group or leadership influences in a religious community limiting deviance from denominational teachings and proscriptions against smoking. The finding for drinking is also supported by another study that found that both communal and doctrinal factors are associated with lower alcohol use among churchgoing Latinos (Ford 2006).

The one protective behavior examined in the study was physical activity. Church attendance was associated with physical activity (Table 6). The effect size was modest, with the odds for non-attendees being more physically active about two-thirds that of regular and occasional attendees. This is consistent with prior evidence that churches can be useful venues for promoting physical activity (Arredondo 2005).

The obesity epidemic in the United States has received ample publicity, including for Latinos. Obesity was the only current behavior analyzed for which church attendance was not associated with health status. The result was contrary to expectations. Moreover, this null finding is somewhat surprising since more physical activity, which was associated with church attendance, is also associated with decreased obesity. The reason for this result for obesity is unclear.

Other unmeasured variables may confound the relationship between obesity and church attendance, such as genetics, nutrition, social networks, or family influences.

Do Health Behaviors Explain the Relationship between Church Attendance and Health Status?

Mediation means that a factor may be the cause of a relationship found; for example, better health behaviors may be the cause of the relationship found between increased church attendance and increased health. There is much evidence of a general relationship between health behaviors and health status; one study showed an indirect effect for churchgoers (Koenig 2009). Still, many other factors can also impact health status other than health behaviors among church attendees such as environment, genetics and social support (Berkman and Kawachi 2000, Koenig et al. 2001, Levin 2001, Powell et al. 2003, Nicholson et al. 2009). Therefore, mediation of health behaviors was expected to be only partial.

The hypothesis that health behaviors mediate the relationship between religious involvement and health status among immigrants, in particular, is complex and interesting because many health behaviors worsen with increased acculturation (Abraído-Lanza et al. 2005, Markides 2005). In contrast, a number of other studies link church attendance and improved health behaviors (Levin 2001, Arredondo 2005, Ford 2006, Hill 2006). It is uncertain from prior research whether the positive association between church attendance and health behaviors will counteract the worsening health behaviors that accompany acculturation.

When the health behaviors were added to the model for health status and subsequent statistical tests performed, a decrease was found in the effect size for church attendance. This is evidence that health behaviors mediate the relationship between church attendance and health status as predicted. However, the proportional change in odds ratio was very small, under five percent for the comparison between both none and occasional churchgoers and between none and regular churchgoers (Table 7). One of the reasons for this small degree of mediation may be the issue of acculturation. One measure of acculturation, number of years in the United States, was negatively associated with health status but not associated with smoking, binge drinking,

physical exercise or obesity. This may indicate that length of stay in the U.S. influences health status in ways other than through health behaviors.

But if behaviors explain only a very small part of the relationship between church attendance and health status and the relationship exists in spite of contradictory associations between health status and health behaviors among length of stay in the U.S. and other variables, then what does explain the relationship? There are a number of mechanisms by which church attendance can affect health outside of health behaviors, especially in terms of social and religious capital. For example, social networks may allow access to additional resources or health ministries may provide congregants with more instrumental support through preventative or care-giving programs (Campbell et al. 2007). Although these are plausible theories worthy of additional research, this study's analyses cannot conclusively answer these questions.

Limitations/Additional Research

Because these data are cross-sectional, we cannot prove causality of a relationship between church attendance and health outcomes. We cannot reject the hypothesis that those in better health or with healthier behaviors are likelier to want to attend church. However, there is no evidence of this. In addition, all variables except for skin color are self-report indicators, which may limit the validity of the responses to the extent that there is intentional or unintentional respondent bias.

The hypothesis that only those with adequate physical functional status attend church cannot be ruled out. However, 85% of the study sample is under age 50, therefore physical capability is unlikely to be an explanatory factor for variations in attendance.

The NIS question about church attendance was not asked in terms of frequency per time period (e.g. once a month, once a week, etc.) but as a total of the number of times respondents attended since legal permanent residence (LPR). Therefore, it is uncertain how much one can assume attendance in the period since LPR was typical of any prior attendance in the United States during which the respondent may have been undocumented. Categorization of church attendance into none, occasional and regular, as coded in this study, may help to limit these potential biases because any bias would occur only if the reporting

error was so large as to shift someone's attendance from one category to another.

A limitation to the denomination variable is that the dataset does not contain information on type of Catholic, given that some research shows Latino Catholics to be disproportionately Charismatic Catholics (Pew 2007). In addition, whereas other surveys find less than one percent of Latinos are Orthodox (Pew 2007), there were five percent Orthodox in this sample (Table 2); it seems unlikely that this group is actually what is commonly called Orthodox. It seems likely that some fundamentalist Protestants interpreted the Spanish translation of the term Orthodox Christian as referring to them and selected this category. This could not be determined from the public use NIS data set, however.

Some studies have found that the standard self-rated health question used in this survey may be less valid for recent Latino immigrants. However, this measure is still widely used for studies of Latinos, and controlling for years in the U.S., as was done in this study, helps address this issue. Further, if there is any bias it would only impact the direction of results if the validity of the question varied by level of church attendance; there is no evidence of this occurring, although it cannot be ruled out.

Whereas the survey was very extensive and many factors were included in the analysis, a number of potential confounding variables were omitted. In particular, social measures outside of family and religious community could not be included. It is possible that a positive association may merely be the result of a larger social network of those who attend church. Those attending church frequently may be less likely to have time and interest in developing large social networks outside the church. In addition, fellow members of a church may form part of or impact the social network (Chatters 2000), which would be captured in the church attendance variable.

This study cannot fully answer questions related to underlying mechanisms for findings of a relationship between church attendance and health status, smoking, binge drinking, and physical activity level. Given the paucity of prior evidence related to the research aims, however, understanding the association between religious involvement and health and its variations by ethnic and religious subgroups is an important contribution. Questions on congregational characteristics and reasons why people attended services would have also been useful and provided more depth to the analysis.

Additional research is needed to understand better the mechanisms by which church attendance can affect health. Useful qualitative research could involve intensive interviews with church leaders and focus groups with church congregants. Analyses using congregational information together with the individual level data in the survey would be of value as well using a multilevel model. A longitudinal analysis would be useful to measure change in outcomes as well as current levels; this will be possible when the next wave of NIS survey data is released. This study focused on Latino Christians; it would be of value to understand the extent to which the findings apply to other religions and ethnic groups, with related policy implications. Whereas this study examined only health status overall, examining relationships with individual diseases are also useful.

Health Promotion Interventions and Policy Implications

This study provides a better understanding of the relationship between religious involvement and the health of Latino immigrants. Whereas there have been interventions implemented and studied for individual communities, there is a paucity of evidence on a national level related to the health of immigrant groups that attend church. Using this information can be of great value in implementing health promotion initiatives for church-going populations on a more systematic basis.

This study can help policymakers leverage the fact that faith communities can play such an important role in the lives of immigrants. While on average, immigrant churchgoers are in better health, not all immigrants who attend church are in excellent or very good health, and not all refrain from smoking and drinking, avoid being obese, or are physically active. Policies can be developed and implemented to take advantage of these opportunities in potentially addressing the problem of worsening health among immigrants as they spend more time living in the United States, and reduce health disparities of Latinos.

The study findings do not mean that we should recommend people start going to church merely to improve their health. Many immigrants already attend church, however (Cadge and Ecklund 2007, Pew 2007), and an opportunity exists to take advantage of regular church attendance by immigrant populations to improve their health. The context in which people live can make choosing healthy behaviors much easier. Social and religious capital can be leveraged to provide such a helpful

context. Policies can be developed and implemented to take advantage of these opportunities in potentially addressing the problem of worsening health among immigrants as they spend more time living in the United States and thereby reduce health disparities of Latinos.

Although there is evidence from this study supporting the idea of faith-based initiatives, who pays for the program is a separate and more controversial issue. The study does not imply that faith-based initiatives should be government or privately sponsored, only that such initiatives have potential. Attending church is a low-cost widely available resource to help reach people in a community given appropriate faith-based program structure (Campbell et al. 2007). A recent study found that congregations in the poorest neighborhoods and whose members have least access to health care are the least likely to sponsor health programs (Trinitapoli et al. 2009). Thus, an opportunity may exist for faith-based programs to build upon such findings and reach immigrant populations through faith-based initiatives.

In addition, there may be an important public policy opportunity related to church attendance for immigrants in particular because of the epidemiological paradox found for immigrants, especially Latinos, described above. Some studies have found that Latinos who have lived longer in the United States have worse health outcomes; a leading hypothesis for the worsened health is that as immigrants become more acculturated, their health-related behaviors such as smoking, drinking, and diet worsen, although exercise may increase. As noted, however, faith communities can have the opposite effect, being associated with less smoking and drinking and more physical activity. As a result, attending church can potentially overcome the decrease in health behaviors and health status associated with length of stay found in the overall immigrant population that may be the cause of the immigrant health paradox.

Conclusion

Despite its limitations, this study found important results. Religious involvement has an important place among factors related to the health of Latinos. An association exists between church attendance and better health status but only for those who attend church at least weekly. Positive outcomes for three of the four health behaviors studied, smoking, binge drinking, and physical activity are associated with more

church attendance, and for two of the three, occasional attendance is also related to positive outcomes. Improved health behaviors explained some of the relationship between religious involvement and better health, but only a small part. These findings are important not only for the study's aims but because of their implications for policy and interventions as well as to guide future research.

References

Abraído-Lanza, Ana, Bruce Dohrenwend, Daisy Ng-Mak, and J. Blake Turner. 1999. "The Latino Mortality Paradox: A Test of the Salmon Bias and Healthy Migrant Hypotheses." *American Journal of Public Health* 90: 1704–08.

Abraído-Lanza, Ana., Maria Chao and Karen Florez. 2005. "Do Healthy Behaviors Decline with Greater Acculturation? Implications for the Latino Mortality Paradox." *Social Science and Medicine* 61: 1243–55.

Allison, Paul. 2001. *Missing Data*. Thousand Oaks, CA: Sage.

American Cancer Society. 2010. "Tobacco-Related Cancers Fact Sheet." *http://www .cancer.org/ Cancer/CancerCauses/TobaccoCancer/tobacco-related-cancer-fact-sheet*. Accessed December 12, 2010.

Arredondo, Elva. 2005. "Is Church Attendance Associated with Latinas' Health Status and Self-reported Behaviors?" *American Journal of Health Behavior* 29: 502–11.

Avalos, Hector. 2004. *Introduction to the U.S. Latina and Latino Religious Experience*. Leiden: Brill.

Badillo, David. 2006. *Latinos and the New Immigrant Church*. Baltimore: Johns Hopkins University Press.

Bagiella, Emilia, Victor Hong and Richard Sloan. 2005. "Religious Attendance as a Predictor of Survival in the EPESE Cohorts." *International Journal of Epidemiology* 42: 443–51.

Baron, Ruben and David Kenny. 1986. "The Moderator-Mediator Variable Distinction in Social Psychological Research." *Journal of Personality and Social Psychology* 51: 1173–82.

Berkman, Lisa and Ichiro Kawachi. 2000. *Social Epidemiology*. New York: Oxford University Press.

Berger, Peter L. 1967. *The Sacred Canopy: Elements of a Sociological Theory of Religion*. Garden City, NY: Doubleday.

_____. 1974. "Some Second Thoughts on Substantive versus Functional Definitions of Religion." *Journal for the Scientific Study of Religion* 13: 125–34.

Bourdieu, Pierre. 1986. "The Forms of Capital." Pp. 241–258 in *Handbook of Theory and Research for Sociology of Education*, edited by J.G. Richardson. Greenwich, CT: Greenwood Press.

Cadge, Wendy and Elaine Ecklund. 2007. "Immigrants and Religion." *Annual Review of Sociology* 33: 359–79.

Campbell, Marci, Marlyn Hudson, Ken Resnicow, Natasha Blakeney, Amy Paxton, and Monica Baskin. 2007. "Church-based Health Promotion Interventions: Evidence and Lessons Learned." *Annual Review of Public Health* 28: 213–34.

Casanova, José. 1994. *Public Religions in the Modern World*. Chicago: University of Chicago Press.

Chatters, Linda. 2000. "Religion and Health: Public Health Research and Practice." *Annual Review of Public Health* 21: 355–67.

Coleman, James. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology* 94: S95–S121.

Drevenstedt, Greg. 1998. "Race and Ethnic Differences in the Effects of Religious Attendance on Subjective Health." *Review of Religious Research* 39: 245–63.
Durkheim, Émile. 1951. *Suicide*. New York: Free Press.
_____. 1957. *The Elementary Forms of Religious Life*. London: Allyn & Unwin.
Ebaugh. Helen R. and Janet Chafetz. 2000. *Religion and the New Immigrants*. Walnut Creek, CA: Altamira Press.
Ellison, Christopher G. and Jeffrey Levin. 1998. "The Religion-Health Connection: Evidence, Theory and Future Directions." *Health Education and Behavior* 25: 700–20.
Ellison, Christopher G., and Darren Sherkat. 1995. "Is Sociology the Core Discipline for the Scientific Study of Religion?" *Social Forces* 73: 1255–66.
Emmons, Karen. 2000. "Health Behaviors in a Social Context." Pp. 242–266 in *Social Epidemiology*, edited by L.Berkman and I.Kawachi. New York: Oxford University Press.
Foley, Michael, and Dean Hoge. 2007. *Religion and the New Immigrants: How Faith Communities Form Our Newest Citizens*. New York: Oxford University Press.
Ford, Julie. 2006. "Some Implications of Denominational Heterogeneity and Church Attendance for Alcohol Consumption among Hispanics." *Journal for the Scientific Study of Religion* 45: 253–67.
_____ and Charles Kadushin. 2002. "Between Sacral Belief and Moral Community: A Multidimensional Approach to the Relationship between Religion and Alcohol Among Whites and Blacks." *Sociological Forum* 17: 255–79.
Geertz, Clifford. 1973. "Religion as a Cultural System" Pp. 87–125 in *Interpretation of Cultures: Selections of Essays*, New York: Basic Books.
Gillum, R. Frank, 2005. "Frequency of Attendance at Religious Services and Cigarette Smoking in American Women and Men." *Preventive Medicine* 41: 607–13.
Gruber, Jonathan. 2005. "Religious Market Structure, Religious Participation and Outcomes: Is Religion Good for You?" National Bureau of Economic Research Working Paper No. 11377.
Guzmán Betsy. 2001. *The Hispanic Population: Census 2000 Brief* (C2KBR/01-3). Washington, DC: U.S. Census Bureau.
Hill, Peter and Kenneth Pargament. 2003. "Advances in the Conceptualization and Measurement of Religion and Spirituality: Implications for Physical and Mental Health Research." *American Psychologist* 58: 64–74.
Hill, Terrence, Amy Burdette, Christopher Ellison, and Marc Musick. 2006. "Religious Attendance and the Health Behaviors of Texas Adults." *Preventive Medicine* 42: 309–12.
Hill, Terrence, Chistopher Ellison, Amy Burdette, and Marc Musick. 2007. "Religious Involvement and Healthy Lifestyles: Evidence from the Survey of Texas Adults." *Annals of Behavioral Medicine* 34: 217–22.
Hirschman, Charles. 2004. "The Role of Religion in the Origins and Adaptation of Immigrant Groups in the U.S." *International Migration Review* 38: 1206–33.
Iannacone, Lawrence. 1990. "Religious Practice: A Human Capital Approach." *Journal for the Scientific Study of Religion* 29:297–314.
_____. 1994. "Why Strict Churches Are Strong." *American Journal of Sociology* 99:1180–1211.
Jasso, Guillermina, Doug Massey, Mark Rosenzweig, and James Smith. 2006. *The New Immigrant Survey 2003. http://nis.princeton.edu*.
Kaplan, Sue, Neil Caiman, Maxine Golub, Charlaine Ruddock, and John Billings. 2006. "The Role of Faith Based Institutions in Addressing Health Disparities." *Journal of Health Care for the Poor and Underserved* 17: 9–19.
Kawachi, I., and Lisa Berkman. 2000. "Social Cohesion, Social Capital and Health." Pp. 174–190 in *Social Epidemiology*, edited by L. Berkman and I. Kawachi. New York: Oxford University Press.

Koenig, Harold, Michael McCullouch, and David Larson (eds.) 2001. *Handbook of Religion and Health*. New York: Oxford University Press.
Koenig, Laura and George Vailant. 2009. "A Prospective Study of Church Attendance and Health over the Lifespan." *Health Psychology* 28: 117–24.
Krause, Neal. 2006. "Church-based Social Support and Change in Health over Time." *Review of Religious Research* 48: 125–40.
Lara, Marielena, Kristina Gamboa, M. Iya Kahramanian, Leo Morales, and David Bautista. 2005. "Acculturation and Latino Health in the United States: A Review of the Literature and its Sociopolitical Context." *Annual Review of Public Health* 26: 367–97.
Levin, Jeffrey. 2001 *God, Faith, and Health*. New York: Wiley.
_____. 2009. "And Let us Make a Name: Reflections on the Future of the Religion and Health Field." *Journal of Religion and Health* 48: 125–45.
_____ and Kyriakos Markides. 1986. "Religious Attendance and Subjective Health." *Journal for the Scientific Study of Religion* 25:1–39.
_____ and Laura Ray. 1996. "Religious Attendance and Psychological Well-being in Mexican Americans: A Panel Analysis of Three-generations Data." *Gerontologist* 36: 454–56.
Markides, Kyriakos and Karl Eschbach. 2005. "Aging, Migration, and Mortality: Current Status of Research on the Hispanic Paradox." *Journal of Gerontology: Psychological Sciences and Social Sciences* 60B: S68–S75.
McCullough, Michael, W. T. Hoyt, David Larson, Harold Koenig, and Carl Thoreson. 2000. "Religious Involvement and Mortality: A Meta-analytic Review." *Health Psychology* 19: 221–32.
Menjivar, Cecilia. 2000. *Fragmented Ties: Salvadoran Immigrant Networks in the U.S.* Berkeley: University of California Press.
_____. 2002. "The Ties that Heal: Guatemalan Immigrant Networks and Medical Treatment." *International Migration Review* 36: 437–66.
_____. 2003. "Religion and Immigration in Comparative Perspective: Catholic and Evangelical Salvadorans in San Francisco, Washington, D.C. and Phoenix." *Sociology of Religion* 64: 21–45.
Min, Pyong Gap. 1992. "The Structure and Social Functions of Korean Immigrant Churches in the United States." *International Migration Review* 26: 1370–94.
Muntaner, Charles, John Lynch and George Davey-Smith. 2001. "Social Capital, Disorganized Communities and the Third Way: Understanding the Retreat from Structural Inequalities in Epidemiology and Public Health." *International Journal of Health Services* 31: 213–37.
Nicholson, Amanda, Richard Rose and Martin Bobak. 2009. "Association between Attendance at Religious Services and Self-reported Health in 22 European Countries." *Social Science and Medicine* 69: 519–28.
Payer, Lynn. 1989. *Medicine and Culture*. Baltimore: Penguin.
Portes, Alejandro. 1998. "Social Capital: Its Origins and Applications in Modern Sociology." *Annual Review of Sociology* 24:1–24.
_____ and Ruben Rumbaut. 2006. *Immigrant America: A Portrait*, 3rd ed. Berkeley: University of California Press.
Powell, Linda, Leila Shahabi and Carl Thoresen. 2003. 'Religion and Spirituality: Linkages to Physical Health." *American Psychologist* 58: 36–52.
Preacher, Kristopher and Andrew Hayes. 2008. "Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models." *Behavior Research Methods* 40: 879–91.
Putnam, Robert. 2000. *Bowling Alone*. New York: Simon & Schuster.
Rumbaut, Ruben. 1997. "Assimilation and its Discontents: Between Rhetoric and Reality." *International Migration Review* 31: 923–60.
Scheitle, Christopher and Amy Adamcyzk. 2009. "It Takes Two: The Interplay of Individual and Group Theology on Social Embeddedness." *Journal for the Scientific Study of Religion* 48: 16–29.

Sherkat, Darren and Christopher G. Ellison. 1999. "Recent Developments and Current Controversies in the Sociology of Religion." *Annual Review of Sociology* 25: 433–94.
Sloan, Richard and Emilia Bagiella. 1999. "Religion, Spirituality, and Medicine." *Lancet* 353: 664–67.
Sloan, Richard. 2006. *Blind Faith*. New York: St. Martin's Press.
Stark, Rodney, and Roger Finke. 2001. *Acts of Faith: Explaining the Human Side of Religion*. Berkeley: University of California Press..
Trinitapoli, Jennifer, Christopher G. Ellison and Jason Boardman. 2009. "US Religious Congregations and the Sponsorship of Health-related Programs." *Social Science and Medicine* 68: 2231–39.
Warner, R. Stephen and Judith Wittner (eds.). 1998. *Gatherings in Diaspora: Religious Communities and the New Immigration.* Philadelphia: Temple University Press.
Weber, Max. 1963. *Sociology of Religion.* Boston: Beacon Press.
Woloshin Steve, Nina Bickell, Lisa Schwartz, Francesca Gany, and H. Gilbert Welch. "Language Barriers in Medicine in the United States." 1995. *JAMA* 273: 724–25.
Wuthnow, Robert. 1992. *The Restructuring of American Religion: Society and Faith Since World War II*. Grand Rapids, MI: Eerdmans.
Yang, Fenggang and Helen Rose Ebaugh. 2001. "Transformations in New Immigrant Religions and their Global Implications." *American Sociological Review* 66: 269–88.
Zsembik Barbara and Dana Fennel. 2005. "Ethnic Variation in Health and the Determinants of Health among Latinos." *Social Science & Medicine* 61: 53–63.

