



RESEARCH REVIEW

A DIGEST OF NEW SCIENTIFIC RESEARCH
CONCERNING RELIGION, BRAIN & BEHAVIOR

JUNE, 2010

INTRODUCTION

IBCSR Research Review (IRR) is published by the Institute for the Biocultural Study of Religion, a non-profit research institute dedicated to the scientific study of the biocultural aspects of religion. *IRR* briefly annotates and furnishes online information about scientific research articles related to brain, behavior, culture, and religion published in English in leading journals. It also lists relevant books. Articles in press are listed without annotation. Annotations for articles aim to supply a preliminary understanding of the methods and results of a research study, or the argument of a paper. Annotations typically furnish more detail for articles in the scientific study of religion related to religion, brain, and behavior, than for articles in the area of spirituality and health, in accordance with IBCSR research priorities.

Articles for this issue were located by searching the following databases: Applied Science and Technology, ASFA Biological Sciences, ATLA Religion Database, General Science, PubMed, Psychology and Behavioral Sciences Collection, PsycARTICLES, PsycINFO, ScienceDirect, and Web of Science. The search terms were altruism, meditat*, prayer, relig*, spiritu*, and yoga, tailored to the database being searched. Books were located on Amazon.com. Articles not directly relevant to the scientific study of religion were excluded, as were correspondence and reviews. From a universe of 614 articles, 101 articles have been retained from 67 journals. There are 42 pre-publication citations from 34 journals.

IRR is distributed free of charge via email to those who register at <http://www.ibcsr.org>. The publisher is Wesley J. Wildman and the editor is Joel Daniels, a doctoral student in Religion and Science at Boston University. Please send comments and suggestions to info@ibcsr.org. To unsubscribe, send an email to irr@ibcsr.org with "unsubscribe" in the subject line.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Chiesa, Alberto, Paolo Brambilla & Alessandro Serretti. 2010. Functional neural correlates of mindfulness meditations in comparison with psychotherapy, pharmacotherapy and placebo effect. Is there a link? *Acta Neuropsychiatrica* 22(3). 104-117.

doi:[10.1111/j.1601-5215.2010.00460.x](https://doi.org/10.1111/j.1601-5215.2010.00460.x).

To identify current knowledge about the neural correlates of mindfulness meditation (MM), a literature search was performed to find articles comparing meditation, psychotherapy, pharmacotherapy and placebo (n = 41 studies). Main findings suggest that long-term MM practice engages frontal cortical structures to dampen automatic amygdala activation; a large overlap exists between cerebral areas activated during MM, psychotherapy, and pharmacotherapy, and those activated by placebo. Studies indicate that MM, psychotherapy and placebo could target the prefrontal cortex (PFC) which in turn could exert an inhibitory effect on limbic regions such as the amygdala when it is needed, possibly through inhibitory connections from the orbitofrontal cortex and ventromedial regions (including the rostral and subgenual cingulate gyri) to the amygdala. Structural neuroimaging studies of long-term Vipassana and Zen meditators showed that MM practice could be related to enduring macroscopic modifications of brain areas including the PFC, the anterior insula and the putamen.

Han, Shihui, Xiaosi Gu, Lihua Mao, Jianqiao Ge, Gang Wang & Yina Ma. 2010. Neural substrates of self-referential processing in Chinese Buddhists. *Social Cognitive and Affective Neuroscience* 5(2-3). 332-339.

doi:[10.1093/scan/nsp027](https://doi.org/10.1093/scan/nsp027).

After finding that self-trait judgment is associated with increased activity in the ventral medial prefrontal cortex (VMPFC) in non-religious Chinese, but in the dorsal medial prefrontal cortex (DMPFC) in Chinese Christians, researchers investigated neural substrates of self-referential processing in Chinese Buddhists. Using fMRI, researchers scanned 14 Chinese Buddhists while they conducted trait judgments of the self, Zhu Rongji (the former Chinese premier), Sakyamuni (the Buddhist leader) and Jesus (the Christian leader). Relative to Zhu Rongji judgment, self-judgment in Buddhist participants failed to generate increased activation in the VMPFC but induced increased activations in the DMPFC/rostral anterior cingulate cortex, midcingulate and the left frontal/insular cortex. Self-judgment was also associated with decreased functional connectivity between the DMPFC and posterior parietal cortex compared with Zhu Rongji judgment. The authors conclude that the Buddhist doctrine of No-self results in weakened neural coding of stimulus self-relatedness in the VMPFC, but enhanced evaluative processes of self-referential stimuli in the DMPFC. Part of a special issue on Cultural Neuroscience.

van den Hurk, Paul A. M., Fabio Giommi, Stan C. Gielen, Anne E. M. Speckens & Henk P. Barendregt. 2010. Greater efficiency in attentional processing related to mindfulness meditation. *Quarterly Journal of Experimental Psychology* 63(6). 1168-1180.

In this study, attentional processing in relation to mindfulness meditation was investigated. Researchers tested 20 expert mindfulness meditators in the attention network test. Their performance was compared to that of 20 age- and gender-matched controls. In addition to attentional network analyses, overall attentional processing was analyzed by means of efficiency scores (i.e., accuracy controlled for reaction time). Better orienting and executive attention (reflected by smaller differences in either reaction time or error score, respectively) were observed in the mindfulness meditation group. Furthermore, extensive mindfulness meditation appeared to be related to a reduction of the fraction of errors for responses with the same reaction time.

MacLean, Katherine A., Emilio Ferrer, Stephen R. Aichele, David A. Bridwell, Anthony P. Zanesco, Tonya L. Jacobs, Brandon G. King et al. 2010. Intensive meditation training improves perceptual discrimination and sustained attention. *Psychological Science: A Journal of the American Psychological Society / APS* 21(6). 829-839.
doi:[10.1177/0956797610371339](https://doi.org/10.1177/0956797610371339).

Researchers investigated improvements in sustained attention with training (approximately 5 hr/day for 3 months), which consisted of meditation practice that involved sustained selective attention on a chosen stimulus (e.g., the participant's breath). Participants were randomly assigned either to receive training first (n = 30) or to serve as wait-list controls and receive training second (n = 30). Training produced improvements in visual discrimination that were linked to increases in perceptual sensitivity and improved vigilance during sustained visual attention. Consistent with the resource model of vigilance, the authors conclude that perceptual improvements can reduce the resource demand imposed by target discrimination and thus make it easier to sustain voluntary attention.