CHAPTER EIGHT

STRESS, RELIGIOUS-BASED COPING, AND PHYSICAL HEALTH

Neal Krause

A number of researchers have observed that people have practiced some type of religion for thousands of years (Eliade 1978). Moreover, religion may be found today in virtually every culture (Clark 1958). Some investigators maintain that religion is so enduring and pervasive because it satisfies a number of basic human needs (Hood, Hill and Spilka 2009). One of the most fundamental needs that religion satisfies has to do with helping people deal with adversity. This makes sense because stress is ubiquitous: everyone is confronted by an adverse event at some point in his or her lifetime, and most people experience a number of stressors as they move through the life course.

A key challenge facing scholars involves specifying precisely how religion offsets the noxious effects of stress. Fortunately, they do not have to start from scratch because valuable insights may be gleaned from the vast literature on the stress process in secular settings. This research indicates that stress exerts a noxious effect on physical as well as mental health (e.g., McEwen 2003). Moreover, secular studies of the stress process further reveal that the deleterious effects of stress on health are buffered or offset by a range of coping resources (Krause 2004). Researchers in religion have taken advantage of this work by identifying and assessing how a number of different religious coping resources offset the pernicious effects of stress on health. Included among these religious coping resources are church-based support (Krause 2008a), specific religious coping responses (Pargament 1997), religiously-based feelings of control (Schieman, Pudrovska and Milkie 2005), prayer (Krause 2009), and a religious sense of meaning in life (Krause 2008b).

The purpose of the current chapter is to take a modest step toward advancing theory on religion, stress and physical health. This will be accomplished by examining the conceptual underpinnings of a select set of religious coping resources. In the process, an effort will be made

to show how the theoretical foundations of these coping resources can be sharpened and extended. In order to reach this goal, three main issues will be examined in the discussion that follows: First, problems in defining stress will be identified and different types of stressors will be identified. This discussion will reveal that religion may be best suited for dealing with some kinds of stressors, but not others. Second, select religious coping resources that are thought to offset the pernicious effects of stress on health will be discussed. Theoretical advances and conceptual shortcomings will be explored for each resource. Third, several unresolved or unexamined issues will be identified that may help move the literature forward. Throughout, an emphasis will be placed on physical health outcomes, as a complement to the earlier chapter by Scott Schieman in this volume dealing with how religion and stress affect mental health.

Examining Different Types of Stress

Because every life is touched by adversity, it would seem that everyone knows what stress is and should be able to define it easily. Yet, researchers have had a notoriously difficult time trying to define stress. In fact, as Cohen and his colleagues observe, "some commentators have gone as far as to argue that the term stress has so many different meanings that it has become a useless concept." No attempt will be made in this chapter to resolve this seemingly intractable problem. Instead, the definition of stress that was developed by Cohen et al. will be used as a point of departure for exploring the interface between religion and the stress process. They argue that stress refers to, "environmental demands [that] tax or exceed the adaptive capacity of an organism, resulting in psychological and biological changes that may place persons at risk for disease" (Cohen, Kessler and Gordon 1995: 3).

As research on the stress process in secular settings began to mature, investigators quickly realized that there are qualitatively different kinds of stressors. Although there is no agreed upon way of classifying different types of stress, most investigators would probably feel comfortable with the notion that there are four main types of stressors: daily hassles, stressful life events, chronic strain, and lifetime trauma. Essentially, these stressors differ by their presumed duration and intensity (i.e., impact). More specifically, daily hassles (e.g., traffic jams) arise and dissipate quickly (Kanner et al. 1981). Moreover, this type of stress is thought to

have a relatively minor impact on health. Stressful life events (e.g., the death of a loved one or the loss of a job) are presumed to be more long-lived. Although there is some debate about how long the deleterious effects of stressful events last, some researchers estimate that events arising one year prior to a study will have the strongest effects on health (Turner and Wheaton 1995).

In contrast to the stressors that have been discussed so far, chronic strains have no clearly defined endpoint because they are thought to be persistent and ongoing (Gottlieb 1997). Chronic financial strain would be a good example of this type of stressor because some people spend an entire lifetime grappling with ongoing economic difficulty. Due in part to this long duration, the impact of chronic strains is presumed to be more severe than the effects of either daily hassles or stressful life events. However, of all the stressors that have been identified in the literature, lifetime traumas are thought to have the longest duration and the most deleterious effects on physical health. Traumatic events are spectacular, horrifying and deeply disturbing life experiences that are typically outside the range of normal human experience. Included among lifetime traumas are physical abuse, sexual abuse, parental drug or alcohol abuse, and traumas associated with participation in combat (Wheaton 1994). Use of the term "lifetime trauma" indicates that the effects of this type of stress on health are presumed to be manifest across the entire life span and there is some evidence that this may be true (Krause, Shaw and Cairney 2004).

Because people may experience different kinds of stressor, some researchers have begun to ask whether religion is more helpful for dealing with some types of stress than others. More specifically, Gottlieb (1997) maintains that religion is most useful for coping with stressors that cannot be altered or avoided easily. Turning to an example will help clarify his point. As discussed above, sexual abuse is widely considered to be a lifetime trauma. However, by the time the victim of this stressor reaches adult life, there is nothing that can be done to confront the perpetrator because this individual is, in many cases, dead. Religion may be especially useful for coping with the fallout from lifetime trauma because it may help the victim let go of the hurt by ultimately forgiving the perpetrator. Unfortunately, there do not appear to be any studies in the literature that evaluate whether religion is especially useful for dealing with the effects of lifetime trauma.

Although the idea that religion is useful for dealing with certain types of stress has intuitive appeal, only a few researchers have

empirically examined this issue in a systematic manner. Perhaps the most comprehensive study was conducted by Mattlin, Wethington and Kessler (1990). These investigators evaluated whether religion or other secular coping responses (e.g., active behavioral coping—doing something concrete to alleviate a problem) offset the effects of different types of stressful life events on anxiety and depression. They report that religion was especially useful for helping people cope with the death of a loved one but less helpful for dealing with other stressors, such as practical problems (e.g., legal difficulties). Unfortunately, their study did not cover all types of stressors (e.g., lifetime traumas) and did not include physical health outcomes in their research. Moreover, these investigators assessed religious coping with a single item that asked study participants how often they relied on their religious beliefs to cope with a particular stressor. As the discussion in the next section will reveal, there is far more to religious coping than that.

Religious Coping Resources and the Stress Process

Researchers have known for some time that religion is a vast, multidimensional construct (Fetzer Institute 1999). This raises the possibility that religion may help people deal with stress in a number of different ways, which is in fact what the literature suggests. Unfortunately, all the ways in which religion may help people deal with adversity cannot feasibly be covered in a single chapter. Consequently, five dimensions of religion that appear to have the greatest potential for alleviating the unwanted effects of stress are examined below: church-based social support, religious coping responses, prayer, religiously-oriented feelings of control, and a religious sense of meaning in life.

The Stress-Buffering Functions of Church-Based Social Support

A vast number of studies have been conducted to explore the interface between social support, stress and health in secular settings (see Cohen 2004, for a review of this literature). This research provides convincing evidence that the pernicious effects of stress on health are buffered or reduced for individuals who receive sufficient support from family members and friends. The classic work of Caplan (1981) provides insight into how the salubrious effects of social support arise. He maintains that stress is especially noxious because the sheer magnitude and disruptiveness of an event often immobilizes the individual

by compromising his or her usual problem-solving abilities. When this happens, the individual typically turns to significant others for assistance. Caplan maintains that social network members respond to requests for assistance by helping the individual evaluate the problem situation and by helping him or her develop a feasible plan of action. Then, once the plan is in hand, significant others help implement it, and they provide feedback and guidance should unforeseen exigencies arise. As a result, the problem situation is brought under control, and the potentially health-damaging effects of the event are reduced significantly.

Given the sheer volume of research on social support and stress in secular contexts, it is not surprising to find that researchers have tried to see if social support systems that arise within the church perform a similar stress-buffering function. In the process of examining this issue more fully, several key findings have emerged that illustrate the potentially unique ways in which religion may shape the relationships among stress, social support and health. Basic tenets of the major faith traditions extol the virtues of loving others, helping people who are in need, and forgiving individuals for the things they have done wrong (Krause 2008a). In the process, the faithful are encouraged to be compassionate and nonjudgmental (Wuthnow 1991). Knowing that others in the congregation share these views creates a unique social milieu that makes it easier to seek out and accept assistance from fellow church members when difficult times are encountered. This raises the possibility that church-based social support may be even more effective in offsetting the effects of stress than support that is received from individuals in the secular world. Three studies support and extend this point of view.

In the first of three studies on this topic, I found that emotional support from fellow church members offsets the noxious effects of financial strain on self-rated health, but support from people outside the church does not have a similar stress-buffering function. The fact that these effects were observed with chronic financial strain harkens back to the discussion in the previous section, where it was proposed that religion may be especially useful for offsetting the effects of stressors that cannot be avoided or altered easily. This issue is especially relevant for the study (Krause 2006a) because the participants were older adults who were retired. Consequently, they had relatively few options to resolve financial problems that may arise.

The second study examined the effects of different dimensions of church-based support on mortality (Krause 2006b). The findings from

this study suggest that giving emotional support to fellow church members is more likely to offset the effects of financial strain on odds of dying than receiving emotional support from people in the congregation. Simply put, this study suggests that it may indeed be more blessed to give than to receive.

The third study extends the potential scope and influence of social support that arises within the church (Krause 2010a). This study finds that individuals who receive more support from fellow church members also indicate they are more likely to receive assistance from people outside the church as well. These results suggest that precepts that promote close social ties in church may be generalized to social relationships in the secular world. This raises an interesting possibility. As noted above, a vast number of studies that were conducted in secular settings reveal that support from family members and friends buffers the effects of stress on health. If lessons that are learned about social relationships in church shape the way in which social relationships are formed in secular world, then perhaps studies of social support from secular sources may indirectly reflect the influence of religion.

Reflecting on the interface between secular and church-based social support raises another closely-related issue. Measures of social support in secular settings typically ask about assistance that has been provided by family members and friends. But no effort is typically made to determine where these individuals are socially situated. Consequently, when study participants respond to these items, they may actually be thinking of social relationships they have formed with significant others in church. As Stark (2008) recently pointed out, about 32% of the people in our nation attend a worship service on any given Sunday. This figure suggests that the probability that church-based social relationships are being captured by so-called secular support measures may actually be quite high.

As these last two points suggest, the boundary between social relationships in religious settings and social relationships in secular settings may be quite porous. Even so, many of the studies of the role that social support plays in the stress process subtly convey the impression that these are largely separate social worlds. This is unfortunate because acknowledging the interface between them raises some interesting theoretical possibilities. As noted earlier, the first of my studies discussed here (2006a) assessed whether church-based social support is more effective in offsetting the effects of stress than social relationships

outside the church. But this may not be the best way to frame the relationship between the two. Perhaps more valuable insight could be obtained by asking how secular and church-based social relationships act in *conjunction* to reduce the deleterious effects of stress on health.

As these comments reveal, research on church-based social support, stress and health is in its infancy. In addition to assessing issues involving the interface between secular and church-based social relationships, exploring two other research questions may add further depth to our understanding of the role that is played by church-based relationships in the stress process. First, as a number of researchers have pointed out, social support is really an umbrella term that refers to a multidimensional conceptual domain that encompasses a number of different ways in which social support can be conceptualized and measured (Barrera 1986). For example, the research that has been discussed up to this point deals primarily with the amount of assistance that has been provided by fellow church members. This is typically called either received or enacted support. However, another important dimension of support involves whether recipients are satisfied with the amount of assistance they have received. This dimension of support is important because it is based on the premise that the need for social support is likely to vary from individual to individual. This means that some people may be satisfied with a fairly minimal amount of assistance from their social network members while other individuals feel more comfortable when significant others provide considerably more help. So if there is variation in the need for social support, knowing whether an individual's needs for assistance have been met may be a more useful way to assess the effectiveness of social support in the stress process. And this is best captured by asking study participants whether they are satisfied with the support they have received from significant others. There do not appear to be any studies in the literature that evaluate whether type of church-based support buffers the effects of stress on health.

The second issue that will enrich the literature on social support in the church, stress and health also has to do with the way church-based social support is measured. Enacted support in the church is typically assessed by asking whether fellow church members as a whole have provided assistance in the past year or so. However, it is likely that people have developed closer relationships with some church members than others, and as a result, the help they receive from these close relationships may be more effective for coping with stress. One way to

evaluate this perspective involves asking questions about support from a close companion friend at church. A recent study (Krause and Cairney 2009) suggests that people who have a close companion friend at church tend to enjoy better health than individuals who do not maintain this kind of relationship in the place where they worship. However, this study did not specifically assess whether a close companion friend is especially useful for coping with the unwanted effects of stress. Evaluating this issue should be a high priority in the future.

Specific Religious Coping Responses and Health

Religious coping responses reflect the extent to which individuals use their faith to shape the specific cognitive and behavioral responses they initiate to offset the unwanted effects of stress. The best work in this area has undoubtedly been done by Kenneth Pargament (1997). His RCOPE inventory is the most thoughtfully developed measure of religious coping responses in the literature (Pargament, Koenig and Perez 2000). The long version of this index was designed to assess five major dimensions of religious coping with 20 sub-scales. Examining a few items from the RCOPE inventory will illustrate the nature of this particular religious coping resource. For example, a *cognitive* response to a negative life event is assessed by asking study participants how often they relied on the following strategy: "Saw the situation as part of God's plan." In contrast, the following indicator illustrates a religiously oriented *behavioral* response to stress: "Tried to put my plans into action together with God."

So far, most of the studies of religious coping responses have used measures of mental health and psychological distress as outcomes (e.g., Fabricatore et al. 2004). However, there is mounting evidence that religious coping responses are also associated with physical health status. For example, Koenig, Pargament and Nielsen (1998) report that individuals who turned to negative religious coping responses (e.g., feeling that they were being punished by God) tend to rate their health less favorably than people who did not rely on negative religious coping responses. However, further work by Pargament et al. (1998) reveals that both positive and negative religious coping responses are associated with more physical health problems. Although the findings involving positive religious coping responses are somewhat counterintuitive,

these investigators speculate that physical illness is a stressor in its own right and that people who are ill turn to positive religious coping responses in an effort to cope more effectively with their health problems. This research points to the ambiguous status of physical health problems in the stress literature. Some researchers argue that physical illness is a stressor while others maintain that physical illness is something that is caused by exposure to stress.

Two studies of religious coping responses from my own research add further credence for the notion that religion may only be helpful for dealing with certain types of stressor. The stressor in the first study (1998a) involved residing in a deteriorated neighborhood. It was argued that living in a rundown neighborhood may be construed as a form of chronic strain. All the participants in this study were older adults. As Glass and Balfour (2003) point out, older people are more likely than younger adults to have resided in the same neighborhood for a long time. Consequently older adults who reside in dilapidated neighborhoods are likely to have been exposed to effects of these unwanted environments for years. The data from this longitudinal study suggest that positive religious coping responses offset the effects of living in a rundown neighborhood on change in physical health over time.

The second of these studies (1998b) focused on a different kind of stressor. Based on the notion that people occupy a range of different roles, this study hypothesized that stressors arising within roles that people value highly will be more taxing than events that emerge in roles that are less important to them. Consistent with this view, the findings suggest that positive religious coping responses arising in highly valued roles offset the effects of stressors on mortality. In contrast, events that emerged in less salient roles were not associated with mortality.

It is important to reflect carefully on the scope of measures that assess religious coping responses. The RCOPE Scale contains a number of the other religious coping resources that are examined elsewhere in this chapter (Pargament et al. 2000). For example, some indicators deal with seeking social support. Other items have to do with praying. And yet other indicators focus on working together with God to gain control over a stressful situation. In contrast to this measurement strategy, other researchers typically evaluate these coping resources separately. There are benefits as well as disadvantages in pursuing either measurement strategy.

Measuring a range of religious coping resources in the same index provides the opportunity to view religious coping resources in a broader and more comprehensive way than studying each resource individually, but a tradeoff is encountered with this comprehensive strategy. Research suggests that each individual coping resource may be related to health in complex ways. For example, a study in my own research program (2004) reveals that the beliefs people have about the outcome of prayer (e.g., whether they always get what they ask for and whether God answers prayers right away) determines the impact of prayer on well-being. Unfortunately, this study does not assess whether the same effects emerge with physical health outcomes. Similarly, a study by Krause and Ellison (2003) suggests that forgiving others unconditionally is more likely to enhance feelings of well-being than requiring transgressors to perform acts of contrition (e.g., making an apology). As these examples reveal, it would be difficult to capture these (and other) fine nuances in scales that are based on the comprehensive approach to assessing the effects of multiple religious coping resources. And as a result, the relationship between coping and health may be underestimated. However, if people typically utilize a number of different coping responses to deal with the problems that confront them, then focusing only on specific religious coping responses may again underestimate the relationship between religious coping, stress and health.

There is no simple way to resolve this dilemma. The same problem has arisen in the study of stress. One approach involves the use of long checklists that evaluate exposure to a range of different stressful events (Turner and Wheaton 1995). Another strategy involves making a detailed study of individual stressors, such as the death of a loved one. These studies take a host of contextual factors (e.g., whether the death anticipated or occurred abruptly, the age at which the death occurred) into account when the impact of the stressor is determined (Stroebe et al. 2008).

Perhaps a two-part strategy might be useful for resolving the problem of determining how to handle multidimensional religious coping response measures. First, studies could be conducted to determine the most important aspect(s) of each religious coping response. Second, comprehensive inventories could then be assembled once greater insight into the ways in which each religious coping response has been obtained. Unfortunately, this approach is likely to be very time consuming, hence quite expensive.

Prayer, Stress, and Health

Some researchers argue that prayer forms the very basis of religion. Evidence of this may be found, for example, in the work of George Albert Coe, who was an early psychologist of religion. Writing early in the twentieth century, he argued that, "Prayer is the heart of religion. When you have told what a man's prayers are like, you have told what his religion is" (1902: 329). If prayer is a core component of religion and if religion helps people deal more effectively with stress, then it follows that prayer may perform an important stress-buffering function. Consequently, it is not surprising to find that a number of studies have been conducted to explore the role prayer may play in the stress process.

Some investigators have attracted a great deal of attention by studying the relationship between intercessory prayer and health. Perhaps one of the most frequently cited studies in this area was conducted by Byrd (1988), in which prayers were offered offsite for patients in an intensive care ward. The individuals who offered the prayers asked God to help the patient have a speedy recovery from his or her illness. The findings, which were based on an experimental design, suggest that prayers provided the desired health-related effects. Even so, there are two reasons why a detailed discussion of intercessory prayer will not be provided in this chapter. First, thorough literature reviews as well as a metaanalysis of this literature (e.g., Masters, Spielmans and Goodson 2006) clearly indicate that intercessory prayer has no discernable effect on health. Second, studies on intercessory prayer do not deal with stress per se. Some researchers might argue that being a patient in an intensive care ward is a stressful life event. However, if the health-related outcome in a study is improvement in the condition that brought the patient to the intensive care ward in the first place, then a researcher is in the untenable position of studying the effects of the stressor on itself.

A number of other studies have been conducted to see whether prayer arising in natural settings or in more spontaneous ways offsets the deleterious effects of stress. However, mental health measures typically serve as the outcome in a good deal of this research (e.g., Bradshaw and Ellison 2010). Fortunately, there are at least three studies that assess whether prayer buffers the effects of stress on health-related outcomes.

The first study was conducted by Tartaro, Luecken and Gunn (2005). This research, which is based on an experimental design, was conducted

to determine whether several dimensions of religion, including prayer, offset the effects of a laboratory-induced stressor (*i.e.*, performing a frustrating computer task) on blood pressure and cortisol stress responses. However, the findings are complicated because the data suggest that prayer is associated with reduced blood pressure for men in the presence of stress. However, prayer appears to increase the blood pressure of women under these conditions. The authors were unable to provide an explanation for the gender differences they observed. In contrast, more consistent findings emerged with respect to cortisol responses. The findings indicate that regardless of gender, prayer was associated with reduced cortisol reactivity, reflecting more beneficial health effects. But it is especially important to reflect on how prayer was measured in this research. These investigators merely assessed whether the frequency of prayer outside the experimental setting exerts a beneficial effect on the physiological outcomes. So in effect, they were trying to see if prayers that did not specifically involve the experimental stressor offset the effects of this stressor on health-related outcomes. This subtly changes the nature of the research question that is being evaluated. Instead of asking whether prayer helps people cope more effectively with the specific problem that confronts them, these investigators are in effect assessing whether the general prayer life of study participants performs a stress-buffering function. But if general rather than specific functions of prayer are involved, it is important to provide a convincing explanation of the theoretical process that is at work. Perhaps the stress-buffering properties of a person's general prayer life really reflect the extent to which the individual is committed to his or her faith. If this is true, then these investigators would have been better off if they measured religious commitment explicitly. The example that is provided by this study shows how measurement and theory are inextricably bound. When researchers decide how to measure a religious coping resource, like prayer, they are in effect making a theoretical statement.

The second study of prayer, stress, and health was conducted by Belding and her associates (Belding et al. 2010). Based on an experimental design, these investigators tried to determine whether prayer offsets the effects of a laboratory induced stressor on blood pressure. They were unable to find a significant relationship. They attribute this to the fact that study participants were instructed to read a prayer after exposure to the stressor and many did not believe that reading a prayer constitutes praying.

The third study was part of my own research program (Krause 2003). This research points to further complexity in the relationships among stress, prayer, and health. The purpose of this study was to see if two types of prayer offset the effects of chronic financial strain on self-rated health. The first type of prayer involved asking for material things for oneself. It is not difficult to see why a person who is facing ongoing economic problems would offer this type of prayer. The second type of prayer involved praying for others. The data suggest that praying for others offsets the noxious effect of financial strain on the health of the person who offered the prayer, but praying for material things did not appear to provide a similar stress-buffering effect.

This is not the first time that praying for others appears to convey health-related benefits to the prayer agent. A study by O'Laoire (1997) was designed to see whether intercessory prayer improved the health of individuals who were in need. O'Laoire found that in addition to helping the individual who was in need, offering prayers for others exerted a beneficial effect on the physical health of the prayer agent, as well.

If praying for others offsets the pernicious effects of stress on the health of prayer agents, then it is important to identify the underlying theoretical process that may be at work. Some insight into this issue may be found by returning to the work of Gottlieb (1997) that was discussed earlier. Recall that he argued that religion may be especially beneficial for dealing with stressors that do not dissipate and that cannot be reconciled easily. Gottlieb argued that when stressors cannot be altered or avoided, it makes sense to look for rewards and satisfaction in other areas of life. One way to do this is by helping others. This is important because when individuals pray for someone else, they typically ask God to help the significant other in some way. Viewed in this manner, praying for others constitutes a specific way in which an individual can provide social support to someone who is in need.

The notion that praying for others constitutes a form of social support is important because Reissman (1965) proposed three ways in which helping others may benefit the support providers as well. First, helping other people enhances the self-esteem of support provider. Helping those who are unfortunate makes a clear and unambiguous statement about the support provider because it highlights aspects of his or her character that are admired in American society. Second, Reissman proposed that helping others provides a psychological respite from the support provider's own difficulties; it shifts the focus

away from the self and the problems with which one often grapples. Third, Reissman argues that seeing support recipients overcome their own problems makes support providers feel that their own difficulties may also be overcome. This may help enhance the support provider's feelings of control. The intervening mechanisms discussed by Reissman are important because a large body of research conducted in secular settings indicates that self-esteem (Trzensniewski, Donnellan and Robins 2003), feelings of control (Skinner 1997), and finding a respite from personal problems (Patterson 2003) exert a beneficial effect on health and well-being.

In addition to the mechanisms that were identified by Reissman, there is another way in which praying for others may reduce the effects of stress on the prayer agent. There is now considerable evidence that exposure to unwanted stressors is associated with elevated blood pressure (e.g., Uchino et al. 2006). However, Benson's longstanding research program suggests that a range of activities, including prayer, evoke a relaxation response that reduces blood pressure (Benson et al. 1977).

Exploring the potentially important stress-buffering effects of prayer on health reinforces a conclusion that was researched when the literature on specific religious coping responses was discussed earlier. It appears that prayer is also a complex phenomenon that can be assessed in a number of ways. And as a result, the role that prayer may play in the stress process is still not entirely clear. There are several ways to improve research in this field. First, as the first two studies on prayer that were discussed earlier reveal, it is not feasible to study the effects of prayer in a laboratory setting. Second, greater attention must be paid to the ways in which prayer is measured in survey research. So far, the primary ways of assessing prayer in surveys involve either determining the simple frequency of prayer or evaluating the type of prayer that was offered (e.g., petitionary, meditative prayer; see Poloma and Gallup 1991). However, it seems that the aspects of prayer that are the most important for dealing with stress have yet to be identified.

One key element of prayer might involve the extent to which the individual trusts God. It seems that prayer might be more beneficial if a person has a deep sense of trust in God because asking God for help and believing that He will actually provide what is best may shore up a person's resolve to carry on in the face of a negative life event. This specification calls for the test of a three-way statistical interaction effect between stress, the frequency or type of prayer, and the extent to which an individual trusts God. This interaction would test the hypothesis

that prayer will reduce the effects of stress on health, but only when a person has trust in God.

Religiously-Oriented Feelings of Control and the Stress Process

For decades, the construct of *control* has played a critical role in secular research on the stress process (Pearlin et al. 1981). This is one reason why Ross and Sastry (1999: 370) claim that, "of all the beliefs about self and society that might affect distress, belief in control over one's own life may be the most important." The construct of control has been defined and measured in a number of different ways. Among the specific variables subsumed under the general rubric of control are mastery (Pearlin and Schooler 1978), fatalism (Wheaton 1983), self-efficacy (Bandura 1995), and locus of control beliefs (Rotter 1966). Although there are differences in the way these constructs have been conceptualized, they nevertheless share a common theoretical core. Embedded in each view is the notion that individuals with a strong sense of control believe the things that happen in their lives are responsive to, and contingent upon, their own choices, efforts, and actions. In contrast, people with a weak sense of control believe that events in their lives are shaped by forces outside their influence and they feel they have little ability to regulate the things that happen to them. Consequently, stressors that could have been eradicated easily if direct action had been take to confront them instead fester and become more consequential. Consistent with this theoretical perspective, a vast number of studies that have been conducted in secular settings suggest that the effects of stress on health are reduced significantly for individuals who have a strong sense of personal control (Christie and Barling 2009).

There are three reasons why researchers have begun to ask whether a religiously-oriented sense of control may also offset the effects of stress on health. First, as Hood, Hill and Spilka (2009) maintain, one of the primary functions of religion is to satisfy the need for control. Second, the Bible is replete with stories about individuals who have faced significant adversity and have turned to God in an effort to regain control over their lives (e.g., the story of Job). Third, the sheer volume of secular studies on personal control, stress, and health has motivated some investigators to see if there is a religious counterpart to this construct.

There are primarily two ways in which the construct of control has been conceptualized within the context of religion. The first way is

exemplified by Schieman's notion of divine control (Schieman, Pudrovska and Milkie 2005). According to this perspective, individuals who feel they cannot exert control over the problems that confront them turn control of these difficulties over to God completely. I have proposed a second view of religiously-oriented control (Krause 2005), reasoning that instead of turning the things that happen in life over to God completely, people believe that they can work together with God to alleviate the adversities that confront them. I refer to this construct as "God-mediated control." Simply put, these two perspectives may be differentiated by the extent to which God is thought to exert control in one's life. Because two differing views of religiously-oriented control may be found in the literature, researchers may reasonably be concerned about which perspective to adopt in their own studies. Three issues must be kept in mind in the process of addressing this important question.

First, I previously (2002) developed measures of God-mediated control based upon extensive qualitative research (*i.e.*, focus groups and individual in-depth interviews). When the participants in these studies were asked about how they cope with unwanted events, many initially said that they simply turn the problem over to God. In fact, some study participants used the phrase "Let go and let God" to characterize this stress response. This would initially appear to be consistent with the notion of divine control (Schieman et al. 2005). However, when study participants expressed this view, they were then asked if this meant they did nothing on their own to eradicate the problem. Many indicated they really meant to say that they did all they could to deal with an adversity and then turned the rest over to God. Given these qualitative findings, it is important to conduct quantitative studies with random probability samples to determine the extent to which people who are faced with adversity either turn their problems entirely over to God or the extent to which they believe that working with God solves problems that arise in their lives.

The second issue involving the conceptualization of religiously oriented control beliefs has to do with empirical findings that have emerged from secular research on personal control beliefs. Recall that individuals with a low sense of personal control are thought to be more vulnerable to the deleterious effects of stress because they typically fail to take action to confront a stressor even though it might have been altered or avoided with some effort on their part. As a result, the impact of the event is likely to become much greater than it should have.

It seems that individuals who maintain a strong belief in divine control run the risk of encountering this problem because if they literally turn control of their lives completely over to God, they would not take action on their own to deal with the events that arise in their lives.

The third issue is closely related to the second and shows why the insights from secular studies on feelings of personal control and stress may not have gone far enough. Schieman and his colleagues have conducted several studies to provide empirical support for their notion of divine control. In one study, Schieman et al. (2006) report that a sense of divine control is more likely to reduce psychological distress for lower socioeconomic status African Americans than lower SES status whites. Both race and SES can be viewed as proxy measures that stand for experiences that individuals encounter when they occupy different positions in the social structure. One such experience for African Americans would be racial prejudice and discrimination while ongoing financial problems would be a good example of what people in lower SES groups are likely to encounter. Since both racial prejudice and financial problems are forms of chronic strain, perhaps the findings that are reported by Schieman et al. (2006) provide further support for the notion that religion may be more useful for helping people deal with the effects of events that either cannot be changed or that can be changed only with great difficulty. Surprisingly, Schieman et al. (2006) had measures of racial discrimination and chronic financial strain in their data. However, it appears that only the additive effects of these stressors were estimated rather than the extent to which divine control might have offset the effects of racial prejudice and financial problems on the study outcome. Stated in a more technical way, it does not appear that these investigators tested for a statistical interaction effect between divine control and the two types of chronic stress.

It is disappointing to find that regardless of the approach that is taken to assess religiously-oriented control, there do not appear to be any studies that specifically assess the interface between this type of control, stress and physical health status. One possibility is that researchers have attempted to assess the stress buffering effects of religiously-oriented control on health empirically but they have been unable to observe any statistically significant effects. Unfortunately, studies that fail to report statistically significant findings are rarely accepted for publication, and as a result, the findings from this research are typically not accessible to the wider research community. In recent research, in fact, I was unable to find evidence that feelings of God-mediated

control offset the effects of stress on physical health (2010c). This study was based on the second wave of interviews for the study in which I first introduced the notion of God-mediated control (Krause 2005). Stress was measured with a 57-item checklist of life events that arose in the year prior to the survey. The findings suggest that the effects of these stressors on self-rated health were not any lower for older people with a strong sense of God-mediated control. Perhaps part of the problem once again arises from measurement issues. One item in the scale that was used in my prior research asks study participants to report the extent to which they "work together with God" to solve a problem. However, this item does not provide a clear sense of what working "together with God" actually entails. Consequently, it is not possible to ascertain whether the efforts that were exerted by the individual were either unwise or ineffective.

As the studies that were reviewed in this section reveal, research on religiously-oriented control and health is considerably underdeveloped. Even so, it is important to continue work with this potentially important construct because the conceptual underpinnings of this religious coping resource are simply too compelling to ignore.

A Religious Sense of Meaning in Life, Stress, and Health

As Hood, Hill and Spilka (2009) argue, another function of religion is to help people satisfy the need to derive a sense of meaning in life. Unfortunately, developing a sound definition of meaning, specifying the content domain of this construct, and findings ways to measure it properly have proved to be especially challenging tasks. No attempt will be made to resolve these long-standing problems here. Instead, the widely-cited definition that was developed by Gary Reker will be used as a point of departure for this discussion. He defines meaning as "the cognizance of order, coherence, and purpose in one's existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment" (Reker 2000: 41). Reker's definition was developed outside the context of religion. So if a secular sense of meaning in life involves perceptions of order, coherence and purpose, then a religious sense of meaning in life must refer to the ways in which these core components of meaning arise specifically from religious sources.

The distinction between a secular and a religious sense of meaning in life points to two different measurement strategies. With respect to

a secular sense of meaning, a researcher might ask whether an individual has found a sense of purpose in life without assessing how these perceptions arose (see, for example, Krause 2004). In contrast, a religious sense of meaning in life might be assessed by asking study participants whether they believe that God has a purpose for their lives (see, for example, Krause 2008b).

There do not appear to be any studies in the literature that specifically examine whether a religious sense of meaning in life offsets the deleterious effects of stress on physical health status. However, there are compelling theoretical reasons for pursuing this issue. In 2007, I published a conceptual rationale to explain why a sense of meaning in life offsets the deleterious effects of lifetime trauma on health outside the context of religion. The intellectual roots of that study are found in Victor Frankl's classic text on meaning in life (1984 [1946]). He maintains that "suffering ceases to be suffering at the moment it finds a meaning" (1984: 135). But instead of suggesting that meaning is merely one of several useful coping resources, Frankl (1984: 126) argues that it may be the most important of all: "There is nothing in the world, I would venture to say, that would so effectively help one to survive even the worst conditions as the knowledge that there is a meaning in one's life."

Although Frankl's insights are invaluable, he is not entirely clear about how the stress buffering effects of meaning in life arise. In a 2007 article, I argued that some insight into this issue may be found by carefully reflecting on two of the core facets of meaning. The first is having a sense of purpose in life. A sense of purpose has to do with believing that one's actions have a set place in the larger order of things and that one's behavior fits naturally into the larger social whole. In contrast, goals are targets for the future; they provide specific endpoints toward which current efforts are oriented. However, even though goals are oriented toward the future, they provide more immediate rewards by giving a sense of hope and by reinforcing and building upon what a person may already have accomplished. The essence of this perspective was captured some time ago in Charles Horton Cooley's discussion of *plans*, which are closely akin to goals. He argued that, "Able men plan and strive not as being discontented now, but because they need to continue that hope and sense of achievement they already have. They bring the future into the scene to animate the present. … Our plans are our working hopes and among our chief treasures" (1927: 205). If individuals are able to maintain a strong sense of purpose when stressors

arise and if they are able to keep a clear set of goals in mind, then the sense of belonging and hope that these facets of meaning convey are likely to be a powerful antidote to the pernicious effects of undesirable stressors.

Beyond these specific issues, there are broader factors that also provide a sense of how meaning in life may help offset the deleterious effects of stress. When individuals are able to maintain a strong sense of meaning in the face of adversity, they likely have a better understanding of why the stressor arose and are more likely to see the role that the unwanted event plays in the overall scheme of their lives. Being able to understand and define the nature and purpose of stress in life can be a great comfort. But more than this, these insights may even promote growth in the face of adversity. This is important because a growing number of studies suggest that many individuals who have been exposed to challenging lifetime traumas find that these events have enabled them to grow in many ways. For example, some find that traumas have opened up new paths in life; others report that their relationships with social network members have grown closer, and yet other individuals indicate that a traumatic event helped them realize they had strengths they didn't know they possessed (Tedeschi and Calhoun 2004).

Regardless of the underlying factors that may be at work, my 2007 article provides evidence that a secular sense of meaning in life is an important coping resource. More specifically, the findings from this study suggest that the noxious effect of lifetime trauma on depressive symptoms are offset for people who have a strong sense of meaning in life. More important for the purposes of this chapter, my earlier research (2004) also reports that a secular sense of meaning in life mediates the effects of the interaction between social support and stress on self-rated health. Stated in a less technical way, the complex findings from this study indicate that social support offsets the effects of undesirable stressors on health primarily because the support that is provided by significant others bolsters and restores a person's sense of meaning in life.

If a sense of meaning outside religion serves as an important resource for coping with stress, then there is reason to believe that it may be even more effective when it arises within the context of religion. This proposition is based on the following rationale: A person's sense of purpose and his or her ability to maintain goals in a secular setting are likely to primarily be personal or private matters that are either not

shared with others or are discussed with a relatively small circle of trusted individuals. But in contrast, religiously-oriented goals and a sense of purpose that arises through one's faith are likely to be shared with a much larger group that consists of fellow church members. Moreover, the members of this group are likely to help bolster and maintain a person's sense of meaning and purpose. This is consistent with the theoretical perspective that was developed by Stark and Finke. Referring to religious world views—a construct much like a religious sense of meaning—as religious explanations, Stark and Finke maintain that, "An individual's confidence in religious explanations is strengthened to the extent to which others express their confidence in them" (2000:107). Unlike the secular world, specific mechanisms are found in the church that are designed to identify and reinforce religious explanations systematically. Included among these formal mechanisms are worship services, prayer groups, and Bible study groups. However, a religious sense of meaning in life is shaped by more than these formal activities alone. More specifically, a religious sense of meaning in life is supported by the centuries of tradition that are imbued with a sacred aura. So if a secular sense of meaning in life helps people cope more effectively with stress, then a religious sense of meaning may be even more efficacious because it rests on a more solid social foundation.

Next Steps in Research on Religion and the Stress Process

Some researchers may feel overwhelmed when they reflect on the problems that are encountered in the study of the relationships among religion, stress, and health. But there is another way to look at this issue. Simply put, the field is wide open and it is ripe with opportunity. In order to see where these opportunities lie, five potentially important ways to enrich and expand the literature are discussed below.

Expanding the Scope of Research on Religious Coping Resources

Five major religious coping resources have been examined in this chapter. However, these coping resources do not capture all the ways in which people may turn to their faith in order to overcome the effects of undesirable stress. One potentially important religious coping resource is feelings of gratitude toward God. Gratitude may be viewed as a virtue or character strength that involves feelings of thankfulness toward a specific person or entity (e.g., God) for the benefits this individual or

entity has provided (Peterson and Seligman 2004). In order to see why feelings of gratitude toward God may help people cope more effectively with stress, it is helpful to return to Pargament's RCOPE Scale. One dimension of this scale deals with benevolent religious reappraisals. The following indicators reflect the content domain of this specific religious coping response: "I saw my situation as part of God's plan." "I tried to see how God might be trying to strengthen me in this situation." and "I tried to see how the situation could benefit me spiritually." (Pargament et al. 2000: 522). If people believe the problems they face are part of God's plan to strengthen them and help them grow, then it is not difficult to see why they may feel grateful to God when adversity arises. And if these feelings of gratitude toward God are deeply and sincerely felt, then the deleterious effects of the stress are likely to be diminished.

But it is still not entirely clear how feeling grateful to God in the face of adversity may lead to better physical health specifically. In order to see why this may be so, it is helpful to identify some of the psychosocial deficits that are created by exposure to unwanted stressors. When people are confronted with adverse situations, they often experience a flood of negative emotions. These negative feelings are captured succinctly by Pearlin and his colleagues in their discussion of persistent role strains. These investigators argue that, "Persistent role strains can confront people with dogged evidence of their own failures—or lack of success—and with inescapable proof of their inability to alter the unwanted circumstances in their lives" (Pearlin et al. 1981: 340). Perhaps feelings of gratitude toward God operate by offsetting or counterbalancing these negative emotions with positive feelings. In fact, as Emmons and McCullough (2003) point out, gratitude fosters a range of positive emotions including a sense of contentment, happiness, pride, and hope. These positive emotions are important: the extensive research reviewed by Ryff and Singer (1998) suggests that they have a beneficial physiological effect on the body because they bolster immune functioning. Moreover, as research discussed by McCraty and Childre (2004) reveals, feelings of appreciation and gratitude may lower blood pressure and decease heart rates.

My research published in 2006 appears to have conducted the only study on the relationships among gratitude toward God, stress, and physical health. Three main findings emerged from this study of older adults. First, the data suggest that older women are more likely to feel grateful to God than older men. Second, the results reveal that the

effects of chronic stress (*i.e.*, living in a deteriorated neighborhood) on self-rated health are reduced for older people who feel more grateful to God. Third, the analyses indicate that the potentially important stress-buffering properties of gratitude toward God emerge primarily among older women, but not older men (Krause 2006c).

Clearly, considerably more research is needed on the potentially important stress buffering effects of feeling grateful toward God. For example, researchers need to know whether feelings of gratitude toward God help people deal with the effects of other kinds of stressors, such as lifetime traumas. In addition, it is important to identify the specific ways in which feelings of gratitude toward God may offset the deleterious effects of stress. For example, feelings of gratitude toward God may provide further insight into the ways in which the beneficial effects of other religious coping resources arise. Perhaps feelings of gratitude toward God intensify as individuals begin to see that support from fellow church members is helping them deal more effectively with the stressors they have encountered. To the extent this is true, feeling grateful to God may also provide some insight into how church-based social support offsets the effects of stress.

Exploring the Influence of Stressors that are Unique to Religious Settings

As research by Krause and Ellison (2009) indicates, it is not uncommon for people to have doubts about their faith. Religious doubt is defined by Hunsberger et al. as "a feeling of uncertainty toward, or questioning of, religious teachings and beliefs" (1993: 28). Doubt may be considered to be a stressor, especially when individuals are not able to resolve it successfully. Kause and Ellison (2009) report that people who try to cope with doubt by suppressing it are more likely to report their health is poor than individuals who are able to deal with doubt in more effective ways. Unfortunately, the precise ways in which religion helps people deal more effectively with religious doubt have not been identified in the literature. This should be a high priority for researchers wishing to investigate more fully the effects of religious doubt.

Assessing Denominational Differences in the Use of Religious Coping Responses

The discussion that has been provided up to this point may convey the impression that people in all faith traditions are likely to rely on the same religious coping resources to the same extent. Yet it doesn't seem

likely that this is true. Unfortunately, there has been very little research on differences in the use of religious coping resources across different faith traditions as well as different denominations in the same faith. In one study in this area, I evaluated differences in the extent to which Catholics and Protestants rely on church-based support to cope with the stressors in their lives (2010b). Only older adults participated in this study. In his insightful research on the Catholic Church, Robert Orsi (2005) found that during the 1920s and 1930s an emphasis was placed on the virtue of suffering in silence. This historical period is important because this was the time when many of the older participants in my study had first become adults. Based on Orsi's insights, it was predicted that older Catholics would be less inclined to turn to people at church for support than older Protestants.