Newberg, Andrew B., Nancy Wintering, Dharma S. Khalsa, Hannah Roggenkamp & Mark R. Waldman. 2010. Meditation effects on cognitive function and cerebral blood flow in subjects with memory loss: A preliminary study. *Journal of Alzheimer's Disease* 20(2). 517-526.
doi:[10.3233/JAD-2010-1391](https://doi.org/10.3233/JAD-2010-1391).

This preliminary study determined if subjects with memory loss problems demonstrate changes in memory and cerebral blood flow (CBF) after a simple 8-week meditation program. Fourteen subjects with memory problems underwent a pre-program baseline SPECT scan while listening to a neutral stimulus CD. Then subjects were guided through their first meditation session with a CD, during which they underwent a pre-program meditation scan. Subjects completed an 8-week meditation program and underwent the same scanning protocol resulting in a post-program baseline and meditation scan. A region of interest (ROI) template obtained counts in each ROI normalized to whole brain to provide a CBF ratio. Baseline and meditation scans and neuropsychological testing were compared before and after the program. The meditation program resulted in significant increases in baseline CBF ratios in the prefrontal, superior frontal, and superior parietal cortices. Scores on neuropsychological tests of verbal fluency, Trails B, and logical memory showed improvements after training.

Wu, Yanhong, Cheng Wang, Xi He, Lihua Mao & Li Zhang. 2010. Religious beliefs influence neural substrates of self-reflection in Tibetans. *Social Cognitive and Affective Neuroscience* 5(2-3). 324-331.
doi:[10.1093/scan/nsq016](https://doi.org/10.1093/scan/nsq016).

Previous transcultural neuroimaging studies have shown that the neural substrates of self-reflection can be shaped by different cultures. The present study examined the self-processing of two Chinese ethnic groups (Han and Tibetan) to investigate the significant role of religion on the functional anatomy of self-representation. Researchers first replicated the previous results in Han participants, with the ventral medial prefrontal cortex and left anterior cingulate cortex showing stronger activation in self-processing when compared with other-processing conditions. However, no typical self-reference pattern was identified in Tibetan participants on behavioral or neural levels. Researchers suggest that this could be explained by the minimal subjective sense of 'I-ness' in Tibetan Buddhists, and they find support for the role of culture and religion in shaping the neural substrate of self. Part of a special issue on Cultural Neuroscience.

Zeidan, Fadel, Susan K. Johnson, Bruce J. Diamond, Zhanna David & Paula Goolkasian. 2010. Mindfulness meditation improves cognition: evidence of brief mental training. *Consciousness and Cognition* 19(2). 597-605.
doi:[10.1016/j.concog.2010.03.014](https://doi.org/10.1016/j.concog.2010.03.014).

Researchers examined whether brief meditation training affects cognition and mood when compared to an active control group. After 4 sessions of either meditation training using basic Shamatha skills ($n = 24$) or listening to a recorded book ($n = 25$), participants with no prior meditation experience were assessed with measures of mood, verbal fluency, visual coding, and working memory. Both interventions were effective at improving mood but only brief meditation training reduced fatigue, anxiety, and increased mindfulness. Moreover, brief mindfulness training significantly improved visuo-spatial processing, working memory, and executive functioning. Findings suggest that 4 days of meditation training can enhance the ability to sustain attention; these benefits have previously been reported with long-term meditators.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

Atran, Scott & Joseph Henrich. 2010. The Evolution of Religion: How Cognitive By-Products, Adaptive Learning Heuristics, Ritual Displays, and Group Competition Generate Deep Commitments to Prosocial Religions. *Biological Theory* 5(1). 18-30.
doi:[10.1162/BIOT_a_00018](https://doi.org/10.1162/BIOT_a_00018).

The authors hold that understanding religion requires explaining why supernatural beliefs, devotions, and rituals are both universal and variable across cultures, and why religion is so often associated with both large-scale cooperation and enduring group conflict. They identify emerging lines of research that suggest that these oppositions result from the convergence of three processes. First, the interaction of certain reliably developing cognitive processes, such as our ability to infer the presence of intentional agents, favors—as an evolutionary by-product—the spread of certain kinds of counterintuitive concepts. Second, participation in rituals and devotions involving costly displays exploits various aspects of our evolved psychology to deepen people’s commitment to both supernatural agents and religious communities. Third, competition among societies and organizations with different faith-based beliefs and practices has increasingly connected religion with both within-group prosociality and between-group enmity. The authors find that this connection has strengthened dramatically in recent millennia, as part of the evolution of complex societies, and is important to understanding cooperation and conflict in today’s world.

Haigh, C. A. 2010. Reconstructing nursing altruism using a biological evolutionary framework. *Journal of Advanced Nursing* 66(6). 1401-1408.
doi:[10.1111/j.1365-2648.2010.05274.x](https://doi.org/10.1111/j.1365-2648.2010.05274.x).

The author performed a search of literature on biological altruism, altruism and health-related literature encompassing the years 1975–2007 to discuss the role of altruism in development of the discipline of nursing and explore how nursing altruism compares with current thinking in biological evolutionary theory. After reviewing the concept of nursing altruism, the major tenets of biological evolution are explored to clarify the theoretical underpinnings of the hypotheses presented. The author holds that nursing altruism is not solely a manifestation of disinterested sacrifice for the benefit of others, but is more concerned with ensuring the survival of a clearly defined social group.

Komter, A. 2010. The Evolutionary Origins of Human Generosity. *International Sociology* 25(3). 443-464.
doi:[10.1177/0268580909360301](https://doi.org/10.1177/0268580909360301).

This article examines how altruism and self-interest are linked in human generosity, and what social scientists can learn from this linkage. The origins of generosity are explored by combining biological, psychological, anthropological and sociological evidence. Kinship altruism, reciprocal altruism, ‘strong reciprocity’, cultural norms and gene-culture co-evolution prove to be major explanations of the evolution of cooperation in human beings. Empirical research shows that human generosity is selective: kin and close relatives are favored over others. Moreover, generosity generates its own rewards and is therefore again selective: the more you give, the more you receive. The author finds that the selectivity of generosity reveals its evolutionary origins.

- Lavric, M. & S. Flere. 2010. Measuring religious costs and rewards in a cross-cultural perspective. *Rationality and Society* 22(2). 223-236.
doi:[10.1177/1043463110366227](https://doi.org/10.1177/1043463110366227).

The assumption of rationally motivated individual religious behavior was tested in a survey of undergraduate university students from four different cultural/religious environments: Slovenia, Bosnia and Herzegovina, Serbia, and the United States of America. In particular, an attempt was made to explain readiness to bear religious costs by the expectation of otherworldly rewards and some other variables, such as religious socialization, support in the upbringing of children, religious capital, satisfaction with religious services and the perceived social sanctions for possible religious nonparticipation. It was found that it is the otherworldly rewards in all the samples that explain by far the major part of the variance in the readiness to bear religious costs. These results suggest that individuals do tend to make rational choices even when it comes to religion. Based on their beliefs, they are ready to accept religious costs approximately to the level of their expectation of otherworldly rewards.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND SOCIOLOGY

- Ankri, Y. L. E., E. Bachar & A. Y. Shalev. 2010. Reactions to Terror Attacks in Ultra-Orthodox Jews: The Cost of Maintaining Strict Identity. *Psychiatry - Interpersonal and Biological Processes* 73(2). 190-197.
doi:[10.1521/psyc.2010.73.2.190](https://doi.org/10.1521/psyc.2010.73.2.190).

Following suicide bus-bombing incidents Jerusalem, Ultra-Orthodox Jewish survivors (n = 20) reported higher levels of PTSD symptoms and more personal guilt than non-Ultra-Orthodox (n = 33). The narratives of the former group reflected an unshaken belief in Just Providence, within which being a victim of terror was perceived as a Just retribution for known or unknown wrongdoing. Survivors' reactions to trauma often reflect an effort to reconcile incongruous experiences with previously held beliefs.

- Aydin, Nilüfer, Peter Fischer & Dieter Frey. 2010. Turning to god in the face of ostracism: effects of social exclusion on religiousness. *Personality and Social Psychology Bulletin* 36(6). 742-753.
doi:[10.1177/0146167210367491](https://doi.org/10.1177/0146167210367491).

Researchers found that individuals who are socially excluded can turn to religion to cope with the experience. Empirical studies with both Christian and Muslim samples found that socially excluded persons reported (a) significantly higher levels of religious affiliation, and (b) stronger intentions to engage in religious behaviors than comparable, nonexcluded individuals. Direct support for the stress-buffering function of religiousness was also found, with a religious prime reducing the aggression-eliciting effects of consequent social rejection.

- Baltazar, A., W. H. Herbert, D. McBride, G. Hopkins & J. V. Stevens. 2010. Internet pornography use in the context of external and internal religiosity. *Journal of Psychology and Theology* 38(1). 32-40.

This study examined the extent of Internet pornography use among 751 males and females who were attending a conservative Christian university, perceived consequences and benefits of viewing, and the relationship between internal, external and quest religiosity and Internet pornography use. Findings suggest that the majority of males had some involvement in Internet pornography, but regular viewing was significantly lower than has been found in the general population. Internal and external religiosity showed only a weak, though statistically significant, inverse relationship with regular Internet pornography use.

- Brint, Steven & Seth Abrutyn. 2010. Who's Right About the Right? Comparing Competing Explanations of the Link Between White Evangelicals and Conservative Politics in the United States. *Journal for the Scientific Study of Religion* 49(2). 328-350.
doi:[10.1111/j.1468-5906.2010.01513.x](https://doi.org/10.1111/j.1468-5906.2010.01513.x).

Using data from the 2000-2004 National Election Studies, researchers found that moral standards traditionalism, religiosity, male-dominant gender ideology, and low levels of education were significantly associated with conservative attitudes. Moral standards traditionalism demonstrated the most consistent, and generally the strongest, effects across dependent variables. Moral standards traditionalism attenuated the evangelical effect on attitudes about abortion, homosexuality, and social spending. Religiosity and male-dominant gender ideology attenuated the effect on abortion and homosexuality only.

- Choi, Youngtae. 2010. Religion, religiosity, and South Korean consumer switching behaviors. *Journal of Consumer Behaviour* 9(3). 157-171.
doi:[10.1002/cb.292](https://doi.org/10.1002/cb.292).

In a study of South Korean consumers, religious affiliation, including non-affiliation, was not found to be significantly related to product- and store-switching behavior. However, consumers reporting high levels of religiosity were found to be significantly less likely to engage in product purchase- and store-switching behaviors than those reporting lower levels of religiosity. Consumers reporting high levels of religiosity are also less likely to engage in product purchase switching behavior than non-religious affiliated consumers (i.e., "no religiosity" consumers). This pattern held across denominations. Statistically significant differences in switching behavior were not obtained between consumers reporting low levels of religiosity and those respondents who expressed no religious affiliation.

- Desmond, Scott A., Kristopher H. Morgan & George Kikuchi. 2010. Religious Development: How (And Why) Does Religiosity Change From Adolescence to Young Adulthood? *Sociological Perspectives* 53(2). 247-270.
doi:[10.1525/sop.2010.53.2.247](https://doi.org/10.1525/sop.2010.53.2.247).

The authors examined the influence of parents and peers on adolescent religious service attendance and belief in the importance of religion using eight years of the National Youth Survey (1979–1987). The results suggest adolescents who live with both of their biological parents have higher initial levels of religious service attendance, but their religious service attendance decreases more rapidly over time. The pattern of results for peer attachment is similar. Compared to adolescents with low peer attachment, adolescents with high peer attachment are more likely to attend religious services initially and to believe that religion is important, but their religious service attendance and belief in the importance of religion decreases more rapidly over time.

- Duffy, Ryan D. 2010. Spirituality, religion, and work values. *Journal of Psychology and Theology* 38(1). 52-61.