The findings from this work reveal that the situation may be more complicated than this hypothesis suggests. The data indicate that compared to Protestants, Catholics indeed appear to receive less emotional support from fellow church members and less emotional support from members of the clergy at relatively low levels of exposure to stress. But denominational differences in support from rank-and-file church members and members of the clergy tend to disappear as the level of exposure to stress escalates. Taken together, these results suggest that Catholics may be reticent to ask for and obtain assistance at relatively low levels of exposure to stress, but once exposure to stress reaches a more uncomfortable level, this reluctance may be overcome and Catholics get as much emotional support from church members and the clergy as Protestants. If these conclusions are accurate, then the initial hesitancy on the part of Catholics to seek support from fellow church members may indeed arise from the church doctrine discussed by Orsi. More research is needed to see if there are denominational differences in the use and effectiveness of the other religious coping resources that have been discussed in this chapter.

Expanding the Scope of Health-Related Outcome Measures

So far, studies that assess the stress buffering effects of religion on health have either focused on self-reported health or biomarkers of health, such as blood pressure. However, exploring other health-related outcomes may provide greater insight into the role religion plays in the stress process. One potentially important outcome is the practice of positive health behaviors. Three independent bodies of research show

why this may be an important outcome to examine. First, a vast literature indicates that people who practice undesirable health behaviors, such as drinking, smoking and consuming too much saturated fat, are more likely to become ill (Glanz, Rimer and Lewis 2002). Second, there is some evidence that people who have been exposed to stress are more likely to adopt negative health behaviors (Wenzel, Glanz and Lerman 2002). Third, a growing number of studies indicate that people who are involved in religion are more likely to practice beneficial health behaviors than people who are less involved in religion (Hill et al. 2006). So if exposure to stress increases the use of poor health behaviors and involvement in religion increases the use of positive health behaviors, then perhaps the beneficial effects of religion arise because it offsets the noxious effects of stress on health behavior. Unfortunately, there do not appear to be any studies in the literature that empirically evaluate this important research question. Doing so should be a high priority for those who wish to achieve a better understanding of the role religion may play in the stress process.

Bringing the Issue of Timing to the Foreground

In 1986 David Jacobson published a paper on the stress process that has been largely overlooked by other investigators. He maintained that the needs that arise from exposure to stressful life events may change over time and as a result, the effectiveness of different types of social support will vary depending upon when they are provided. More specifically, Jacobson (1986) argues that when an undesirable stressor first arises, people are typically overwhelmed by a cascade of negative emotions. Consequently, before the individual can begin to think about solutions to the problem, he or she must first get these challenging emotions under control. It is for this reason that Jacobson proposes that emotional support will be more useful early in the stress process. Then, once the emotional reaction to a stressor has passed, the individual can pursue more concrete steps toward eradicating the problem at hand. Other types of support, such as informational support and tangible help, become more beneficial at this juncture. This perspective is useful because it introduces a dynamic element into the study of stress that has not been examined in the literature on religion, stress, and health.

The general issue of timing that Jacobson introduces appears to be especially useful for arriving at a better understanding of two religious

coping resources that were discussed earlier. First, consistent with the views of Jacobson, different types of church-based support may be more helpful at different points in the natural history of a stressor. Second, it seems as though these basic insights may be generalized beyond church-based support to other religious coping resources. For example, as discussed earlier, deriving a sense of religious meaning in life is an important religious coping resource. However, religious meaning may be more useful in the latter stages of an unwanted stressor. Recall that the potential benefits of meaning in life arise from the ability to retain a sense of purpose and goals in the face of adversity. It seems that an individual would be in a better position to reflect on his or her purpose and goals only after the emotional rush of a stressor has subsided. Moreover, if religious meaning also offsets the effects of stress by helping people find growth in the face of adversity, then this benefit is likely to be most effective when an individual has had time to reflect back over the course of the challenging experience. This suggests that persons would be more likely to find growth in the face of adversity when they are in the waning stages of a stressor.

Although the element of timing in the stress process is relatively easy to grasp in theory, it is far more difficult to implement in empirical research. The problem arises because of the nature of the data that must be obtained. More specifically, data on responses to stress would have to be gathered at relatively close intervals across multiple points in time so that researchers could accurately track transitions from one phase of the stressor to another. This may best be accomplished by having study participants fill in diaries of their experiences with a stressor on a frequent basis. But a complete assessment of the natural history of a stressor would be possible only if a researcher has forewarning that a stressful event is likely to occur. This would, of course, be more possible for certain stressors, such as the anticipated death of a loved one or a job loss that arises from the planned closing of a factory, than for those that come without warning. Stress coming from things like car accidents, house fires, tornados, or flash floods would be quite different.

As the issues that have been raised throughout this chapter reveal, there are many ways in which theory and research on religion, stress, and health can be improved. But the care, innovation and effort required to overcome these challenging issues will be more than offset by the gains that a more mature literature will provide. At times, it seems that research on religion is conducted in a largely insular

environment that slips beneath the awareness of investigators outside the field. Fortunately, this situation is changing, due in part to the headway that is being made in research on religion and health. The role that religion plays in the stress process is especially well suited for this purpose because it showcases the ways in which study findings can be directly applied to programs that are designed to improve the health of the people in our nation. Bringing this research to fruition should go a long way toward helping scholars who study religion assume their rightful place in the research enterprise.[1]

References

Bandura, Albert. 1995. "Exercise of Personal and Collective Efficacy in Changing Societies." Pp. 1–45 in *Self Efficacy in Changing Societies*, edited by A. Bandura. New York: Cambridge University Press.

Barrera, Manuel. 1986. "Distinctions between Social Support Concepts, Measures, and Models." *American Journal of Community Psychology* 14: 413–25.

Belding, Jennifer N., Malcolm G. Howard, Anne M. McGuire, Amanda C. Schwartz, and Janie H. Wilson. 2010. "Social Buffering by God: Prayer and Measures of Stress." *Journal of Religion and Health* 49: 179–87.

Benson, Herbert, Jamie B. Kotch, Karen D. Crassweller, and Martha M. Greenwood. 1977. "Historical and Clinical Considerations of the Relaxation Response." *American Scientist* 65: 441–45.

Bradshaw, Matthew and Christopher G. Ellison. 2010. "Financial Hardship and Psychological Distress: Exploring the Buffering Effects of Religion." *Social Science and Medicine* 71: 196–204.

Byrd, Randolph C. 1988. "Positive Therapeutic Effects of Intercessory Prayer in a Coronary Care Unit Population." *Southern Medical Journal* 81: 826–29.

Caplan, Gerald.1981. "Mastery of Stress." *American Journal of Psychiatry* 138: 413–20.

Christie, Amy M. and Julian Barling. 2009. "Disentangling the Indirect Links Between Socioeconomic Status and Health: The Dynamic Roles of Work Stressors and Personal Control." *Journal of Applied Psychology* 94: 1466–78.

Clark,Walter H. 1958. *The Psychology of Religion.* New York: Macmillan.

Coe, George Albert. 1902. *The Religion of a Mature Mind.* Chicago: Revell.

Cohen, Sheldon. 2004. "Social Relationships and Health." *American Psychologist* 59: 676–84.

_____, Ronald C. Kessler, and Lynn Underwood Gordon. 1995. "Strategies for Measuring Stress in Studies of Psychiatric and Physical Disorders." Pp. 3–26 in *Measuring Stress: A Guide for Health and Social Scientists,* edited by S. Cohen, R.C. Kessler, and L.U. Gordon. New York: Oxford University Press.

Cooley, Charles H. 1927. *Life and the Student.* New York: Knopf.

Eliade, Mircea. 1978. *A History of Religious Ideas, Volume 1: From the Stone Age to the Eleusinian Mysteries*. Chicago: University of Chicago Press.

[1] This research was supported by grants from the National Institute on Aging (RO1 AG014749; RO1 AG026259) and a grant from the John Templeton Foundation through the Duke University Center on Spirituality, Theology, and Health.

Emmons, Robert A. and Michael E. McCullough. 2003. "Counting Blessings Versus Burdens: An Experimental Investigation of Gratitude and Subjective Well-Being in Daily Life." *Journal of Personality and Social Psychology* 84: 377–89.
Fabricatore, Anthony N., Paul J. Randal, Doris M. Rubio, and Frank H. Gilner. 2004. "Stress, Religion, and Mental Health: Religious Coping in Mediating and Moderating Roles." *International Journal for the Psychology of Religion* 14: 97–108.
Fetzer Institute/National Institute on Aging Working Group. (1999). *Multidimensional Measurement of Religiousness/Spirituality for Use in Health Research.* Kalamazoo, MI: John E. Fetzer Institute.
Frankl, Victor E. 1984. *Man's Search for Meaning*. New York: Washington Square Press.
Glanz, Karen, Barbara K. Rimer and Frances Marcus Lewis. 2002. *Health Behavior and Health Education: Theory, Research, and Practice.* San Francisco: Jossey-Bass.
Glass, Thomas A. and Jennifer L. Balfour. 2003. "Neighborhoods, Aging, and Functional Limitations." Pp. 303–334 in *Neighborhoods and Health*, edited by I. Kawachi and L.F. Berkman. New York: Oxford University Press.
Gottlieb, Benjamin H. 1997. "Conceptual and Measurement Issues in the Study of Coping with Chronic Stress." Pp. 3–40 in *Coping with Chronic Stress,* edited by B.H. Gottlieb. New York: Plenum.
Hill, Terrance D., Amy M. Burdette, Christopher G. Ellison, and Marc A. Musick. 2006. "Religious Attendance and Health Behaviors of Texas Adults." *Preventive Medicine* 42: 309–12.
Hood, Ralph W., Peter C. Hill and Bernard Spilka. 2009. *The Psychology of Religion,* 4th ed. New York: Guilford.
Hunsberger, Bruce S., Michael McKenzie, Michael W. Pratt, and S. Mark Pancer. 1993. "Religious Doubt: A Social Psychological Analysis." *Research in the Social Scientific Study of Religion* 5: 27–51.
Jacobson, David E. 1986. "Types of Timing of Social Support." *Journal of Health and Social Behavior* 27: 250–64.
Kanner, Allen D., James C. Coyne, Catherine Schaefer, and Richard S. Lazarus. 1981. "Comparison of Two Modes of Stress Measurement: Daily Hassles and Uplifts Versus Major Life Events." *Journal of Behavioral Medicine* 4: 1–39.
Koenig, Harold G., Kenneth I. Pargament and Julie Nielsen. 1998. "Religious Coping and Health Status in Medically Ill Hospitalized Older Adults." *Journal of Nervous and Mental Disease* 186: 513–21.
Krause, Neal. 1998a. "Neighborhood Deterioration, Religious Coping, and Changes in Health During Late Life." *Gerontologist* 38: 653–64.
_____. 1998b. "Stressors in Highly Valued Roles, Religious Coping, and Mortality." *Psychology and Aging* 13: 242–55.
_____. 2002. "A Comprehensive Strategy for Developing Closed-Ended Survey Items for Use in Studies of Older Adults." *Journal of Gerontology: Social Sciences* 57B: S263–74.
_____. 2003. "Praying for Others, Financial Strain, and Physical Health Status in Late Life." *Journal for the Scientific Study of Religion* 42: 377–91.
_____. 2004. "Stressors Arising in Highly Valued Roles, Meaning in Life, and the Physical Health Status of Older Adults." *Journal of Gerontology: Social Sciences* 59B: S287–97.
_____. 2005. "God-Mediated Control and Psychological Well-Being in Late Life." *Research on Aging* 27: 136–64.
_____. 2006a. "Exploring the Stress-Buffering Effects of Church-Based Social Support and Secular Social Support on Health in Late Life." *Journal of Gerontology: Social Sciences* 61B: S35–S43.
_____. 2006b. "Church-Based Social Support and Mortality." *Journal of Gerontology: Social Sciences* 61B: S140–S146.

_____. 2006c. "Gratitude Toward God, Stress, and Health in Late Life." *Research on Aging* 28: 163–83.
_____. 2007. "Evaluating the Stress-Buffering Function of Meaning in Life Among Older People." *Journal of Aging and Health* 19: 792–812.
_____. 2008a. *Aging in the Church: How Social Relationships Affect Health.* West Conshohocken, PA: John Templeton Foundation Press.
_____. 2008b. "The Social Foundations of Religious Meaning in Life." *Research on Aging* 30: 395–427.
_____. 2009. "Lifetime Trauma, Prayer, and Psychological Distress in Late Life." *International Journal for the Psychology of Religion* 19: 55–72.
_____. 2010a. "Do Church-Based Social Relationships Influence Social Relationships in the Secular World?" Under review at *Mental Health, Religion & Culture.*
_____. 2010b. "Assessing Coping Responses Within Specific Faith Traditions: Suffering in Silence and Depressive Symptoms among Older Catholics." *Mental Health, Religion & Culture* 13: 513–529.
_____. 2010c. Unpublished data analyses. Ann Arbor, MI: University of Michigan.
_____ and John Cairney. 2009. "Close Companion Friends in Church and Health in Late Life." *Review of Religious Research* 51:181–200.
_____ and Christopher G. Ellison. 2003. "Forgiveness by God, Forgiveness of Others, and Psychological Well-Being in Late Life." *Journal for the Scientific Study of Religion* 42: 77–93.
_____ and Christopher G. Ellison. 2009. "The Doubting Process: A Longitudinal Study of the Precipitants and Consequences of Religious Doubt." *Journal for the Scientific Study of Religion* 48: 293–312.
_____, Benjamin A. Shaw and John Cairney. 2004. "A Descriptive Epidemiology of Lifetime Trauma and the Physical Health Status of Older Adults." *Psychology and Aging* 19: 637–48.
Masters, Kevin S., Glen I. Spielmans and Jason T. Goodson. 2006. "Are There Demonstrable Effects of Distant Intercessory Prayer? A Meta-Analytic Review." *Annals of Behavioral Medicine* 32: 21–26.
Mattlin, Jay A., Elaine Wethington and Ronald C. Kessler. 1990. "Situational Determinants of Coping and Coping Effectiveness." *Journal of Health and Social Behavior* 31:103–22.
McCraty, Rollin and Doc Childre. 2004. "The Grateful Heart: The Psychophysiology of Appreciation." Pp. 230–55 in *The Psychology of Gratitude,* edited by R.A. Emmons and M.E. McCullough. New York: Oxford University Press.
McEwen, Bruce, 2003. *The End of Stress as We Know It.* Washington, DC: Joseph Henry Press.
O'Laoire, Susan. 1997. "An Experimental Study of the Effects of Distant, Intercessory Prayer on Self-Esteem, Anxiety, and Depression." *Alternative Therapies in Health and Medicine* 3: 38–53.
Orsi, Robert. 2005. *Between Heaven and Earth: The Religious Worlds People Make and the Scholars Who Study Them.* Princeton, NJ: Princeton University Press.
Pargament, Kenneth I. 1997. *The Psychology of Religious Coping: Theory, Research, and Practice.* New York: Guilford.
_____, Harold G. Koenig and Lisa M. Perez 2000. "The Many Methods of Religious Coping: Development and Initial Validation of the RCOPE." *Journal of Clinical Psychology* 56: 519–43.
_____, Bruce W. Smith, Harold G. Koenig, and Lisa Perez. 1998. "Patterns of Positive and Negative Religious Coping with Major Life Stressors." *Journal for the Scientific Study of Religion* 37: 710–24.
Patterson, Thomas L. 2003. "Interventions for Caregiving in Dementia: Physical Outcomes." *Current Opinions in Psychiatry* 16: 629–33.

Pearlin, Leonard I. and Carmi Schooler. 1978. "The Structure of Coping." *Journal of Health and Social Behavior* 19: 2–21.

_____, Elizabeth Menaghan, Morton Lieberman, and John Mullan. 1981. "The Stress Process." *Journal of Health and Social Behavior* 22: 337–56.

Peterson, Christopher and Martin E. Seligman. 2004. *Character Strengths and Virtues: A Handbook and Classification.* New York: Oxford University Press.

Poloma, Margaret M. and George H Gallup. 1991. *Varieties of Prayer: A Survey Report.* Philadelphia: Trinity Press International.

Reissman, Frank. 1965. "The 'Helper' Therapy Principle." *Social Work* 10: 27–32.

Reker, Gary T. 2000. "Theoretical Perspective, Dimensions, and Measurement of Existential Meaning." Pp. 39–58 in *Exploring Existential Meaning: Optimizing Human Development Across the Life Span*, edited by G.T. Reker and K. Chamberlain. Thousand Oaks, CA: Sage.

Ross, Catherine E. and Jaya Sastry. 1999. "The Sense of Personal Control: Social-Structural Causes and Emotional Consequences." Pp. 369–94 in *Handbook of the Sociology of Mental Health,* edited by C.S. Aneshensel and J.C. Phalen. New York: Plenum.

Rotter, Julian B. 1966. "Generalized Expectancies for Internal Versus External Control of Reinforcement." *Psychological Monographs: General and Applied* 80/609.

Ryff, Carol D. and Burton Singer. 1998. "The Contours of Positive Human Health." *Psychological Inquiry* 9: 1–28.

Schieman, Scott, Tetyana Pudrovska and Melissa A. Milkie. 2005. "The Sense of Divine Control and the Self-Concept." *Review of Religious Research* 27: 165–96.

Schieman, Scott, Tetyana Pudrovska, Leonard I. Pearlin and Christopher G. Ellison. 2006. "The Sense of Divine Control and Psychological Distress: Variations Across Race and Socioeconomic Status." *Journal for the Scientific Study of Religion* 45: 529–49.

Skinner, Ellen A.1997. "A Guide to the Construct of Control." *Journal of Personality and Social Psychology* 71: 549–70.

Stark, Rodney. 2008. *What Americans Really Believe*. Waco, TX: Baylor University Press.

_____ and Roger Finke. 2000. *Acts of Faith: Explaining the Human Side of Religion.* Berkeley: University of California Press.

Stroebe, Margaret S., Robert O. Hansson, Henk Schut, and Wolfgang Stroebe. 2008. *Handbook of Bereavement Research and Practice: Advances in Theory and Intervention*. Washington, DC: American Psychological Association.

Tartaro, Jessica, Linda J. Luecken and Heather E. Gunn. 2005. "Exploring Heart and Soul: Effects of Religiosity/Spirituality and Gender on Blood Pressure and Cortisol Stress Responses." *Journal of Health Psychology* 10: 753–66.

Tedeschi, Richard G., and Lawrence G. Calhoun. 2004. "Posttraumatic Growth: Conceptual Foundations and Empirical Evidence." *Psychological Inquiry* 15: 1–18.

Trzesniewski, Kali H., M. Brent Donnellan and Richard W. Robins. 2003. "Stability of Self-Esteem Across the Lifespan." *Journal of Personality and Social Psychology* 84: 205–20.

Turner, R. Jay and Blair Wheaton. 1995. "Checklist Measurement of Stressful Life Events." Pp. 29–58 in *Measuring Stress: A Guide for Health and Social Scientists,* edited by S. Cohen, R.C. Kessler and L.U. Gordon. New York: Oxford University Press.

Uchino, Bert, N., Cynthia A. Berg, Timothy W. Smith, Gale Pearce, and Michelle Skinner. 2006. "Age-Related Differences in Ambulatory Blood Pressure During Daily Stress: Evidence for Greater Blood Pressure Reactivity with Age." *Psychology and Aging* 21: 231–39.

Wenzel, Lari, Karen Glanz and Caryn Lerman. 2002. "Stress, Coping, and Health Behavior." Pp. 210–39 in *Health Behavior and Health Education: Theory, Research, and Practice*, edited by K. Glanz, B. K. Rimer, and F.M. Lewis. San Francisco: Jossey-Bass.

Wheaton, Blair. 1983. "Stress, Personal Coping Resources and Psychiatric Symptoms: An Investigation of Interactive Models." *Journal of Health and Social Behavior* 24: 208–29.

_____. 1994. "Sampling the Stress Universe." Pp. 77–114 in *Stress and Mental Health: Contemporary Issues and Prospects for the Future*, edited by W.R. Avison and I.H. Gotlib. New York: Plenum.

Wuthnow, Robert. 1991. *Acts of Compassion.* Princeton, NJ: Princeton University Press.