The current study explored the relation of intrinsic religiousness and spirituality to work values with a sample of undergraduate college students (n = 265). Each of the constructs was found to weakly correlate with the value of influence, and spirituality weakly-moderately correlated with valuing service and meaning. Relations among these variables were substantially moderated by gender. For males, higher levels of spirituality moderately related to valuing influence and service, whereas for females no significant relations existed among these constructs. It is proposed that spirituality and religiousness may have only a minor relation to the work values assessed in this study, but these connections may be stronger for men.

- Hall, M. Elizabeth Lewis, Brad Christerson & Shelly Cunningham. 2010. Sanctified sexism: Religious beliefs and the gender harassment of academic women. *Psychology of Women Quarterly* 34(2). 181-185.
doi:[10.1111/j.1471-6402.2010.01560.x](https://doi.org/10.1111/j.1471-6402.2010.01560.x).

The authors examined ways in which the theologically-based gender schemas in Christian higher education settings might affect the experiences of harassment among male and female faculty. A questionnaire containing measures of harassment and two aspects of institutional climate (the degree to which the participant feels he or she has influence in the academic unit and perceived access to information about academic life and advancement) was sent to all

faculty at a single university; 138 responses were received, 42 of which were female, closely resembling the gender distribution of the faculty. Results indicated that attributing discrimination to the Christian beliefs of the perpetrator moderated the effects of harassment on the two organizational climate variables, potentiating the negative effects at higher levels of harassment.

Hunter, Isaac, Bryan J. Dik & James H. Banning. 2010. College students' perceptions of calling in work and life: A qualitative analysis. *Journal of Vocational Behavior* 76(2). 178-186.
doi:[10.1016/j.jvb.2009.10.008](https://doi.org/10.1016/j.jvb.2009.10.008).

This study examined open-ended responses from 295 college students to questions regarding how they define the construct of calling, how having a calling influences their career development, and the extent to which the term "calling" may apply to areas of life other than work. Results indicated that students perceived a calling as originating from external guiding forces, co-occurring with unique fit and well-being, having altruistic features, and extending to multiple life roles. These results largely support recent conceptualizations of calling in the career development literature, and suggest themes to explore in counseling with clients who desire to approach work as a calling.

Jenkins, Kathleen E. 2010. In Concert and Alone: Divorce and Congregational Experience. *Journal for the Scientific Study of Religion* 49(2). 278-292.
doi:[10.1111/j.1468-5906.2010.01509.x](https://doi.org/10.1111/j.1468-5906.2010.01509.x).

Drawing from data collected in a four-year ethnographic study of divorce and ending life partnerships across six religious traditions, the author analyzed the experiences of 41 individuals who ended life partnerships while active in their congregations. Despite intense points of communal connection through ritual, respondents named largely private strategies for settling heightened emotion, physical and psychological pain, and creating a new self. Permeating their communal experiences was a marked sense of aloneness, resulting from individual shame and congregational silence, as well as their understanding of divorce-work as ultimately private self-work.

Juhl, Jacob & Clay Routledge. 2010. Structured terror: further exploring the effects of mortality salience and personal need for structure on worldview defense. *Journal of Personality* 78(3). 969-990.
doi:[10.1111/j.1467-6494.2010.00639.x](https://doi.org/10.1111/j.1467-6494.2010.00639.x).

The current 3 studies examine the potential for "personal need for structure" (PNS) to determine the extent to which people respond to mortality salience with increased worldview defense. After having PNS measured and mortality salience induced, university-related (Study 1) or religious (Studies 2 and 3) worldview defense was assessed. Only individuals high in PNS responded to mortality salience with increased worldview defense, responding to death thoughts by seeking a highly structured, clear, and coherent view of the world.

Koch, J. R. & I. L. Ramirez. 2010. Religiosity, Christian Fundamentalism, and Intimate Partner Violence among US College Students. *Review of Religious Research* 51(4). 402-410.

In a study of the relationship between religious behavior, religious belief, and intimate partner violence in 626 undergraduates, researchers found that general religiosity, measured as belief in God, strength of religious faith, church attendance, and frequency of prayer, was not associated with violence approval, psychological aggression, or intimate partner violence. However, Christian fundamentalism was positively associated with both violence approval and acts of intimate partner violence, but not psychological aggression.

Maccio, Elaine M. 2010. Influence of Family, Religion, and Social Conformity on Client Participation in Sexual Reorientation Therapy. *Journal of Homosexuality* 57(3). 441-448.
doi:[10.1080/00918360903543196](https://doi.org/10.1080/00918360903543196).

In a sample of 52 sexual reorientation therapy (SRT) participants, and 211 SRT nonparticipants who had ever identified as gay, lesbian, or bisexual, actual or expected negative family reactions, high religious fundamentalism, and identifying as spiritual significantly increased one's odds of participating in SRT.

- Merino, Stephen M. 2010. Religious Diversity in a "Christian Nation": The Effects of Theological Exclusivity and Interreligious Contact on the Acceptance of Religious Diversity. *Journal for the Scientific Study of Religion* 49(2). 231-246.
doi:[10.1111/j.1468-5906.2010.01506.x](https://doi.org/10.1111/j.1468-5906.2010.01506.x).

Using data from the nationally representative Religion and Diversity Survey, the author found that theological exclusivism is consistently and strongly associated with negative attitudes toward religious diversity and less willingness to include Muslims and Hindus in community life. A belief that the United States is a Christian nation is associated with a positive view of religious diversity but decreased willingness to include Muslims in community life. Prior contact with Muslims, Buddhists, and Hindus is predictive of more positive views of religious diversity; contact with Muslims is associated with greater tolerance for a mosque in one's community.

- Peifer, Jared L. 2010. The Economics and Sociology of Religious Giving: Instrumental Rationality or Communal Bonding? *Social Forces* 88(4). 1569-1594.

Using data from the American Congregational Giving Survey and the Social Capital Community Benchmark Survey, the author finds that applying rational choice theory to religious giving produces mixed results, while research indicates that the sense of solidarity one feels with the congregation does correlate with religious giving. High levels of religiosity also have a strong impact on giving.