CHAPTER NINE

RELIGIOUS INVOLVEMENT AND RELIGIOUS STRUGGLES

Terrence D. Hill and Ryon J. Cobb

Several literature reviews and meta-analyses provide convincing evidence that religious involvement—indicated by observable feelings, beliefs, activities (most typically), and experiences in relation to spiritual, divine, or supernatural entities—is associated with lower mortality risk (McCullough et al. 2000, Koenig, McCullough and Larson 2001, Powell et al. 2003, Hummer et al. 2004, Chida, Steptoe and Powell 2009, Ellison et al. 2010). This general pattern is consistent across outcomes, including all-cause mortality and mortality linked to circulatory diseases, respiratory diseases, infectious diseases, and other specific causes (Oxman, Freeman and Manheimer 1995, Strawbridge et al. 1997, Oman and Reed 1998, Hummer et al. 1999, Koenig et al. 1999, Ellison et al. 2000, Helm et al. 2000, Oman et al. 2002, Dupre, Lutgendorf et al. 2004, Musick, House and Williams 2004, Hill et al. 2005, Franzese and Parrado 2006, Krause 2006b, La Cour, Avlund and Schultz 2006, Gillum et al. 2008, Hummer et al. 2010, Rogers, Krueger and Hummer 2010). Although most studies emphasize the health benefits of religious involvement, religious struggles—indicated by strained relationships with divine others and coreligionists, negative religious beliefs, religious doubts, and religious switching—may also undermine longevity. For example, research suggests that wondering whether God has abandoned you, questioning God's love, and attributing poor health conditions to the devil can actually increase the risk of mortality in elderly hospital patients (Pargament et al. 2001).

The basic association between religious involvement and longevity is well established; however, theoretical and empirical explanations for these patterns are not. Even less is known about how religious struggles might increase mortality risk. In this chapter, we propose and develop two theoretical models. The first model explains why religious involvement should favor longevity. The second model accounts for why religious struggles might increase mortality risk. We conclude with a discussion of viable avenues for future research. In the sections

that follow, we emphasize seminal research articles, recent studies, and notable reviews of empirical evidence. Although we intend for this research collection to be representative of the field, we do not consider it to be exhaustive.

Religious Involvement and Longevity

Why might religious involvement favor health and longevity? Several articles, chapters, and books have addressed this issue (e.g., Koenig, McCullough and Larson 2001, George, Ellison and Larson 2002, Oman and Thoresen 2002, Seeman, Dubin and Seeman 2003, Idler 2004, Ellison, Hummer et al. 2010). Drawing on this body of work and relevant empirical evidence, this section develops a theoretical model linking religious involvement and longevity (see Figure 9.1). This model incorporates several potential mechanisms, including social resources, psychological resources, mental health, health behaviors, biological markers, and physical health—as will our model linking religious struggles and mortality. These mechanisms have been emphasized in previous research as key explanations for the social distribution of mortality risk (Crimmins and Seeman 2001).

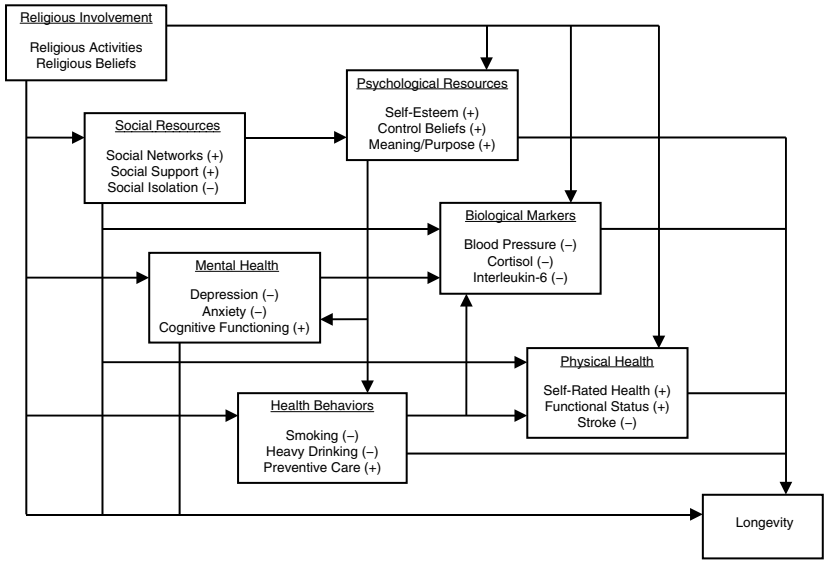


Figure 9.1: A Model Linking Religious Involvement and Longevity

Social Resources

Studies show that religious involvement (especially religious attendance) is associated with larger and more diverse social networks, more contact with network members, more stable marriages and extensive family ties, more types of social support received and perceived (both instrumental and emotional), and greater civic participation, including memberships to religious and secular organizations and groups (Ellison and George 1994, Idler and Kasl 1997a, Strawbridge et al. 1997, McIntosh, Sykes and Kubena 2002, Strawbridge et al. 1997, Hill et al. 2008, Krause 2008, Gray 2009). Recent work by Kobayashi and colleagues (2009) demonstrates that regular religious attendance (at least monthly) reduces the odds of social isolation among older adults by 128%, even with adjustments for health status, chronic conditions and activity limitations.

Public involvement in religious communities clearly influences the size and nature of social networks in late life. Strong religious beliefs concerning the sanctification of the family could encourage adults to maintain strong family ties (Clarke et al. 1999). Divine relations may also play a significant role in promoting health and well-being when adults believe that they are constantly supported and loved by a supernatural entity (Harvey and Silverman 2007, Van Ness et al. 2008).

Several studies have formally tested whether social resources help to explain why religious involvement might favor health and longevity; however, many of these tests are difficult to interpret because multiple mediators are entered simultaneously. With respect to mortality outcomes, some research confirms the mediating influences of marital status, social connections, social activity, and the receipt and provision of social support (Strawbridge et al. 1997, Ellison et al. 2000, la Cour et al. 2006), while others show no evidence of mediation for number of confidants, frequency of social contact, and perceived social support (Koenig et al. 1999, Musick et al. 2004, Hill et al. 2005).

Psychological Resources

Research indicates that religious involvement is positively associated with key psychological resources, including self-esteem, self-control, personal control or mastery, optimism, and meaning and purpose (Krause 1992, 2003a, 2005, 2010, Ai et al. 2002, Jang et al. 2003, Schieman, Pudrovska and Milkie 2005, Ardelt and Koenig 2006, Dillon

and Wink 2007, Hill et al. 2008, McCullough and Willoughby 2009, McFarland 2009). Religious involvement may enhance psychological resources and positive coping by promoting social connections, social activities, and specific religious beliefs.

Religious attendance provides people with the opportunity to interact with those who hold similar values and beliefs, and these interactions can be important for self-esteem because they reinforce positive role identities and role expectations. Ellison (1993) notes that active religious participants are often valued for skills and abilities that are uniquely connected with church-related activities (e.g., singing in choir, participation in religious discussion groups, praying for others), respected for service to others in the community (e.g., volunteering and specific leadership roles), and admired for personal spiritual qualities (e.g., wisdom and morality).

Religious involvement is characterized by social control and self-regulation. Within the context of religious communities, there are social (and perceived divine) sanctions associated with conformity to and deviance from established religious standards (e.g., behavioral and ritual standards and expectations). Religious involvement contributes to self-control by building generic self-regulatory strength over the life course (McCullough and Willoughby 2009). Because religion is, in many respects, a routine practice of constraint and restraint, religious adults are more likely to believe that they can control their emotions and behavior. A strong sense of divine control may also help to promote a sense of personal control or mastery over various aspects of life when adults trust that anything is possible through faith and a strong partnership with God (Schieman et al. 2005, Harvey and Silverman 2007).

Religious involvement may contribute to hope and optimism by fostering positive self-conceptions and control beliefs. When adults are faced with adversity, confidence derived from self-esteem and a sense of control can be instrumental in solving problems. It is also useful to think of life as unfolding according to some divine plan. Beliefs such as these promote a sense of meaning and purpose, which helps to buffer appraisals of difficult life conditions (Pargament 1997, Harvey and Silverman 2007).

Although psychological resources are theoretically viable explanations for why religious involvement might favor longevity, we were unable to find any studies to support this specific class of mechanisms.

Health Behaviors

Studies show that religious involvement is associated with a wide range of healthy behaviors, including, for example, lower levels of smoking and drinking, higher levels of exercise, greater use of preventive health care services, and more rigid adherence to medication regimens (Idler and Kasl 1997a, Strawbridge et al. 1997, Koenig et al. 1998a, 1998b, Oman and Reed 1998, Krause 2003b, Benjamins and Brown 2004, Benjamins 2005, Hill et al. 2006, Klemmack et al. 2007, Hill and McCullough 2008). There is even some evidence to suggest that older religious adults exhibit a stronger preference for and willingness to undergo life-sustaining treatments (Cohen-Mansfield, Droge and Billig 1992, Van Ness et al. 2008). Body mass is one possible exception to the healthy lifestyle profile of religious adults. Studies clearly demonstrate that religious adults tend to weigh more, not less, than their less religious counterparts (Idler and Kasl 1997a, Strawbridge et al. 1997, Ferraro 1998, Oman and Reed 1998). However, research also suggests that religious adults are less likely to be underweight (Musick et al. 2004), which is especially relevant in old age.

There are several compelling explanations for why religious involvement is associated with so many healthy behaviors. First and foremost, religious involvement exposes individuals to moral directives that are supported by the authority of longstanding religious traditions and sacred texts. With prolonged exposure to religious activities and religious social networks, individuals may internalize religious messages that discourage specific health-relevant behaviors (e.g., biblical proscriptions against intoxication). Although specific religious proscriptions may help to explain why religious individuals might avoid particular behaviors (e.g., heavy drinking), they cannot account for the effects of religious involvement on health-relevant behaviors that are unspecified in religious scripture (e.g., smoking and use of preventive health care services).

Interestingly, many religious groups adhere to general religious principles that sanctify the body and promote the instrumental importance of physical health as a means to greater spiritual commitment and involvement (e.g., 1 Cor. 3: 16–17; 1 Cor. 6: 19–20). Mahoney and colleagues (2005) refer to sanctification as a process through which objects are infused with divine or spiritual significance. The Apostle Paul's first Letter to the Corinthians (6: 19–20) provides an especially direct example of the sanctification of the body: "[Y]our body is the

temple of the Holy Spirit who is in you…therefore glorify God in your body, and in your spirit, which are God's." Many Christian religious groups use this passage to promote the body as a sacred object and to discourage a wide range of health-relevant behaviors, including, for example, alcohol consumption, tobacco smoking, illicit drug use, risky sexual behaviors, and even body piercing and tattooing.

Religious involvement could also contribute to healthy behaviors by encouraging deference to authority and conformity to rules and laws (Welch, Tittle and Grasmick 2006). Numerous biblical passages counsel adherents to submit to various "authorities" and "ordinances" (e.g., Hebrews 13: 17, 1 Peter 2: 13–14, Romans 13:1–7). For instance, Romans (13: 1–2) advises: "Let every soul be subject to the governing authorities. For there is no authority except from God, and the authorities that exist are appointed by God. Therefore whoever resists the authority resists the ordinance of God, and those who resist will bring judgment on themselves." Welch and colleagues (2006) explain that religious involvement may favor conformity through fear of divine retribution, internalized moral codes, guilt avoidance, and the social context of similarly obedient peer networks. If religious individuals are more sensitive to authority (which is often sanctified), they may be more likely to trust physicians, adhere to recommended medical regimens, and avoid risky health-related activities. Indeed, many older religious adults view physicians and institutions of medicine as instruments through which God heals (King et al. 2005).

Psychological resources might also help to explain these healthy behavior patterns. If, as previous research suggests, religious involvements promotes self-esteem, self-control and a sense of mastery, religious adults may feel especially confident in their abilities to design and carryout a generally healthy lifestyle (McCullough and Willoughby 2009). A greater sense of meaning and purpose gained through religious involvement could also contribute to healthy behaviors by increasing psychological well-being and reducing motivations to exercise negative coping behaviors like smoking and heavy drinking (Koenig et al. 2001).

Healthy behaviors are the most intuitive explanations for the effects of religious involvement on longevity, and several studies have formally examined this link. Some mortality studies indicate that smoking (Strawbridge et al. 1997, Hummer et al. 1999, Ellison et al. 2000, Dupre et al. 2006), body mass—especially underweight (Strawbridge et al. 1997, Hummer et al. 1999; Musick et al. 2004, Dupre et al. 2006),

exercise (Strawbridge et al. 1997, Musick et al. 2004), and alcohol consumption (Strawbridge et al. 1997) are important explanatory factors, while others show little to no mediating influence for smoking (Koenig et al. 1999, Helm et al. 2000, La Cour et al. 2006), body mass (Koenig et al. 1999, Helm et al. 2000, La Cour et al. 2006), and alcohol consumption (Hummer et al. 1999, Ellison et al. 2000, Hill et al. 2005, Dupre et al. 2006).

The idea that religious involvement might contribute to longevity by promoting healthy behaviors is perhaps the most widely accepted explanation in the religion-health literature (and the popular mind). Religious involvement is clearly associated with a wide range of healthy practices, and these healthy practices are strong predictors of health and longevity. This process should work theoretically, but empirical support is limited and mixed. Given that religious involvement is associated with so many healthy behaviors, it makes sense to think less in terms of individual health behaviors and more in terms of healthy lifestyles (Hill et al. 2007). Are religious adults healthier simply because they avoid smoking and heavy drinking or because they are also more likely to exercise, use preventive health care services, and follow medication regimens simultaneously? Adjusting for an index of healthy behaviors would directly test the mediating influence of the clustering of healthy behaviors within individuals and groups. This reconceptualization could be the key to finding consistent empirical support for this traditional explanation.

Mental Health

Research indicates that religious involvement is associated with better mental health across a range of indicators, including anger, depression, anxiety, non-specific psychological well-being, life satisfaction, and cognitive functioning (Idler 1987, Levin, Markides and Ray 1996, Idler and Kasl 1997a, Roberts and Kaplan 1998, Fry 2001, Cicirelli 2002, Carr 2003, Krause 2003a, Strawbridge et al. 2004, Jang et al. 2005, Krause 2005, Hill et al. 2006, Hill et al. 2008, Norton et al. 2008, Reyes-Ortiz et al. 2008, Corsentino et al. 2009, Ellison, Burdette and Hill 2009, Idler, McLaughlin and Kasl 2009, Law and Sbarra 2009, McFarland 2009, Krause 2010).

Koenig and colleagues (2001) argue that religious involvement benefits mental health by promoting social (e.g., social support) and psychological resources (e.g., optimism and a sense of meaning and

purpose). Healthy lifestyles (especially lower levels of substance use) are also likely to play an important role. Religious attendance may be especially important for indicators of cognitive functioning. Religious attendance in particular involves a number of activities that are likely to stimulate cognitive faculties, including singing, prayer/meditation, sermons, scriptural study, philosophical discussions, and general socializing. If social ties and activities stimulate cognitive faculties, they may delay the deterioration of cognitive performance in old age, presumably through the maintenance of dense neocortical synapses in the brain (Van Ness and Kasl 2003, Hill et al. 2006).

Does better mental health help to explain why religious adults tend to live longer than their less religious counterparts? One study shows no evidence of mediation with separate adjustments for depression and cognitive impairment (Hill et al. 2005). Most studies enter health status variables in a block, so it is difficult to distinguish the mediating influences of mental and physical health. A least five other studies provide little to no evidence to support the mechanisms of depression and anxiety (Strawbridge et al. 1997, Koenig et al. 1999, Helm et al. 2000, Oman et al. 2002, La Cour, Avlund and Schultz 2006).

Biological Markers

Biological markers or biomarkers are objective indicators (derived from independent assessments like blood and saliva, not self-reports) of physiological functioning (e.g., cardiovascular and immune functioning) that are known to predict health and mortality risk. Like most health outcomes, biomarkers are not randomly distributed in society. They are shaped by repeated and patterned social, psychological, and behavioral processes. Does religious involvement favor healthier biomarker profiles? If so, do biomarkers help to explain any health and mortality advantages associated with religious commitment?

To this present, very few studies have considered biomarkers as outcomes of religious involvement. Nevertheless, research shows that various indicators of religious involvement are associated with biomarkers across sympathetic nervous, hypothalamic-pituitary-adrenal, cardiovascular, immune, and metabolic systems (Seeman et al. 2003, Seybold 2007). For example, there is evidence that religious involvement is associated with lower levels of blood pressure, c-reactive protein, interleukin-6, white blood cells, and cortisol (Koenig et al. 1997; Koenig et al. 1998b; King et al. 2001, Ironson et al. 2002, King, Mainous

and Pearson 2002, Krause et al. 2002, Lutgendorf et al. 2004, Gillum et al 2008).

How might religious involvement get "under the skin" to contribute to favorable biomarker profiles? Religious involvement (e.g., religious meaning systems) may help to buffer appraisals of stressful life conditions and, by extension, their physiological consequences (Seybold 2007). Religious involvement might also support healthy biological functioning indirectly by promoting social and psychological resources, healthy behaviors, and mental health. For example, instrumental support, sense of control and moderate drinking practices could help adults to avoid stressful life conditions (events and appraisals) and chronic activation of the physiological stress response (i.e., allostatic load). In the event of stressful life conditions (and the activation of sympathetic systems), religious beliefs and practices, supportive relationships, strong self-concepts, and healthy lifestyles may also favor healthy coping strategies (and efficient activation of parasympathetic systems and various growth responses).

Given the limited amount of research in this area, it should come as no surprise that very few studies have formally tested whether biomarkers help to mediate or explain the effects of religious involvement on longevity. Lutgendorf and colleagues (2004) demonstrate that the inverse association between religious attendance and all-cause mortality risk in older adults is fully mediated by lower levels of interleukin-6, a biomarker implicated in the development of heart disease, cancer, osteoporosis, frailty, and functional limitations. Although Gillum and colleagues (2008) report a similar pattern for c-reactive protein, these results are unclear because several potential mediators were entered simultaneously.

Physical Health

Like research in the area of biomarkers, few empirical studies have examined the effects of religious involvement on physical health status. There is some evidence to suggest that religious involvement is associated with better overall self-rated health, lower levels of functional disability, and lower rates of stroke (Idler 1987, Musick 1996, Idler and Kasl 1997b, Krause 1998, Benjamins 2004, Krause 2006a, Park et al. 2008, Idler et al. 2009; Wolinsky et al. 2009, Eberstein and Heyman 2010).

Although empirical mechanisms for these patterns have yet to be established, the link between religious involvement and physical health

status could be explained by enhanced social and psychological resources, healthier lifestyles, better mental health, and favorable biomarker profiles (Koenig, McCullough and Larson 2001, George, Ellison and Larson 2002, Oman and Thoresen 2002, Seeman, Dubin and Seeman 2003).

Is the association between religious involvement and lower mortality risk explained by better physical health status? This question is difficult to answer because physical health status is often framed as a selection factor. We assume that religious involvement predicts health status, but physical health status might also predict religious involvement. For example, studies show that physical health problems, including broken hips, disability, cancer, and stroke, can undermine or limit public religious activities in old age (Benjamins et al. 2003; Kelley-Moore and Ferraro 2001). In the absence of longitudinal designs and adequate controls for baseline health status, certain indicators of religious involvement (especially indicators of public religious activities) "select" healthier adults into religious activities. This pattern can be seen in various mortality studies when associations with religious attendance are noticeably attenuated or even eliminated with comprehensive adjustments for baseline physical health and functioning (e.g., Ellison et al. 2000; Hill et al. 2005; Hummer et al. 1999; Musick et al. 2004). Depending on one's orientation, these results could suggest selection, mediation, or some combination.

Religious Struggles and Mortality Risk

Why might religious struggles undermine health and longevity? Several articles and chapters have explored this question (e.g., Pargament et al. 2001, Pargament 2002, Krause and Wulff 2004, Pargament et al. 2004, Magyar-Russell and Pargament 2006, Krause 2008, Krause and Ellison 2009, Abu-Raiya, Pargament and Magyar-Russell 2010, Ellison and Lee 2010, Ellison, Roalson et al. 2010, Exline forth., Exline and Rose forth.). Drawing on this body of work and relevant empirical evidence, this section develops a theoretical model linking religious struggles and increased mortality risk (see Figure 9.2). Although it is conceivable that religious struggles could increase mortality risk according to this model, there is to the best of our knowledge little or no empirical support for these processes. The following discussion is therefore mostly speculative.

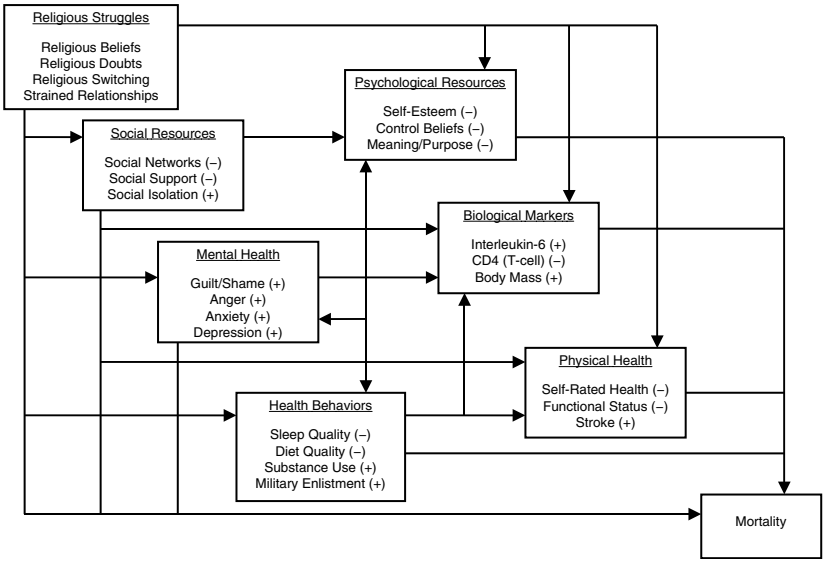


Figure 9.2: A Model Linking Religious Struggles and Mortality

Social Resources

Religious struggles could increase mortality risk by reducing social resources. Controversial religious (and related political and social) beliefs and interpretations, religious doubts, failure to meet the expectations of religious institutions, and religious switching could lead to disagreements with and criticism from coreligionists, clergy, and religious and non-religious family and friends (Clarke et al. 1999, Exline, Yali and Sanderson 2000, Exline 2002, Magyar-Russell and Pargament 2006, Krause 2008, Abu-Raiya, Pargament and Magyar-Russell 2010, Ellison and Lee 2010, Exline forth., Exline and Rose forth.). These strained relationships could in turn shrink social networks, reduce social support, and increase the risk of social isolation.

Psychological Resources

Studies suggest that religious struggles can also reduce self-esteem, personal control beliefs, optimism, and a sense of meaning and purpose (Pargament 2002, Abu-Raiya, Pargament and Magyar-Russell 2010, Ellison and Lee 2010, Magyar-Russell and Pargament 2006). Other research fails to connect various indicators of negative religious

coping and positive psychological resources, including, for example, self-esteem and purpose in life (Ano and Vasconcelles 2005).

Religious struggles could undermine psychological resources in various ways. Failure to meet the expectations of religious institutions (e.g., expectations regarding religious practices and established morality standards), acknowledging personal sin (and related feelings of guilt and shame and attributions of divine retribution), and feeling abandoned (by God and members of social networks) and the loss of love and support are intuitive explanations for lower levels of self-esteem and self-worth (Exline 2002, Exline and Rose 2005, Magyar-Russell and Pargament 2006, Abu-Raiya, Pargament and Magyar-Russell 2010, Ellison and Lee 2010, Exline. forth. Exline and Rose forth.). While negative religious beliefs (e.g., beliefs concerning the pervasiveness of evil and sin) might undermine hope, optimism, and a sense of personal control or mastery, religious doubts (e.g., uncertainty about the existence of a higher power or divine plan) could reasonably undermine a sense of meaning and purpose.

Mental Health

Research indicates that religious struggles are associated with poorer mental health, including higher levels of guilt, shame, anger, anxiety, paranoia, depression, and non-specific psychological distress (Krause et al. 1999, Exline, Yali and Sanderson 2000, Krause and Wulff 2004, Pargament et al. 2004, Ano and Vasconelles 2005, Exline and Martin 2005, Ardelt and Koenig 2006, McConnell et al. 2006, Dillon and Wink 2007, Galek et al. 2007, Allen et al. 2008, Ellison, Burdette and Hill 2009, Ellison and Lee 2010, Ellison, Roalson et al. 2010, Sternthal et al. 2010). These general patterns are consistent across several indicators of religious struggle, including, for example, religious doubts, feeling abandoned by God, negative interactions within the church, negative religious beliefs (e.g., believing that human nature is fundamentally perverse and corrupt), high levels of extrinsic religiosity, and the combination of strong religious beliefs and low religious attendance.

Religious struggles may directly undermine mental health. Failing to meet religious standards could contribute to feelings of guilt and shame (Magyar-Russell and Pargament 2006, Abu-Raiya et al. 2010). Religious doubts are likely associated with anxiety (especially fears and worries concerning divine retribution), while strained relationships with God and coreligionists might relate to feelings of anger and

hostility (Exline and Martin 2005, Abu-Raiya, Pargament and Magyar-Russell 2010). Religious struggles could also undermine mental health indirectly by reducing social and psychological resources. The loss of meaning and purpose could contribute to anxiety (especially fears and worries concerning the meaning and significance of life events) (Ellison and Lee 2010, Abu-Raiya, Pargament and Magyar-Russell 2010). The loss of social support and self-esteem might also elevate depression levels—especially feelings of sadness and hopelessness (Exline, Yali and Sanderson 2000, Abu-Raiya, Pargament and Magyar-Russell 2010).

Health Behaviors

Very few studies have considered the connection between religious struggles and poor health behaviors. Nevertheless, the strong association between health behaviors and mortality risk suggests that any comprehensive model must integrate this important class of mechanisms. We could find only one direct investigation of religious struggles and poor health behaviors. This study suggests that religious doubts are associated with poorer sleep quality (Ellison et al. forth.). We found two studies linking religious involvement (not religious struggles) and poor health behaviors: Research suggests that religious conservatism may increase the odds of military enlistment—an extremely risky occupational pursuit (Burdette et al. 2009)—while monthly religious attendance is associated with poorer overall diet quality (Hill et al. 2006).

It is easy to imagine how indicators of religious struggle like religious doubts and strained relationships might contribute to sleeplessness by promoting feelings of guilt, shame, or anxiety. Certain religious beliefs that are associated with religious conservatism (e.g., a belief in the pervasiveness of evil) might encourage military enlistment. It is unclear why monthly service attendance is associated with poorer diet quality. Why are some religious adults only sporadically involved in religious communities? Is sporadic involvement an indirect measure of religious doubts or strained relationships within the church? The stress of these elements of religious struggle (combined with little to no reinforcement of moderation ideals) could contribute to poor dietary choice (e.g., comfort eating). Although there is no direct empirical evidence linking religious struggles and substance use, religious adults could conceivably turn to substances to cope with negative emotions associated religious doubts and strained relationships.

Biological Markers

Could religious struggles increase the risk of mortality by taxing physiological systems? There is some evidence to suggest a link between religious struggles and poorer immune and metabolic function. Research suggests that negative religious coping (e.g., spiritual discontent, punishing God images, and questioning God's love) is associated with higher levels of interleukin-6 among cardiac patients and lower CD4 (T-cell) counts in patients with HIV/AIDS (Ai et al. 2009, Ai et al. 2010, Trevino et al. 2010). Although studies clearly show that religious adults tend to weigh more than their less religious counterparts (Idler and Kasl 1997a, Ferraro 1998, Oman and Reed 1998, Strawbridge et al. 1997), the connection between religious struggles and body mass is unclear.

How might religious struggles contribute to poor biomarker profiles? First and foremost, religious struggles are stressful and psychologically distressing (Magyar-Russell and Pargament 2006, Abu-Raiya, Pargament and Magyar-Russell 2010). Chronic stress and psychological distress (e.g., anxiety and depression) are clearly linked to overactivation of the physiological stress response (*i.e.*, allostatic load) (McEwen 2002). For example, when stress hormone (e.g., cortisol) levels are chronically high, the body's natural defenses are compromised and excessive amounts of energy are stored as fat around the abdomen. Interestingly, high levels of cortisol may also impair the hippocampus, which is responsible for shutting off the HPA axis (and the very production of cortisol). Because physiological systems are also extremely sensitive to risky health behaviors (e.g., sleeplessness or substance use), religious struggles could reasonably contribute to poor biological functioning through related behavioral mechanisms.

Physical Health

Although religious struggles have been linked with so many health-related factors, very few empirical studies have focused on physical health status. Nevertheless, research shows that religious struggles (e.g., religious doubts and religious switching) are associated with poorer overall self-rated health (Krause and Wulff, 2009, Krause and Ellison 2009, Scheitle and Adamczyk 2010). There is also some evidence to suggest that negative religious coping is related to higher levels of disability (Pargament et al. 2004). Explanations for these patterns have yet to be established; however, the link between religious

struggles and physical health status could be explained by compromised social and psychological resources, risky lifestyles, psychological distress, and poor biological functioning (Pargament et al. 2004, Magyar-Russell and Pargament 2006, Abu-Raiya, Pargament and Magyar-Russell 2010; Exline in press).

Conclusion

Numerous studies suggest that religious involvement tends to favor longevity. There is also evidence to suggest that religious struggles can increase the risk of mortality. The primary aim of this chapter was to explain these distinct patterns. Toward this end, we developed two theoretical models. The first model explained why religious involvement should favor longevity. The second model accounted for why religious struggles might increase mortality risk. Both models incorporated several classes of mechanisms, including social resources, psychological resources, mental health, health behaviors, biological markers, and physical health.

We conclude that additional empirical research is needed to establish theoretically viable mechanisms linking religious involvement and longevity. There is a glaring need for meditational studies focused on psychological resources, mental health, healthy lifestyles (not individual health behaviors), and physical health. It is also important for future studies to begin to test more elaborate causal models with multiple mediators and complex internal causal processes. The study of religious struggles and mortality risk is wide open. We need more empirical research to establish this association. Also, explanations for the effects of religious struggles are not as thoroughly developed as explanations for the healthful consequences of religious involvement. To this point, there are no empirical studies of processes linking religious struggles and mortality risk. Research along these lines will no doubt contribute to a better understanding of religious involvement, religious struggles and mortality risk.

References

Abu-Raiya, Hisham, Kenneth Pargament and Gina Magyar-Russell. 2010. "When Religion Goes Awry: Religious Risk Factors for Poorer Health and Well-being." Pp. 389–412 in *Religion and Psychiatry: Beyond Boundaries*, edited by P. Verhagen, H. van Praag, J. Lopez-Ibor, J. Cox, and D. Moussaoui. West Sussex, UK: Wiley-Blackwell.

_____, Kenneth Pargament, Ziad Kronfol,Terrence N. Tice, and Hoa Appel. 2010. "Pathways to Postoperative Hostility in Cardiac Patients Mediation of Coping, Spiritual Struggle and Interleukin-6." *Journal of Health Psychology* 15: 186–95.

Allen, Rebecca, Laura Phillips, Lucinda Roff, Ronald Cavanaugh, and Laura Day. 2008. "Religiousness/Spirituality and Mental Health among Older Male Inmates." *Gerontologist* 48: 692–97.

Ano, Gene G. and Erin B. Vasconcelles. 2005. "Religious Coping and Psychological Adjustment to Stress: A Meta-Analysis." *Journal of Clinical Psychology* 61: 461–80.

Ardelt, Monika and Cynthia Koenig. 2006. "The Role of Religion for Hospice Patients and Relatively Healthy Older Adults." *Research on Aging* 28: 184–215.

Benjamins, Maureen. 2004. "Religion and Functional Health among the Elderly: Is there a Relationship and is it Constant?" *Journal of Aging and Health* 16: 355–74.

_____. 2005. "Social Determinants of Preventive Service Utilization: How Religion Influences the use of Cholesterol Screenings in Older Adults." *Research on Aging* 27: 475–97.

_____ and Carolyn Brown. 2004. "Religion and Preventative Health Care Utilization among the Elderly." *Social Science & Medicine* 58:109–18.

_____, Marc Musick, Deborah Gold, and Linda George. 2003. "Age-Related Declines in Activity Level: The Relationship between Chronic Illness and Religious Activities." *Journal of Gerontology* 58B: S377–85.

Burdette, Amy M., Victor Wang, Glen H. Elder, Terrence D. Hill, and Janel Benson. 2009. "Serving God and Country? Religious Involvement and Military Service among Young Adult Males." *Journal for the Scientific Study of Religion* 48: 794–804.

Carr, Deborah. 2003. "A 'Good Death' for Whom? Quality of Spouse's Death and Psychological Distress among Older Widowed Persons." *Journal of Health and Social Behavior* 44: 215–32.

Chida, Yoichi, Andrew Steptoe and Lynda H. Powell. 2009. "Religiosity/Spirituality and Mortality A Systematic Quantitative Review." *Psychotherapy and Psychosomatics* 78: 81–90.

Cicirelli, Victor. 2002. "Fear of Death in Older Adults: Predictions from Terror Management Theory." *Journal of Gerontology* 57B: P358–P366.

Clarke, Edward, Mar Preston, Jo Raskin and Vern Bengtson. 1999. "Types of Conflicts and Tensions between Older Parents and Adult Children." *Gerontologist* 39: 261–70.

Cohen-Mansfield, Jiska, Janet Droge and Nathan Billig. 1992. "Factors Influencing Hospital Patients Preferences in Utilization of Life-Sustaining Treatments." *Gerontologist* 32: 89–95.

Corsentino, Elizabeth A., Nicole Collins, Natalie Sachs-Ericsson, and Dan G. Blazer. 2009. "Religious Attendance Reduces Cognitive Decline Among Older Women With High Levels of Depressive Symptoms." *Journal of Gerontology Series* 64A: 1283–89.

Crimmins, Eileen, and Teresa Seeman. 2001. "Integrating Biology into Demographic Research on Health and Aging: With a Focus on the MacArthur Study of Successful Aging." Pp. 9–41 in *Cells and Surveys: Should Biological Measures be Included in Social Science Research?* edited by C. Finch, J. Vaupel, and K. Kinsella. Washington, DC: National Academy Press.

Dillon, Michele and Paul Wink. 2007. *In the Course of a Lifetime: Tracing Religious Belief, Practice, and Change*. Berkley: University of California Press.

Dupre, Matthew, Alexis Franzese, and Emilio Parrado. 2006. "Religious Attendance and Mortality: Implications for the Black-White Mortality Crossover." *Demography* 43: 141–64.

Eberstein, Ike and Kathleen Heyman. 2010. "Jewish Identity and Self-reported Health." Pp. 349–67 in *Religion, Families, and Health: Population-based Research in the United States*, edited by C.G. Ellison and R.A. Hummer. New Brunswick, NJ: Rutgers University Press.

Ellison, Christopher G. 1993. "Religious Involvement and Self-perception among Black Americans." *Social Forces* 71: 1027–55.
_____ and Linda George. 1994. "Religious Involvement, Social Ties, and Social Support in a Southeastern Community." *Journal for the Scientific Study of Religion* 33: 46–61.
_____, Robert Hummer, Shannon Cormier, and Richard Rogers. 2000. "Religious Involvement and Mortality Risk among African American Adults. *Research on Aging* 22: 630–67.
_____, Amy Burdette, and Terrence D. Hill. 2009. "Blessed Assurance: Religion, Anxiety, and Tranquility among US Adults." *Social Science Research* 38: 656–67.
_____, Robert Hummer, Amy Burdette and Maureen Benjamins. 2010. "Race, Religious Involvement, and Health: The Case of African Americans." Pp. 321–348 in *Religion, Families, and Health: Population-based Research in the Unites States*, edited by C.G. Ellison and R.A. Hummer. New Brunswick, N.J.: Rutgers University Press.
_____ and Jinwoo Lee. 2010. "Spiritual Struggles and Psychological Distress: Is There a Dark Side of Religion?" *Social Indicators Research* 98: 501–17.
_____ Lori Roalson, Janelle M. Guillory, Kevin J. Flannelly, and John P. Marcum. 2010. "Religious Resources, Spiritual Struggles, and Mental Health in a Nationwide Sample of PCUSA clergy?" *Pastoral Psychology* 59: 287–304.
_____, Matt Bradshaw, Terrence D. Hill, Jennifer E. Storch, and John P. Marcum. Forth. "Religious Doubt and Sleep Quality in a Nationwide Sample of Presbyterians." *Review of Religious Research*.
Exline, Julie J. 2002. "Stumbling Blocks on the Religious Road: Fractured Relationships, Nagging Vices, and the Inner Struggle to Believe". *Psychological Inquiry* 13: 182–89.
_____. Forth. "Religious and Spiritual Struggles." Pp. 73–88 in *Handbook of Psychology, Religion, and Spirituality*, edited by K. Pargament.
_____, Ann Marie Yali, and William C. Sanderson. 2000. "Guilt, Discord, and Alienation: The Role of Religious Strain in Depression and Suicidality." *Journal of Clinical Psychology* 56: 1481–96.
_____ and Alyce Martin. 2005. "Anger Toward God: A New Frontier in Forgiveness Research." Pp. 73–88 in *Handbook of Forgiveness*, edited by E. Worthington. New York: Routledge.
_____ and Ephraim Rose. 2005. "Religious and Spiritual Struggles." Pp. 315–30 in *Handbook of the Psychology of Religion*, edited by R. Paloutzian and C. Park. New York: Guilford.
_____ and Eric Rose. Forth. "Religious and Spiritual Struggles." In *Handbook of the Psychology of Religion and Spirituality,* 2nd ed. ed. R. Paloutzian and C. Park. New York: Guilford.
Ferraro, Kenneth. 1998. "Firm Believers? Religion, Body Weight, and Well-being." *Review of Religious Research* 39: 224–44.
Fry, P.S. 2001. "The Unique Contribution of Key Existential Factors to the Prediction of Psychological Well-Being of Older Adults Following Spousal Loss." *Gerontologist* 41: 69–81.
Galek, Kathleen, Neal Krause, Christopher G. Ellison, Taryn Kudler, and Kevin J. Flannelly. 2007. "Religious Doubt and Mental Health Across the Lifespan." *Journal of Adult Development* 14: 16–25.
George, Linda, Christopher Ellison and David Larson. 2002. "Explaining the Relationships between Religion and Health." *Psychological Inquiry* 13: 190–200.
Gillum, R., Dana King, Thomas Obisesan, and Harold Koenig. 2008. "Frequency of Attendance at Religious Services and Mortality in a U.S. National Cohort." *Annals of Epidemiology* 18: 124–29.
Gray, Anne. 2009. "The Social Capital of Older People." *Ageing & Society* 29: 5–31.
Haber, Jon R., and Theodore Jacob. 2007. "Alcoholism Risk Moderation by a Socio-religious Dimension." *Journal of Studies on Alcohol and Drugs* 68: 912–22.

Harvey, Idethia and Myrna Silverman. 2007. "The Role of Spirituality in the Self-management of Chronic Illness among Older African and Whites." *Journal of Cross-Cultural Gerontology* 22: 205–20.

Helm, Hughes, Judith Hays, Elizabeth Flint, Harold Koenig, and Dan Blazer. 2000. "Does Private Religious Activity Prolong Survival? A Six-year Follow-up Study of 3,851 Older Adults." *Journal of Gerontology* 55A: M400–M405.

Hill, Terrence, Jacqueline Angel, Christopher Ellison, and Ronald Angel. 2005. "Religious Attendance and Mortality: An 8-year Follow-up of Older Mexican Americans." *Journal of Gerontology* 60B: S102–S109.

Hill, Terrence, Amy Burdette, Jacqueline Angel, and Ronald Angel. 2006. "Religious Attendance and Cognitive Functioning among Older Mexican Americans." *Journal of Gerontology* 61B: P3–P9.

Hill, Terrence, Amy Burdette, Christopher Ellison, and Marc Musick. 2006. "Religious Attendance and the Health Behaviors of Texas Adults." *Preventive Medicine* 42: 309–12.

Hill, Terrence, Christopher Ellison, Amy Burdette, and Marc Musick. 2007. "Religious Involvement and Healthy Lifestyles: Evidence from the Survey of Texas Adults." *Annals of Behavioral Medicine* 34: 217–22.

Hill, Terrence, Amy Burdette, Mark Regnerus, and Ronald Angel. 2008. "Religious Involvement and Attitudes Toward Parenting among Low-income Urban Women." *Journal of Family Issues* 29: 882–900.

Hill, Terrence and Michael McCullough. 2008. "Religious Involvement and Frequency of Intoxication among Low-income Urban Women." *Journal of Drug Issues* 38: 847–62.

Hummer, Robert, Richard Rogers, Charles Nam, and Christopher Ellison. 1999. "Religious Involvement and U.S. Adult Mortality." *Demography* 36: 273–85.

Hummer, Robert A., Christopher G. Ellison, Richard G. Rogers, Benjamin E. Moulton, and Ron R. Romero. 2004. "Religious Involvement and Adult Mortality in the United States: Review and Perspective." *Southern Medical Journal* 97: 1223–30.

Hummer, Robert, Maureen Benjamins, Christopher Ellison, and Richard Rogers. 2010. "Religious Involvement and Mortality Risk among Pre-retirement aged U.S. Adults." Pp. 273–91 in *Religion, Families, and Health: Population-based Research in the Unites States*, ed. C.G. Ellison and R.A. Hummer. New Brunswick, NJ: Rutgers University Press.

Idler, Ellen. 1987. "Religious Involvement and the Health of the Elderly: Some Hypotheses and an Initial Test." *Social Forces* 66: 226–238.

_____. 2004. "Religious Observance and Health: Theory and Research." Pp. 20–43 in *Religious Influences on Health and Well-being in the Elderly*, ed. K. Schaie, N. Krause, and A. Booth. New York: Springer.

_____ and Stanislav Kasl. 1997a. "Religion among Disabled and Nondisabled Persons I: Cross-sectional Patterns in Health Practices, Social Activities, and Well-being." *Journal of Gerontology* 52B: S294–305.

_____ and Stanislav Kasl. 1997b. "Religion among Disabled and Nondisabled Persons II: Attendance at Religious Services as Predictor of the Course of Disability." *Journal of Gerontology* 52B: S306–16.

_____, Julie McLaughlin, and Stanislav Kasl. 2009. "Religion and the Quality of Life in the Last Year of Life." *Journal of Gerontology:* 64B: S528–37.

Ironson, Gail, George Solomon, Elizabeth Balbin, Conall O'Cleirigh, Annie George, Mahendra Kumar, David Larson, and Teresa Woods. 2002. "The Ironson-Woods Spirituality/Religiousness Index is Associated with Long Survival, Health Behaviors, Less Distress, and Low Cortisol in People with HIV/AIDS." *Annals of Behavioral Medicine* 24: 34–48.