- Pitt, Richard N. 2010. Fear of a Black Pulpit? Real Racial Transcendence Versus Cultural Assimilation in Multiracial Churches. *Journal for the Scientific Study of Religion* 49(2). 218-223.
doi:[10.1111/j.1468-5906.2010.01504.x](https://doi.org/10.1111/j.1468-5906.2010.01504.x).

The author argues that multiracial churches do not cause blacks to transcend their race consciousness. Instead, they offer havens for those blacks who have already transcended their race enough to pursue membership in these religious communities. He does not find sufficient evidence of religion's ability to promote racial transcendence for "race-conscious" white congregants.

- Sander, W. 2010. Religious background and educational attainment: The effects of Buddhism, Islam, and Judaism. *Economics of Education Review* 29(3). 489-493.
doi:[10.1016/j.econedurev.2009.08.004](https://doi.org/10.1016/j.econedurev.2009.08.004).

Analysis of data from the National Opinion Research Center's "General Social Survey: 1998–2008" found that Islam and Judaism have similar positive effects on educational attainment relative to Protestants and Catholics. The effect of Buddhism is specific to respondents who were living in the United States at age sixteen and/or were born in the United States.

- Schwadel, Philip. 2010. Period and Cohort Effects on Religious Nonaffiliation and Religious Disaffiliation: A Research Note. *Journal for the Scientific Study of Religion* 49(2). 311-319.
doi:[10.1111/j.1468-5906.2010.01511.x](https://doi.org/10.1111/j.1468-5906.2010.01511.x).

Using data from the 1973 through 2006 General Social Survey, the author finds that by 2006, the probability of respondents reporting no religious preference had risen to almost 16%. Analysis reveals period-based increases in the probability of reporting no religious preference from 1990 to 2006; across-cohort increases in no religious preference beginning with those born in the 1940s; and, a decline in the likelihood of religious disaffiliation (being raised with a religious preference but currently reporting no religious preference) for those born in the 1960s and 1970s compared to those born between 1945 and 1959.

Skirbekk, Vegard, Eric Kaufmann & Anne Goujon. 2010. Secularism, Fundamentalism, or Catholicism? The Religious Composition of the United States to 2043. *Journal for the Scientific Study of Religion* 49(2). 293-310.

doi:[10.1111/j.1468-5906.2010.01510.x](https://doi.org/10.1111/j.1468-5906.2010.01510.x).

Researchers provide a cohort-component projection of the religious composition of the United States, considering differences in fertility, migration, intergenerational religious transmission, and switching. If fertility and migration trends continue, Hispanic Catholics will experience rapid growth and expand from 10 to 18 percent of the American population between 2003 and 2043. Protestants are projected to decrease from 47 to 39 percent over the same period, while Catholicism emerges as the largest religion among the youngest age cohorts. Liberal Protestants decline relative to other groups due to low fertility and losses from religious switching. Immigration drives growth among Hindus and Muslims, while low fertility and a mature age structure causes Jewish decline. The low fertility of secular Americans and the religiosity of immigrants provide a countervailing force to secularization, causing the nonreligious population share to peak before 2043.

Smith, Buster G. & Byron Johnson. 2010. The Liberalization of Young Evangelicals: A Research Note. *Journal for the Scientific Study of Religion* 49(2). 351-360.

doi:[10.1111/j.1468-5906.2010.01514.x](https://doi.org/10.1111/j.1468-5906.2010.01514.x).

Using the Baylor Religion Survey, the researchers found that young evangelicals: are significantly more likely than older evangelicals to think that more should be done to protect the environment; hold views similar to older evangelicals regarding abortion, same-sex marriage, stem cell research, marijuana use, government welfare spending, spending on the nation's health, and the war in Iraq; and, remain significantly more conservative than nonevangelicals on these same social issues. They find no strong evidence to support the notion that young evangelicals are retreating from traditional positions or increasingly adopting more liberal positions on hot-button or controversial social issues.

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

Ammerman, Nancy T. 2010. The Challenges of Pluralism: Locating Religion in a World of Diversity. *Social Compass* 57(2). 154-167.

doi:[10.1177/0037768610362406](https://doi.org/10.1177/0037768610362406).

The author argues that religious pluralism is the normal state of affairs. Religion itself is multi-dimensional, and the several dimensions of religious and spiritual experience can be combined in myriad ways across individual lives. Preliminary findings from new research are presented, detailing modes of spiritual discourse that include mystery, majesty, meaning, moral compassion, and social connection. These dimensions find expression across multiple social institutions. In addition, religion is multi-traditional and organized by plural producers of the goods and services and events that embody and transform religious tradition. Finally, it is argued that religious pluralism must be studied in terms of the structures of power and privilege that allow some religious ideas to be given free voice, but limit the practice of other religious rituals or the gathering of dissident religious communities.

Anthony, Francis-Vincent, Chris A. M. Hermans & Carl Sterkens. 2010. A Comparative Study of Mystical Experience Among Christian, Muslim, and Hindu Students in Tamil Nadu, India. *Journal for the Scientific Study of Religion* 49(2). 264-277.

doi:[10.1111/j.1468-5906.2010.01508.x](https://doi.org/10.1111/j.1468-5906.2010.01508.x).

Using an abridged version of Hood's Mysticism Scale, researchers studied Christian, Muslim, and Hindu respondents (1,920 college students) living in Tamil Nadu, India. Empirical analysis yielded a moderately reliable model of mystical experience that permits comparison between the three religious traditions. The authors

argue for the usefulness of a comparative model of vertical mysticism that combines with the complementary common characteristics of noetic quality and ineffability.

Henrich, Joseph, Steven J. Heine & Ara Norenzayan. 2010. The Weirdest People in the World? *Behavioral and Brain Sciences* 33(2-3). 61-83.
doi:[10.1017/S0140525X0999152X](https://doi.org/10.1017/S0140525X0999152X).

Behavioral scientists routinely publish broad claims about human psychology and behavior in the world's top journals based on samples drawn entirely from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies. Researchers – often implicitly – assume that either there is little variation across human populations, or that these “standard subjects” are as representative of the species as any other population. To determine whether these assumptions are justified, researchers reviewed comparative database from across the behavioral sciences. Results suggest both that there is substantial variability in experimental results across populations, and that WEIRD subjects are particularly unusual compared with the rest of the species – frequent outliers. The findings suggest that members of WEIRD societies, including young children, are among the least representative populations one could find for generalizing about humans. Hence, there are no obvious a priori grounds for claiming that a particular behavioral phenomenon is universal based on sampling from a single subpopulation. One of the two target articles in this issue of Behavioral and Brain Sciences.