Jang, Yuri, Amy Borenstein-Graves, William Haley, Brent Small, and James Mortimer. 2003. "Determinants of a Sense of Mastery in African American and White Older Adults." *Journal of Gerontology* 58B: S221–24.

Jang, Yuri, Amy Borenstein, David Chiriboga, and James Mortimer. 2005. "Depressive Symptoms among African American and White Older Adults." *Journal of Gerontology* 60B: P313–19.

Kelley-Moore, Jessica and Kenneth Ferraro. 2001. "Functional Limitations and Religious Service Attendance in Later Life: Barrier and/or Benefit Mechanism." *Journal of Gerontology* 56B: S365–73.

King, Dana, Arch Mainous, Terrence Steyer, and William Pearson. 2001. "The Relationship between Attendance at Religious Services and Cardiovascular Inflammatory Markers." *International Journal of Psychiatry in Medicine* 31: 415–25.

King, Dana, Arch Mainous, and William Pearson. 2002. "C-reactive Protein, Diabetes, and Attendance at Religious Services." *Diabetes Care* 25: 1172–76.

King, Sharon, Elisabeth Burgess, Makungu Akinyela, Margaret Counts-Spriggs, and Nesonya Parker. 2005. "'Your Body is God's Temple': The Spiritualization of Health Beliefs in Multigenerational African American Families." *Research on Aging* 27: 420–46.

Klemmack, David, Lucinda Roff, Michael Parker, Harold Koenig, Patricia Sawyer, and Richard Allman. 2007. "A Cluster Analysis Typology of Religiousness/Spirituality among Older Adults." *Research on Aging* 29: 163–83.

Kobayashi, Karen, Denise Cloutier-Fisher, and Marilyn Roth. 2009. "Making Meaningful Connections: A Profile of Social Isolation and Health among Older Adults in Small Town and Small City, British Columbia." *Journal of Aging and Health* 21: 374–97.

Koenig, Harold, Harvey Cohen, Linda George, Judith Hays, David Larson, and Dan Blazer. 1997. "Attendance at Religious Services, Interleukin-6, and other Biological Parameters of Immune Function in Older Adults." *International Journal of Psychiatry in Medicine* 27: 233–50.

Koenig, Harold, Linda George, Harvey Cohen, Judith Hays, David Larson, and Dan Blazer. 1998a. "The Relationship between Religious Activities and Cigarette Smoking in Older Adults." *Journal of Gerontology* 53A: M426–M434.

Koenig, Harold, Linda George, Judith Hays, David Larson, Harvey Cohen, and Dan Blazer. 1998b. "The Relationship between Religious Activities and Blood Pressure in Older Adults." *International Journal of Psychiatry in Medicine* 28:189–213.

Koenig, Harold, Judith Hays, David Larson, Linda George, Harvey Cohen, Michael McCullough, Keith Meador, and Dan Blazer. 1999. "Does Religious Attendance Prolong Survival? A Six-year Follow-up Study of 3,968 Older Adults." *Journal of Gerontology* 54A: M370–M376.

Koenig, Harold, Michael McCullough, and David Larson. 2001. *Handbook of Religion and Health*. New York: Oxford University Press.

Koenig, Harold, Linda George, and Patricia Titus. 2004. "Religion, Spirituality, and Health in Medically Ill Hospitalized Older Patients." *Journal of the American Geriatrics Society* 52: 554–62.

Krause, Neal. 1992. "Stress, Religiosity, and Psychological Well-being among Older Blacks." *Journal of Aging and Health* 4: 412–39.

_____. 1998. "Neighborhood Deterioration, Religious Coping, and Changes in Health during Late Life." *Gerontologist* 38: 653–664.

_____. 2003a. "Religious Meaning and Subjective Well-being in Late Life." *Journal of Gerontology* 58B: S160–S170.

_____. 2003b. "Race, Religion, and Abstinence from Alcohol in Late Life." *Journal of Aging and Health* 15: 508–33.

_____. 2005. "God-Mediated Control and Psychological Well-being in Late Life." *Research on Aging* 27: 136–64.

_____. 2006a. "Gratitude toward God, Stress, and Health in Late Life." *Research on Aging* 28: 163–83.

_____. 2006b. "Church-based Social Support and Mortality." *Journal of Gerontology* 61B: S140–46.

_____. 2008. *Aging in the Church: How Social Relationships Affect Health.* West Conshohocken, PA: Foundation Press.
_____. 2010. "Religion and Depression Symptoms in Late Life." Pp. 229–47 in *Religion, Families, and Health: Population-based Research in the Unites States*, ed. C.E. Ellison and R.A. Hummer. New Brunswick, NJ: Rutgers University Press.
_____ and Keith Wulff. 2004. "Religious Doubt and Health: Exploring the Potential Dark Side of Religion." *Sociology of Religion* 65: 35–56.
_____ and Christopher G. Ellison. 2009. "The Doubting Process: A Longitudinal Study of the Precipitants and Consequences of Religious Doubt in Older Adults." *Journal for the Scientific Study of Religion* 48: 292–312.
_____, Berit Ingersoll-Dayton, Christopher Ellison, and Keith Wulff. 1999. "Aging, Religious Doubt, and Psychological Well-being." *Gerontologist* 39: 525–33.
_____, Jersey Liang, Benjamin Shaw, Hidehiro Sugisawa, Hye-Kyung Kim, and Yoko Sugihara. 2002. "Religion, Death of a Loved One, and Hypertension among Older Adults in Japan." *Journal of Gerontology* 57B: S96–S107.
La Cour, Peter, Kirsten Avlund, and Kirsten Schultz-Larsen. 2006. "Religion and Survival in a Secular Region: A Twenty Year Follow-up of 734 Danish Adults Born in 1914." *Social Science & Medicine* 62: 157–64.
Law, Rita and David Sbarra. 2009. "The Effects of Church Attendance and Marital Status on the Longitudinal Trajectories of Depressed Mood among Older Adults." *Journal of Aging and Health* 21: 803–23.
Levin, Jeffrey, Kyriakos Markides, and Laura Ray. 1996. "Religious Attendance and psychological Well-being in Mexican Americans: A Panel Analysis of Three Generations' Data." *Gerontologist* 36: 454–63.
Lutgendorf, Susan, Daniel Russell, Philip Ullrich, Tamara Harris, and Robert Wallace. 2004. "Religious Participation, Interleukin-6, and Mortality in Older Adults." *Health Psychology* 23: 465–75.
Magyar-Russell, Gina and Kenneth Pargament. 2006. "The Darker Side of Religion: Risk Factors for Poorer Health and Well-being." Pp. 91–117 in *Where God and Science Meet: How Brain and Evolutionary Studies Alter our Understanding of Religion*, edited by P. McNamara. Westport, CT: Praeger.
Mahoney, Annette, Robert Carels, Kenneth Pargament, Amy Wachholtz, Laura Leeper, Mary Kaplar, and Robin Frutchey. 2005. "The Sanctification of the Body and Behavioral Health Patterns of College Students." *International Journal of the Psychology of Religion* 15: 221–38.
McFarland, Michael. 2009. "Religion and Mental Health among Older Adults: Do the Effects of Religious Involvement Vary by Gender?" *Journal of Gerontology* 65B: 621–30.
McIntosh, William, Dianne Sykes, and Karen Kubena. 2002. "Religion and Community among the Elderly: The Relationship between Religious and Secular Characteristics of their Social Networks." *Review of Religious Research* 44: 109–25.
McConnell, Kelly, Kenneth Pargament, Christopher Ellison, and Kevin Flannelly. 2006. "Examining the Links between Spiritual Struggles and Symptoms of Psychopathology in a National Sample." *Journal of Clinical Psychology* 62: 1469–84.
McCullough, Michael and Brian Willoughby. 2009. "Religion, Self-Regulation, and Self-Control: Associations, Explanations, and Implications." *Psychological Bulletin* 135: 69–93.
McEwen, Bruce. 2002. *The End of Stress as We Know It.* Washington D.C.: Joseph Henry Press.
Musick, Marc. 1996. "Religion and Subjective Health among Black and White Elders." *Journal of Health and Social Behavior* 37: 221–37.
_____, James House and David Williams. 2004. "Attendance at Religious Services and Mortality in a National Sample." *Journal of Health and Social Behavior* 45: 198–213.

Norton, Maria, Archana Singh, Ingmar Skoog, Christopher Corcoran, JoAnn Tschanz, \Peter Zandi, John Breitner, Kathleen Welsh-Bohmer, and David Steffens. 2008. "Church Attendance and New Episodes of Major Depression in a Community Study of Older Adults: The Cache County Study." *Journal of Gerontology* 63B: P129–P137.

Oman, Douglas and Dwayne Reed. 1998. "Religion and Mortality among the Community-Dwelling Elderly." *American Journal of Public Health* 88: 1469–75.

Oman, Douglas, John Kurata, William Strawbridge, and Richard Cohen. 2002. "Religious Attendance and Cause of Death over 31 Years." *International Journal of Psychiatry in Medicine* 32: 69–89.

Oman, Douglas and Carl Thoresen. 2002. "Does Religion Cause Health? Differing Interpretations and Diverse Meanings." *Journal of Health Psychology* 7: 365–80.

Pargament, Kenneth. 1997. *The Psychology of Religion and Coping.* New York: Guilford Press.

_____. 2002. "The Bitter and the Sweet: An Evaluation of the Costs and Benefits of Religiousness." *Psychological Inquiry* 13: 168–81.

_____, Harold Koenig, Nalini Tarakeshwar, and June Hahn. 2001. "Religious Struggle as a Predictor of Mortality among Medically Ill Elderly Patients: A 2-year Longitudinal Study." *Archives of Internal Medicine* 161: 1881–85.

_____, Harold Koenig, Nalini Tarakeshwar, and June Hahn. 2004. "Religious Coping Methods as Predictors of Psychological, Physical and Spiritual Outcomes among Medically Ill Elderly Patients: A 2-year Longitudinal Study." *Journal of Health Psychology* 9: 713–30.

Park, Nan Sook, David Klemmack, Lucinda Roff, Michael Parker, Harold Koenig, Patricia Sawyer, and Richard Allman. 2008. "Religiousness and Longitudinal Trajectories in Elders' Functional Status." *Research on Aging* 30: 279–98.

Powell, Linda, Leila Shahabi, and Carl Thoresen. 2003. "Religion and Spirituality: Linkages to Physical Health." *American Psychologist* 58: 36–52.

Reyes-Ortiz, Carlos, Ivonne Berges, Mukaila Raji, Harold Koenig, Yong-Fang Kuo, and Kyriakos Markides. 2008. "Church Attendance Mediates the Association between Depressive Symptoms and Cognitive Functioning among Older Mexican Americans." *Journal of Gerontology* 63A: 480–86.

Rogers, Richard, Patrick Krueger, and Robert Hummer. 2010. "Religious Attendance and Cause-Specific Mortality in the United States." Pp. 292–320 in *Religion, Families, and Health: Population-based Research in the United States*, edited by C.G. Ellison and R.A. Hummer. New Brunswick, NJ: Rutgers University Press.

Scheitle, Christopher and Amy Adamczyk. 2010. "High-cost Religion, Religious Switching, and Health." *Journal of Health and Social Behavior* 51: 325–342.

Schieman, Scott, Tetyana Pudrovska, and Melissa Milkie. 2005. "The Sense of Divine Control and the Self-Concept." *Research on Aging* 27: 165–96.

Seeman, Teresa, Linda Dubin, and Melvin Seeman. 2003. "Religiosity/Spirituality and Health: A Critical Review of the Evidence for Biological Pathways." *American Psychologist* 58: 53–63.

Seybold, Kevin. 2007. "Physiological Mechanisms Involved in Religiosity/Spirituality and Health." *Journal of Behavioral Medicine* 30: 303–09.

Sternthal, Michelle, David Williams, Marc Musick, and Anna Buck. 2010. "Depression, Anxiety, and Religious Life: A Search for Mediators." *Journal of Health and Social Behavior* 51: 343–59.

Strawbridge, William, Richard Cohen, Sarah Shema, and George Kaplan. 1997. "Frequent Attendance at Religious Services and Mortality over 28 Years." *American Journal of Public Health* 87: 957–61.

Strawbridge, William, Sarah Shema, Richard Cohen, Robert Roberts, and George Kaplan. 1998. "Religiosity Buffers Effects of Some Stressors on Depression but Exacerbates Others." *Journal of Gerontology* 53B: S118–S126.

Trevino, Kelly, Kenneth Pargament, Sian Cotton, Anthony Leonard, June Hahn, Carol Caprini-Faigin, and Joel Tsevat. 2010. "Religious Coping and Physiological, Psychological, Social, and Spiritual Outcomes in Patients with HIV/AIDS: Cross-sectional and Longitudinal Findings." *AIDS Behavior* 14: 379–89.

Van Ness, Peter, and Stanislav Kasl. 2003. "Religion and Cognitive Dysfunction in an Elderly Cohort." *Journal of Gerontology* 58B: S21–S29.

Van Ness, Peter, Virginia Towle, John O'Leary, and Terri Fried. 2008. "Religion, Risk, and Medical Decision Making at the End of Life." *Journal of Aging and Health* 20: 545–59.

Welch, Michael, Charles Tittle, and Harold Grasmick. 2006. "Christian Religiosity, Self-control and Social Conformity." *Social Forces* 84: 1605–23.

Wolinsky, Frederic, Suzanne Bentler, Elizabeth Cook, Elizabeth Chrischilles, Li Liu, Kara Bright, John Geweke, Maksym Obrizan, Claire Pavlik, Robert Ohsfeldt, Michael Jones, Robert Wallace, and Gary Rosenthal. 2009. "A 12-year Prospective Study of Stroke Risk in Older Medicare Beneficiaries." *BMC Geriatrics* 9: 1–11.

CHAPTER TEN

THE RECONDITE RELIGIOUS LIFE OF HEALTH

Anthony J. Blasi

Following a stratagem from early sociology (Weber 1978: 6, 21), we can begin with instrumental reason and consider religion, which is "value-rational" in nature, as a deviation from instrumental reason. An instrumentally rational (*zweckrational*) act is logically determined, *i.e.* set by a calculation of some kind, according to conditions or means for the attainment of an actor's explicit ends. Deviations from such a means/ends calculus include value-rational (*wertrational*) action, *i.e.* action set by a conscious belief in the value for its own sake in ethical, aesthetic, religious, or other forms of action, independently of any prospect of outcomes; affectual or emotional action set according to an actor's specific feeling states; and traditional action, *i.e.* action set by collective habituation (Weber 1978: 24–25). While few if any actions embody purely one of such types, we can intellectually understand them to the extent that they are of the instrumentally rational kind. Religion, as something oriented to the non-empirical, would not be authentically religious to the extent that it would be instrumentally rational; consequently social scientists who would seek to understand religion and its correlates in terms of instrumental rationality would be mistaken in their approach. In the study of health outcomes, social actors under scientific study pursue religion for religious reasons, not for its health consequences, however much the latter may be of interest to the scientific community.

Nevertheless, the possibility that a social actor may pursue religious activity with extrinsic outcomes in view is a real one. The question remains whether the purportedly religious activity is genuinely religious. Genuineness is not in itself of interest to the social scientist as something to be valued for its own sake; but if it is genuine religion that has health consequences, genuineness is of interest. Subjects who simply go along with a not-too-demanding religion in order to enjoy the social support to be had in the congregation, for example, will likely benefit from the health outcomes of the social support; and that but

not the religion would be of scientific interest. However, those same subjects will unlikely benefit from a salutary (in a clinical sense) religious state of mind in which they do not share. Hypothetically, there could be health consequences of faking it, but that would involve a social scientific study of faking, not of religion *per se*. It is in this context that measures of *extrinsic religiosity* and its lack of health-related outcomes should be understood.

Fundamentally, speaking of religion as a non-instrumental kind of consciousness fails to say what religion *is*. The failure is not that of lacking a definition of religion but that of not having characterizations of it for purposes of establishing how it comes to be liked to health. Such characterizations would be necessary whether or not a satisfactory definition had been settled upon. Setting out from Weber's types of rationality (the instrumentally rational, the value rational, the affective, and the traditional—all of which are overlapping categories), we can begin with the empirical fact of consciousness. There is the *reflective objective consciousness of something, where the object itself is foremost*. The higher non-human animals come close to having this kind of consciousness, but they are not aware of objects as matters of contemplation from a reflective perspective, *i.e.* a perspective that includes themselves as an object among other objects and therefore occasion a response in another that is also occasioned in oneself (Mead 1934: 90ff, esp. 96–97). Science features this kind of consciousness.

Then there is the consciousness of an object where the concept with which it is cognized is foremost. This is the kind of consciousness that comes into play in the course of a mathematical demonstration, for example. A third kind of consciousness of an object occurs when *the having of the consciousness* is foremost. It is this third kind of consciousness that is of interest here.[1]

Where having the consciousness is foremost, there are the aesthetic, fusion, and absorption experiences. In aesthetic experience, one wants to enjoy an artistic work of some kind. In fusion, one wants to relax subjectivity by merging it into activity, as in a vigorous athletic endeavor. In absorption, one forgets the self in the course of attending

[1] Theoretically inclined readers might recognize here something similar to the noematic, eidetic, and noetic moments of consciousness described by Edmund Husserl (1962). The noematic refers to the experiencing, the eidetic to an ideal essence occasioned by the experience, and the noetic to a same identity of a thing experienced from one experience of it to another.

to another interest such as a hobby or a line of inquiry. Religiosity is authentic to the subject who is religious, in the sense of being persuasive, as an experience: as an aesthetic, fusing, or absorbing conscious experience—or something like these. It is in the actual experiencing of this kind of consciousness that the specific and direct health effects of religiosity are likely to come. But we are getting ahead of ourselves.

Where studying a form of consciousness gets difficult—and therefore interesting—is where it has the form of one kind of consciousness but succeeds in bringing to the fore what would be in the fore in a different kind of consciousness. Let's take the case of science as an example. Science as a quest for making an object of a matter of interest is not difficult to communicate to another; a scientist can answer a questionnaire item about the obvious purpose of pursuing science. Science having the same form but pursued out of a hunger for the development of an idea requires some explanation for the benefit of an inquirer who does not really know what being driven by an idea means. To do justice to the experience the scientist would not simply fill in a blank on a questionnaire about the purpose of science but might shed light on one subject after another by applying the basic idea in different but analogous ways. One could say one studies waves or social contradictions, but the person seeking the explanation of what the scientist does would have only a merely verbal answer until the point is somehow communicated by illustration, iteration, elaboration, and other forms of indirection. Again science, still having the form of making an object of a matter of interest come to the fore, could be pursued as a rewarding experience—aesthetically, as a fusing experience, or as an absorption. The having of the experience of science, again, could not be communicated adequately by filling in a blank on a questionnaire about the purpose of science but would involve making analogies with the enthusiasms of the person to whom the scientist might be directing an account. A questionnaire about why scientists pursue their craft would have to go beyond the straightforward purpose of science.

A General Theoretical Orientation to the Nexus of Religion and Health

Religion is about God. A religious person may maintain a religious orientation, relativizing all that is not God. But religion can also be about the idea of God, doctrine. It is sometimes fashionable in religious circles to minimize the role of doctrine, but while affective experiences,

enthusiasms, come and go and can even periodize one's life, doctrines tend to endure and provide a long-term continuity in one's religious life. An individual may be religious but be moved by the sense of continuity to be had from doctrine. Again, the experience of religion may be what moves a person—contemplation (which is aesthetic), prayer (which is often fusion), "practicing the presence of God" (absorption); but in all this the religiosity of the individual is directed toward God. All of these retain the form of religion, but the religious life in question is, after all, life, not God. When one aspect of one's religious life no longer aligns with the other aspects, a conversion of some kind may result (Blasi 2009).

So far we have been limiting our consideration to a kind of philosophical psychology. Religion, however, is social. For a more adequate comprehension, we need to appreciate the fact that religious persons *import* (to use Mead's term) the form of their engagement with the society around them into their consciousness and into their religion. At the social level, by way of analogy with having the form of being about God but being moved by doctrine or religious experience, we can speak of *latent functions* (Merton 1968: 114–36). The concept has been used before on occasion in the sociology of religion (Schneider and Dornbusch 1957, Bibby and Brinkerhoff 1974, Bibby and Mauss 1974, Billette 1976); in the case of the kind of health consequences of interest in this volume it is a matter of latent functions for individuals. So while latent functions can also benefit organizations and societies, in the consideration of health outcomes we are interested in latent *microfunctions*.[2] Of course, the psychological characteristics of religious consciousness do not cease to be relevant for being inserted into the social; indeed, their social environment may be what occasions doctrine or experience.