Kanazawa, Satoshi. 2010. Why Liberals and Atheists Are More Intelligent. *Social Psychology Quarterly* 73(1). 33-57.
doi:[10.1177/0190272510361602](https://doi.org/10.1177/0190272510361602).

Using data from the National Longitudinal Study of Adolescent Health and the General Social Surveys, the author finds that adolescent and adult intelligence significantly increases adult liberalism, atheism, and men's (but not women's) value on sexual exclusivity. Articulating the Savanna-IQ Interaction Hypothesis, he suggests that more intelligent individuals may be more likely to acquire and espouse evolutionarily novel values and preferences (such as liberalism and atheism and, for men, sexual exclusivity) than less intelligent individuals, but that general intelligence may have no effect on the acquisition and espousal of evolutionarily familiar values (for children, marriage, family, and friends).

Kim, Jibum, Sang-Wook Kim & Jeong-Han Kang. 2010. Confidence in Religious Leaders in Korea: A Research Note. *Journal for the Scientific Study of Religion* 49(2). 320-327.
doi:[10.1111/j.1468-5906.2010.01512.x](https://doi.org/10.1111/j.1468-5906.2010.01512.x).

In Korea from 1985 to 1995, all religious groups experienced growth, but from 1995 to 2005 only the Catholic population did so. Favorable images of Korean Catholicism compared to other Korean religions point to one factor that may account for this trend, namely, confidence in religious leaders. Using the 2003–2007 Korean General Social Surveys cumulative data, researchers found a hierarchy of confidence in religious leaders ranging from highest to lowest as follows: Catholics, Protestants, Buddhists, no religion.

Lazar, A. 2010. The relationship between spirituality and religiousness among Jewish nurses in Israel. *Review of Religious Research* 51(4). 428-439.

In order to examine the relationship between spirituality and religiousness, 117 Jewish Israeli hospital nurses responded to a multidimensional measure of humanistic spirituality and indicated their identification with one of the four degrees of religious adherence common in Israeli society. Three dimensions of spirituality—Fruits of Spirituality, Transcendent Dimension, and Meaning and Purpose in Life—were highly weighted on the significant discriminant function that differentiated between the groups and ordered them according to their degree of religiousness. Three additional spirituality dimensions—Mission in Life, Material Values, and Sacredness of Life—had slightly lower weights on this function. However, three other dimensions of spirituality—Idealism, Altruism and Awareness of the Tragic—were found to be lowly weighted on the discriminant function. These

results indicate that while the former aspects of spirituality are strongly associated with religiousness, the latter aspects are to a large degree independent of it.

- Levin, J. & B. H. Kaplan. 2010. The Sorokin Multidimensional Inventory of Love Experience (SMILE): Development, Validation, and Religious Determinants. *Review of Religious Research* 51(4). 380-401.

This paper describes the development and validation of the Sorokin Multidimensional Inventory of Love Experience (SMILE), a 24-item scale based on the writing of sociologist Pitirim Sorokin. The SMILE contains six subscales of four items each, corresponding to what Sorokin termed the religious, ethical, ontological, biological, psychological, and social domains of love. All factor loadings were found to be strong and statistically significant. A model specifying intercorrelations among all subscales exhibited good overall fit, although biological love was only weakly related to the other factors. Finally, religious measures were found to be significant determinants of scores on five of six subscales. This confirms Sorokin's hypothesis that affirming the experience of love is in part a function of religiousness.

- Machery, Edouard. 2010. *Precis of Doing Without Concepts*. *Behavioral and Brain Sciences* 33(2-3). 195-206.
doi:[10.1017/S0140525X09991531](https://doi.org/10.1017/S0140525X09991531).

In this article, the second target article for this issue of Behavioral and Brain Sciences, Edouard Machery reviews the main points and arguments that are developed at greater length in his 2009 book Doing without Concepts. Although cognitive scientists have learned a lot about concepts, their findings have yet to be organized in a coherent theoretical framework. In addition, after twenty years of controversy, there is little sign that philosophers and psychologists are converging toward an agreement about the very nature of concepts. Doing without Concepts attempts to remedy this state of affairs.

- Palmer, Craig T., Lyle B. Steadman, Chris Cassidy & Kathryn Coe. 2010. The importance of magic to social relationships. *Zygon* 45(2). 317-337.
doi:[10.1111/j.1467-9744.2010.01083.x](https://doi.org/10.1111/j.1467-9744.2010.01083.x).

Many anthropological explanations of magical practices are based on the assumption that the immediate cause of performing an act of magic is the belief that the magic will work as claimed. Such explanations typically attempt to show why people come to believe that magical acts work as claimed when such acts do not identifiably have such effects. Using ethnographic examples, the authors suggest an alternative approach to the explanation of magic that views magic as a form of religious behavior, a form of communication that promotes or protects cooperative social relationships.

- Pratt, Douglas. 2010. Religion and Terrorism: Christian Fundamentalism and Extremism. *Terrorism and Political Violence* 22(3). 438-456.
doi:[10.1080/09546551003689399](https://doi.org/10.1080/09546551003689399).

The author presents a typological paradigm of religious fundamentalism that attempts to demonstrate the ideological development from what might be referred to as an "initial" and relatively benign fundamentalism into extremism and thence to terrorism. Islamic and Christian fundamentalism and extremism are compared, and specifically Christian contexts and examples are explored.

- Seligman, Rebecca & Ryan A. Brown. 2010. Theory and method at the intersection of anthropology and cultural neuroscience. *Social Cognitive and Affective Neuroscience* 5(2-3). 130-137.
doi:[10.1093/scan/nsp032](https://doi.org/10.1093/scan/nsp032).

The authors suggest three interconnected domains of inquiry in which the intersection of neuroscience and anthropology can productively inform our understanding of the relationship between human brains and their socio-

cultural contexts, including the social construction of emotion, cultural psychiatry, and the embodiment of ritual. They generate novel, ecologically informed hypotheses for future study, and we lay out a specific suggestion for operationalizing insights from anthropology in the context of cultural neuroscience research. Part of a special issue on Cultural Neuroscience.

- Upal, M. Afzal. 2010. An alternative account of the minimal counterintuitiveness effect. *Cognitive Systems Research* 11(2). 194-203.
doi:[10.1016/j.cogsys.2009.08.003](https://doi.org/10.1016/j.cogsys.2009.08.003).

This paper outlines two approaches to account for the finding that concepts that are minimally counterintuitive are better remembered than intuitive or maximally counterintuitive concepts. The first approach considers such memory advantages to be a property of the concepts themselves, while the second approach emphasizes the role played by the context in which such concepts appear in allowing a reader to make sense of them. The context-based view also suggests that counterintuitive concepts lose their advantages as they become widely accepted and embedded in a cultural milieu, accounting for the development and spread of complex cultural ideas such as the overly counterintuitive religious concepts including the Judeo-Christian-Islamic conceptions of God.

- Yang, F. 2010. Oligopoly Dynamics: Consequences of Religious Regulation. *Social Compass* 57(2). 194-205.
doi:[10.1177/0037768610362417](https://doi.org/10.1177/0037768610362417).

The author clarifies a set of interconnected concepts: religious plurality (diversity), pluralization, and pluralism. Social pluralism is further differentiated into legal, civic and cultural arrangements. In the second part, the author argues that the predominant type of Church—State relationship in the world today is neither monopoly nor pluralism, but oligopoly. More importantly, the theoretical propositions based on the studies of monopoly-pluralism are not applicable without substantial modification to explain oligopoly dynamics. The case of China shows that in oligopoly, increased religious regulation leads not necessarily to religious decline, but to triple religious markets: the red market (legal), black market (illegal) and grey market (both legal and illegal or neither legal nor illegal).

PART 2. ARTICLES IN SPIRITUALITY & HEALTH RESEARCH

2.1 SPIRITUALITY & HEALTH: GENERAL HEALTH & WELL-BEING

Ando, Michiyo, Tatsuya Morita, Tatsuo Akechi & Takuya Okamoto. 2010. Efficacy of short-term life-review interviews on the spiritual well-being of terminally ill cancer patients. *Journal of Pain and Symptom Management* 39(6). 993-1002.
doi:[10.1016/j.jpainsymman.2009.11.320](https://doi.org/10.1016/j.jpainsymman.2009.11.320).

Researchers examined the efficacy of a one-week Short-Term Life Review for the enhancement of spiritual well-being, using a randomized controlled trial with 68 terminally ill cancer patients, randomly allocated to a Short-Term Life-Review interview group or a control group. Post-intervention evaluations showed significantly greater improvement in the intervention group compared with those of the control group. Scores in the intervention group also suggested greater alleviation of suffering compared with the control group.

Bousoo, Regina Szylit, Taís de Souza Serafim & Maira Deguer Misko. 2010. The relationship between religion, illness and death in life histories of family members of children with life-threatening diseases. *Revista Latino-Americana De Enfermagem* 18(2). 156-162.

Nine families from six different religions who had lived the experience of having a child with a life-threatening disease were interviewed. Three dimensions of spirituality were related to illness and death in their life histories: a Higher Being with a healing power; Development and Maintenance of a Connection with God and Faith Encouraging Optimism. The narratives demonstrated the family's search to attribute meanings to their experiences, based on their religious beliefs.

Fitzpatrick, Lee, Jane Simpson & Alistair Smith. 2010. A qualitative analysis of mindfulness-based cognitive therapy (MBCT) in Parkinson's disease. *Psychology and Psychotherapy* 83(Pt 2). 179-192.
doi:[10.1348/147608309X471514](https://doi.org/10.1348/147608309X471514).

In a study of 12 participants with Parkinson's disease (5 women), researchers found that, following a mindfulness-based cognitive therapy intervention, the following major themes of the experience were: changing patterns of coping; the role of mindfulness in consolidating existing coping skills in the context of loss; group support in the context of loss and society that stigmatizes difference; and, the dualism of experience between Parkinson's and mindful meditation.

Harvey, Idethia Shevon & Lawanda Cook. 2010. Exploring the role of spirituality in self-management practices among older African-American and non-Hispanic White women with chronic conditions. *Chronic Illness* 6(2). 111-124.
doi:[10.1177/1742395309350228](https://doi.org/10.1177/1742395309350228).

Using data from interviews with a sample of 41 African-American and non-Hispanic White women, of age 66 and older, analysis identified four categories that emerged to suggest the influence of spirituality in behavioral change and disease management: God's involvement in illness management; prayer as a mediator; spirituality as a coping mechanism; and, the combination of conventional and spiritual practices.

Innes, Kim E., Terry Kit Selfe & Abhishek Vishnu. 2010. Mind-body therapies for menopausal symptoms: a systematic review. *Maturitas* 66(2). 135-149.
doi:[10.1016/j.maturitas.2010.01.016](https://doi.org/10.1016/j.maturitas.2010.01.016).

In a systematic review of literature regarding the effects of self-administered mind-body therapies on menopausal symptoms (18 trials included), the authors found that interventions included yoga and/or meditation-based programs, tai chi, and other relaxation practices. Eight of the nine studies of yoga, tai chi, and meditation-based

programs reported improvement in overall menopausal and vasomotor symptoms; six of seven trials indicated improvement in mood and sleep with yoga-based programs, and four studies reported reduced musculoskeletal pain. Results from the remaining nine trials suggest that breath-based and other relaxation therapies also show promise for alleviating menopausal symptoms. Most studies reviewed suffered methodological or other limitations.

- Krisanaprakornkit, Thawatchai, Chetta Ngamjarus, Chartree Witoonchart & Nawanant Piyavhatkul. 2010. Meditation therapies for attention-deficit/hyperactivity disorder (ADHD). *Cochrane Database of Systematic Reviews* 6. CD006507.
doi:[10.1002/14651858.CD006507.pub2](https://doi.org/10.1002/14651858.CD006507.pub2).