The very research question of the health consequences in individuals of a social phenomenon such as religion falls within what Georges Gurvitch long ago termed *microsociologie*—or in English,

[2] Abrahamson (1978:25ff.) uses the term *individualistic functionalism*. Bronislaw Malinowski is the best known microfunctionalist in the history of social science; he applied his approach to religion in the essays collected in *Magic, Science and Religion and Other Essays* (1978). In an early text in sociological theory, Martindale (1960) uses the expression *microfunctionalism*, albeit with a different meaning; Martindale had in mind Gestalt psychology and similar approaches that emphasize a primacy of the whole over the parts in cognition; others in society enter in as objects, e.g. in field theory.

microsociology. Health consequences from something like poverty, though the poverty may be a society-wide phenomenon, are the effects of the individual person's poverty. Relevant universes include the "We" (sociability by the partial fusion of otherwise separate individuals) and "relationships with the other" (sociability by partial opposition) (Gurvitch 1958:173). According to Simmel, in his discussion of conflict (2009: 228), such a partial fusion and such a partial opposition are two dimensions of the same phenomenon. The tendency in recent research has been to inquire into "networks." This may be worthwhile too, but it neglects the "who" with whom subjects identify and the "who" with whom they do not identify. The presence of religion in these would likely be most relevant to the kinds of consciousness and states of mind that in turn have health effects.

Let's take the example of an alcoholic who may enter Alcoholics Anonymous to overcome an addiction problem. In the AA program one would be led to religiosity as an aspect of the recovery process. To contribute to the recovery process, the religiosity included in the AA program needs to be convincing as religiosity; it must be a consciousness that brings to the fore a conversion experience, *i.e.* the emphasis needs to be on the experience itself. If it is approached instrumentally, it may not stand in the way of recovery but is unlikely to be a very valuable resource. There is an obvious dilemma in this, resolvable only by the latent microfunction of the religiosity being an internal state of mind that is not thematized but that in turn assists in a self-transformation that makes resort to alcohol less likely. The instrumental reasoning thematizes the instrument (religion) and a desired byproduct (sobriety) but needs to leave out of the instrumental rationale a mediating variable. The occasioning of that mediating variable would be a latent microfunction.

The kind of religiosity in question here is a fairly mature one. The AA participant may need to go back to a relatively undeveloped childhood religion and undergo a conversion experience that leads to a more mature kind of religiosity in order to achieve a healing self-transformation. Since, following Mead, the self has an *other* component, *i.e.*, since the self is a dialectical double of otherness, a self-transformation is also a matter of which *others* are recapitulated in one's self or how one imports their presence into one's own engagement with the world. It is not a mere matter of who is juxtaposed to oneself but who one constitutes as a master reference group (see the discussion of conversion in Shibutani 1961, esp. p. 525). One area of

theoretical development and research in the study of the health effects of religion is the difference the various stages of faith development, or maturation, can make. One well-worked-over model of faith development is that of James Fowler (see Parker 2010). We will return to the question of reference groups further below.

Religion, Stress, and Health

At a first impression, one can distinguish healthy behavior that a religion may encourage, thereby creating good health outcomes, from states of mind that have health effects but are themselves effects of religiosity. Thus religions that discourage the abuse of alcohol, the consumption of caffeine, and smoking, or that encourage fasting can be said to have beneficial health effects, but in addition to that there is a whole universe of health outcomes that are related to psychological stress. Such an impression is valid so far as it goes, but the abuse of alcohol and smoking and a care of one's body in general are motivated lines of action. They are minded activities in themselves, not happenstance behavior. An adolescent may take up smoking or engage in binge drinking in the course of adopting a mildly rebellious stance toward childhood, home and church, but there is also the issue of a problematic sense of self (manifest as low self esteem) and an ambivalent attitude toward one's self. Self-destructive activity as an aspect of a relative severance of oneself from a previously accustomed home base or social location is itself something quasi-motivated among many adolescents. Religious commitment can serve as a cultural resource against the severance of oneself from one's roots. Because of the ambivalence in which the transition into adulthood takes place, the very process of such severance is itself difficult to operationalize in research.[3]

Turning to states of mind, it is useful to distinguish between stressors on the one hand and the states of mind, psychological strain, on the other. As noted elsewhere in this volume, stressors include daily hassles, stressful life events, chronic problems (e.g., poverty and illness), and life-long trauma. Daily hassles and coping with them probably do

[3] For a general treatment of ambivalence as socially structured, see Weigert (1991), who suggests that a sense of the transcendent serves as a mechanism for coping with ambivalence.

not normally lead to strain and hence health effects, but in connection with trauma, for example, they can serve as catalysts for problematic behavior, sometimes outbursts. Occasionally individuals can be observed to fixate on a minor hassle, and one wonders whether there is not a more significant "issue" underlying such behavior. Stressful life events have obvious effects for a year or longer—often longer if several occur within a short period of time. Chronic problems and illness can occasion continuing strain, while life-long trauma in itself can be considered as much strain as stressor. The implication is that different kinds and aspects of religion can mediate the stress inversely and thereby reduce the strain, and whether they can reverse strain through compensation.

Some religious norms can affect behaviors that prevent a stressor; for example, a prohibition of smoking can help prevent chronic illness. As suggested above, such is not what we are focusing on, except insofar as a state of mind acts back on behavior. More important than religious norms, religiosity can reduce the salience of daily hassles and chronic problems. To the extent that the religious person is oriented to God all else is only relative. Conversion experiences that transform the self can move the self from being the mere sufferer of stressful life events into the category of the survivor or veteran. The religious discovery that "God loves me" can relativize the life-long trauma. These are the possibilities around which research has been and continues to be structured. Research on the effectiveness of norms affecting behaviors that are related to health outcomes needs to involve samples of religious traditions and denominations that have the relevant norms. Research on religion mediating daily hassles or buffering the strain from them requires a more general population. Where it is a question of life events, chronic problems or illness, or lifelong trauma, specific subpopulations need to be sampled.

In Figure 10.1, a general theoretical framework is essayed. It presupposes that religious doctrine is relevant primarily as a support for (1) a religious orientation having the capacity to relativize extra-religious concerns and (2) a religious social experience in which one may participate and that may reinforce self-esteem and create a sense of oneness with one's fellow religionists. Each lettered cell in Figure 10.1 represents a distinct research question.

What Figure 10.1 does not include are such identifiable health outcomes as physical symptoms, depression, sense of well-being, life satisfaction, and the like. It also does not fill in the social structuration of

Figure 10.1: Distinctive Research Problematics in the Nexus of Stressors, Mental Strain, and Potentially Health Outcomes

	RELIGION AS DOCTRINE HELPS MAINTAIN		
NON-RELIGIOUS STRESSOR	RELIGION AS RELATIVIZER	RELIGION AS SOCIAL EXPERIENCE	CUMULATIVE EFFECT
Daily Hassles	A	B	I
Life Events	C	D	J
Chronic Problems and Illness	E	F	K
Lifelong Trauma	G	H	L
Diminution of Well-being	Direct effect	Buffering	Global mental state

daily hassles, the social structuration of exposure to those life events that are preventable (victimization, loss of employment, loss of home, etc.), the social structuration of such chronic problems as poverty and preventable chronic illnesses, and even the social structuration of traumatization. What we have begun to theorize here is a nexus.

There is also an aspect of that "nexus" itself that is not captured in Figure 1, and the question of reference groups comes up again in reference to that. In a famous essay, Shibutani (1955) distinguishes three uses of the term *reference group*. It had meant (1) categories of people who serve as a comparison group by which to assess oneself—Hyman's (1942) meaning; (2) categories of people whose status one may aspire to join—the meaning used by Merton and Kitt (1950); and (3) categories of people whose cognitive perspective one may adopt—a usage proposed by Sherif 1943. Shibutani's essay argued that the third usage could be most fruitful in research, but in the present context all three meanings are important. A reference group is not in fact necessarily a group at all; a group is a formally or informally structured network of interacting persons who play routinized roles and share rules. Both groups and categories of persons may be relevant to health outcomes albeit in different ways. Some of these modalities are described below, though no claim to exhaustiveness is to be implied.

1) A comparison population that is a category can give a subject a sense of inadequacy if the comparison proves to be unfavorable.

Thus a relatively unreligious person who by virtue of denominational membership uses the ideal or active members as a comparison group, buffering the effects of stress by virtue of a religiously enhanced self-esteem would be unlikely. Moreover, the negative comparison itself could serve as a stressor. On the other hand, comparing well with the reference group could enable buffering to occur.

2) A comparison group, insofar as it is understood as a group by the subject, would be perceived more realistically than a comparison population would be. This implies that the subject interacts with group members and is probably also a member. With a sense of the group's real as opposed to ideal culture, the subject is less likely to compare favorably or unfavorably. Social support of various kinds is likely to be more relevant than comparisons.
3) A sought-for membership in a population implies a conversion process. The subject converts from one religion or no religion to another religion. The denominational beliefs and practices would be particularly salient since knowledge of these is what are available to the subject. The subject can highlight precisely the beliefs and practices that are needed for purposes of addressing felt quandaries and needs. The conversion process would bring about a sense of meaning that could relativize stressors. Studies need be designed with caution in this respect, however, since some "conversions" are little more than efforts to satisfy family and approximate "faking it." To the extent that there is a sense of meaning occasioned by a conversion, stressors could be dulled. It is also possible that "meaning" is comforting, and a state of comfort could buffer the effects of stressors.
4) A sought-for membership in a group is less a matter of converting from one religion or lack of religion, to another, than it is a matter of becoming more active in a congregation or other religious organization of some kind. It is in this context that the subject could become a care provider or a support for others. That can enhance self-esteem and therefore lead to the buffering of the effects of stressors, quite in addition to the reception of social support from other members of the congregation or organization.
5) Having the perspective or subculture of a population could provide cultural liabilities (e.g., images of a hostile or distant deity or feelings of guilt) or cultural capital (e.g., images of a loving and proximate deity or a vocabulary of forgiveness and assurance).

Ascertaining the content of the perspective or subculture would be important in research employing the concept of a reference group of this kind.

6) Having the perspective of a religious group implies a career of involved membership in the group. Such involvement would be a necessary (but not sufficient) condition for the development of a mature religiosity that through experience has developed beyond mythic literalism and into reflective, symbolically competent, and perhaps universalizing faith (to use some of Fowler's language [Parker 2010]). What is at issue is a more humanistic than conventional development in the religious biography.

These possibilities are, admittedly, sketchy. The state of theorizing about the relationship between stressors, religion, and health has not yet reached the stage where a system of concatenate propositions can be articulated with any confidence. Such would be hoped for in the future.

References

Abrahamson, Mark. 1978. *Functionalism*. Englewood Cliffs, NJ: Prentice-Hall.

Bibby, Reginald W. and Merlin B. Brinkerhoff. 1974. "When Proselytizing Fails: An Organizational Analysis." *Sociological Analysis* 35: 189–200.

Bibby, Reginald W. and Armand L. Mauss. 1974. "Skidders and their Servants: Variable Goals and Functions of the Skid Road Rescue Mission." *Journal for the Scientific Study of Religion* 13: 421–36.

Billette André. 1976. "Sa raconteur une histoire…. Pour une analyse révisée de la conversion." *Social Compass* 23: 47–56.

Blasi, Anthony J. 2009. "The Meaning of Conversion: Redirection of Foundational Trust." Pp. 11–31 in *Conversion in the Age of Pluralism*, edited by G. Giordan. Leiden: Brill.

Gurvitch, Georges. 1958. "Microsociologie." Pp. 172–84 in *Traité de Sociologie*, edited by G. Gurvitch. Paris: Presses Universitaires de France.

Husserl, Edmund. 1962. *Ideas: General Introduction to Pure Phenomenology*. London: Collier-Macmillan.

Hyman, Herbert H. 1942. *The Psychology of Status*. New York: Archives of Psychology.

Malinowski, Bronislaw. 1978. *Magic, Science and Religion and Other Essays*. Garden City, NY: Doubleday.

Martindale, Don. 1960. *The Nature and Types of Sociological Theory*. Boston: Houghton Mifflin.

Mead, George H. 1934. *Mind, Self, and Society*. Chicago: University of Chicago Press.

Merton, Robert K. 1968. *Social Theory and Social Structure* (Enlarged Edition). New York: Free Press.

_____, and Alice Kitt [Rossi]. 1950. "Contributions to the Theory of Reference Group Behavior." Pp. 40–105 in *Studies in the Scope and Method of "The American Soldier,"* edited by R.K. Merton and P.F. Lazarsfeld. Glencoe, IL: Free Press.

Parker, Stephen. 2010. "Research in Fowler's Faith Development Theory: A Review Article." *Review of Religious Research* 51: 233–52.
Schneider, Louis and Sanford M. Dornbusch. 1957. "Inspirational Religious Literature: From Latent to Manifest Functions of Religion." *American Journal of Sociology* 62: 476–81.
Sherif, Muzafer. 1953. "The Concept of Reference Groups in Human Relations." Pp. 203–31 in *Group Relations at the Crossroads* edited by M. Sherif and M.O. Wilson. New York: Harper.
Shibutani, Tamotsu. 1955. "Reference Groups as Perspectives." *American Journal of Sociology* 60: 562–69.
_____. 1961. *Society and Personality. An Interactionist Approach to Social Psychology*. Englewood Cliffs, NJ: Prentice-Hall.
Simmel, Georg. 2009. *Sociology. Inquiries into the Construction of Social Forms, Vol. 1*, translated by A.J. Blasi, A.K. Jacobs and M. Kanjirathinkal. Leiden: Brill.
Weber, Max. 1978. *Economy and Society: An Outline of Interpretive Sociology*. Berkeley: University of California Press.
Weigert, Andrew J. 1991. *Mixed Emotions: Certain Steps Toward Understanding Ambivalence*. Albany: SUNY Press.

CONTRIBUTORS

Alex Bierman is Assistant Professor of Sociology at the University of Calgary. Much of his current research focuses on the way social statuses and social resources, including religious beliefs and behavior, condition the effects of stress on psychological well-being. He is a co-editor of a newly revised edition of *The Handbook of Sociology of Mental Health.*

Anthony J. Blasi, Professor of Sociology at Tennessee State University, is completing a term as editor of the *Review of Religious Research* and is a past president of the Association for the Sociology of Religion. He earned the Ph.D. in sociology at the University of Notre Dame and a conjoint Th.D. at Regis College and the University of Toronto. Among his over twenty books are the edited volumes *American Sociology of Religion: Histories* and *Diverse Histories of American Sociology* (A.S.A. History of Sociology Section 2006 Distinguished Scholarly Publication Award), and the monograph *Transition from Vowed to Lay Ministry in American Catholicism*. His next planned book is a history of American sociology of religion.

Ryon Jason Cobb is a doctoral student in the Department of Sociology at Florida State University. His primary research interests are in racial and ethnic relations, public opinion, sociology of religion, and mental health. He has recently surveyed Evangelicalism's influence on white racial attitudes from the period 1988–2008.

Sherry M. Cummings is Professor and Associate Dean at the University of Tennessee College of Social Work. She received a Ph.D. in Social Work from the University of Georgia in 1998 and a Masters in Theology from Villanova University in 1981. Her research focuses on aging and mental health. In her research she has examined the impact of religiosity on psychological well-being among older adults.

Christopher G. Ellison is Professor of Sociology and Dean's Distinguished Professor of Social Science at the University of Texas at San Antonio. His main areas of interest include religion and health, religion and family life, and the role of religion among racial and ethnic minorities in the United States. He has published over 150 articles

and chapters in these areas, and recently edited, with Robert Hummer, *Religion, Families, and Health: Population-based Research in the United States.*

Andrea K. Henderson is a graduate student in Sociology at the University of Texas at Austin. Her primary research interests are religion, health and family, with a particular interest in the religious lives of African Americans. Her dissertation will examine how religion influences the psychological well-being of Black Americans. She is also working on projects that examine how religion influences marital and non-marital relationships.

Terence D. Hill is Assistant Professor of Sociology at Florida State University, with a secondary appointment in the department of Public Health. He received his Ph.D. in sociology at the University of Texas at Austin in 2006. His research focuses on the social distribution of health and health-relevant behaviors, drawing from sociology, psychology and biology to frame health and longevity as expressions or religious involvement, social relationships, neighborhood conditions, and socioeconomic status.

Barbara Kilbourne, Professor of Sociology at Tennessee State University, is also affiliated with Meharry Medical College. She earned her B.A., M.A., and Ph.D. at the University of Texas at Dallas. Her articles have appeared in the *American Journal of Sociology, American Sociological Review,* and *Social Forces*, among others from the health field. Her current research centers on factors contributing to resiliency among vulnerable subpopulations and on how the diffusion of health-related innovations affects racial disparities in morbidity and mortality.

Neal Krause is the Marshall H. Becker Collegiate Professor of Public Health at the University of Michigan. He received a Ph.D. in Sociology from the Joint Akron University/Kent State University Program. He is the author of *Aging in the Church: How Social Relationships Affect Health*, which received the 2010 Kalish Award for innovative publication from the Gerontological Society of America.

Jeff Levin is an epidemiologist and religious scholar, University Professor of Epidemiology and Population Health and Director of the Program on Religion and Population Health at the Institute for Studies of Religion at Baylor University. He has authored or edited over 160

publications, including seven books, notably *God, Faith, and Health* and *Divine Love: Perspectives from the World's Religious Traditions*.

Robert S. Levine is Professor of Family and Community Medicine at Meharry Medical College. Over his career he has been awarded numerous competitive grants and published over 150 articles in peer-reviewed medical journals including *Epidemiology, JAMA,* and *Annals of Internal Medicine.* He is currently director for the federally funded Center for Excellence for Disparities Research, where his current research focuses on racial disparities and how public policy decisions affect these.

Eric Y. Liu is currently an adjunct associate professor at Renmin University, Beijing, China. He completed Ph.D. in sociology at Baylor University. His research areas include religion, media, mental health, deviance, and prosocial behavior. He has published in the *Journal for the Scientific Study of Religion, Sociology of Religion, Review of Religious Research,* and *Sociological Spectrum* as well as other scholarly journals.

Michael K. Roemer is an Assistant Professor of Religious Studies at Ball State University in Muncie, Indiana. He received his doctorate in sociology from the University of Texas at Austin, and his research and teaching interests include religion and health, the religious of East Asia—especially rituals and festivals in Japan. He has recently published articles in *Social Forces, Japan Forum, Review of Religious Research,* and the *Journal for the Scientific Study of Religion*, as well chapters in several books.

Scott Schieman is Professor of Sociology at the University of Toronto. He is also the editor of *Sociology of Religion*, the official journal of the Association for the Sociology of Religion, and deputy editor at *Society and Mental Health*. He is currently working on a book that explores the ways that beliefs about God's influence in everyday life shapes our health, social lives, and the nature of our politics.

Ephraim Shapiro recently earned the Ph.D. in Sociomedical Sciences at the Mailman School of Public Health at Columbia University, with a discipline in sociology. His research focuses on the intersection of religion, immigrants and health, and he has spoken widely on this topic. He currently serves on the board of the International Sociological Association's Sociology of Religion Research Committee.

William H. Swatos, Jr., has served as Executive Officer of the Association for the Sociology of Religion since 1996, prior to which he served for six years as editor of *Sociology of Religion,* the ASR's official journal. He is also executive officer of the Religious Research Association, adjunct professor of sociology at Augustana College (Illinois), and senior fellow of the Center for Religious Inquiry Across the Disciplines at Baylor University, serving as managing editor of the *Interdisciplinary Journal of Research on Religion.* A doctoral alumnus of the University of Kentucky, Bill is author, co-author, editor, or co-editor of over twenty books including the *Encyclopedia of Religion and Society* (1998). His current research centers on pilgrimage religiosity, secularization and resacralization, reflected in his most recent book, *On the Road to Being There: Pilgrimage and Tourism in Late Modernity,* also published in the Religion and the Social Order series (2006). With Kevin Christiano and Peter Kivisto, Bill has written the text *Sociology of Religion: Contemporary Developments* (2008 [2nd edition]). He has served as editor of this series since 2005. In 2010 he was named Canon Theologian of the Anglican Diocese of Quincy (Illinois).

Religion and the Social Order

Edited by
William H. Swatos, Jr.

ISSN 1610–5210

The series *Religion and the Social Order* was initiated by the Association for the Sociology of Religion in 1991, under the General Editorship of David G. Bromley. In 2004 an agreement between Brill and the ASR renewed the series.

11. *State, Market, and Religions in Chinese Societies*. 2005.
    Edited by Fenggang Yang and Joseph B. Tamney
    ISBN 978 90 04 14597 9
12. *On the Road to Being There*: Studies in Pilgrimage and Tourism in Late Modernity. 2006.
    Edited byWilliam H. Swatos, Jr.
    ISBN 978 90 04 15183 3
13. *American Sociology of Religion*: Histories. 2007.
    Edited by Anthony J. Blasi
    ISBN 978 90 04 16115 3
14. *Vocation and Social Context*. 2007.
    Edited by Giuseppe Giordan
    ISBN 978 90 04 16194 8
15. *North American Buddhists in Social Context*. 2008.
    Edited by Paul David Numrich
    ISBN 978 90 04 16826 8
16. *Religion and Diversity in Canada*. 2008.
    Edited by Lori G. Beaman and Peter Beyer
    ISBN 978 90 04 17015 5
17. *Conversion in the Age of Pluralism*. 2009.
    Edited by Giuseppe Giordan
    ISBN 978 90 04 17803 8
18. *Religion Crossing Boundaries*: Transnational Religious and Social Dynamics in Africa and the New African Diaspora. 2010.
    Edited by Afe Adogame and James V. Spickard
    ISBN 978 90 04 18730 6
19. Toward a Sociological Theory of Religion and Health. 2011.
    Edited by Anthony Blasi
    ISBN 978 90 04 20597 0