This literature review assessed the efficacy of meditation therapy for the treatment of attention-deficit/hyperactivity disorder. As a result of the small number of studies, and the limitations of those studies, the authors were unable to draw any conclusions regarding the effectiveness of meditation therapy for ADHD. No adverse effects of meditation in children have been reported.

- Lambert, Nathaniel M., Frank D. Fincham, Loren D. Marks & Tyler F. Stillman. 2010. Invocations and intoxication: does prayer decrease alcohol consumption? *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors* 24(2). 209-219.
doi:[10.1037/a0018746](https://doi.org/10.1037/a0018746).

Researchers found evidence that prayer frequency and alcohol consumption are negatively related. In Study 1 (n = 824), researchers found that higher prayer frequency was related to lower alcohol consumption and problematic drinking behavior. Study 2 (n = 702) found that more frequent prayer at Time 1 predicted less alcohol consumption and problematic drinking behavior at Time 2. In Studies 3 and 4 (n = 117, n = 115), participants assigned to pray every day for 4 weeks drank about half as much alcohol at the conclusion of the study as control participants.

- Mars, Thomas S. & Hilary Abbey. 2010. Mindfulness meditation practise as a healthcare intervention: A systematic review. *International Journal of Osteopathic Medicine* 13(2). 56-66.
doi:[10.1016/j.ijosm.2009.07.005](https://doi.org/10.1016/j.ijosm.2009.07.005).

The authors reviewed literature on the effectiveness of mindfulness meditation practice as a healthcare intervention, and found that the higher quality studies analyzed have demonstrated replicated statistically significant improvements in spirituality and positive health measures and decreases in depressive relapse, depressive recurrence and psychological distress.

- McLaughlin, S. S., A. D. McLaughlin & J. A. Van Slyke. 2010. Faith and Religious Beliefs in an Outpatient Military Population. *Southern Medical Journal* 103(6). 527-531.
doi:[10.1097/SMJ.0b013e3181de0304](https://doi.org/10.1097/SMJ.0b013e3181de0304).

A cross-sectional survey was conducted using a convenience sample of 670 outpatients presenting at a military medical center found that the majority of respondents endorsed a Christian religious affiliation (87%), a belief in God (91%), and attendance at religious services at least a few times a month (53%). Respondents who were male, younger than age 43, and on active duty were significantly less likely to attend religious services, believe in God (or a 'higher power'), or rely on religion or spirituality to cope with illness. Outpatients presenting for procedures or treatments were more likely to desire prayer or other religious intervention, as compared to patients who had regular clinic appointments.

- Patra, S. & S. Telles. 2010. Heart Rate Variability During Sleep Following the Practice of Cyclic Meditation and Supine Rest. *Applied Psychophysiology and Biofeedback* 35(2). 135-140.
doi:[10.1007/s10484-009-9114-1](https://doi.org/10.1007/s10484-009-9114-1).

In a study of 30 male volunteers using EEG, EMG, and EGG recordings, researchers found that yoga practice during the day shifted the sympatho-vagal balance in favor of parasympathetic dominance during sleep on the following night. No change was seen, however, when the volunteers engaged in supine rest.

- Richmond, Jacqueline A., Donald E. Bailey, John G. McHutchison & Andrew J. Muir. 2010. The use of mind-body medicine and prayer among adult patients with chronic hepatitis C. *Gastroenterology Nursing* 33(3). 210-216.
doi:[10.1097/SGA.0b013e3181e01a7b](https://doi.org/10.1097/SGA.0b013e3181e01a7b).

Of 177 patients with chronic hepatitis C attending a tertiary healthcare facility in the United States, a questionnaire and interviews revealed that 88% (n = 105) of participants had used mind-body medicine in the past 12 months. The most commonly used therapies were prayer for health reasons (90%), deep breathing (29%), and meditation (29%). Mind-body medicine was most commonly used to relieve tension and promote general well-being.

- Roemer, M. K. 2010. Religion and Subjective Well-Being in Japan. *Review of Religious Research* 51(4). 411-427.

Using data from a sample of Japanese adults, this study finds that religious devotion and affiliation with certain religions are positively and significantly correlated with life satisfaction and happiness in Japan. Further cross-cultural analysis shows similarities between subjective religiousness and subjective wellbeing. Findings indicate that religious devotion buffers the negative effects of unemployment on life satisfaction and happiness, and the effects of low class status on happiness.

- Shahid, Shaouli, Ryan Bleam, Dawn Bessarab & Sandra C. Thompson. 2010. "If you don't believe it, it won't help you": use of bush medicine in treating cancer among Aboriginal people in Western Australia. *Journal of Ethnobiology and Ethnomedicine* 6(1). 18.
doi:[10.1186/1746-4269-6-18](https://doi.org/10.1186/1746-4269-6-18).

From interviews with 11 Aboriginal cancer patients, family members of people who died from cancer and Aboriginal health care providers, researchers found that some Aboriginal Australians use traditional medicine for treating their cancer. Such healing processes and medicines were preferred by some because it helped reconnect them with their heritage, land, culture and the spirits of their ancestors, which brought peace of mind during their illness.

- Visser, Anja, Bert Garssen & Ad Vingerhoets. 2010. Spirituality and well-being in cancer patients: a review. *Psycho-Oncology* 19(6). 565-572.
doi:[10.1002/pon.1626](https://doi.org/10.1002/pon.1626).

The present literature review of 40 studies that fit search criteria summarizes the research findings on the relationship between spirituality and emotional well-being. The authors find that, despite the majority of the studies concluding that spirituality was associated with higher well-being, no definitive conclusions on this relationship can be drawn due to the major methodological shortcomings of these studies.

- Yehya, Nadine A. & Mohan J. Dutta. 2010. Health, religion, and meaning: a culture-centered study of Druze women. *Qualitative Health Research* 20(6). 845-858.
doi:[10.1177/1049732310362400](https://doi.org/10.1177/1049732310362400).

Researchers engaged in in-depth interviews and informal conversations with elderly Druze women and their caregiver daughters to develop an understanding of the intersections of religion and health meanings in the context of aging women in this Lebanese community. Four themes emerged: health as faith; mistrust, privacy, and modern medicine; polymorphic health experiences; and health as structure. These themes serve as the backdrop for playing out the competing tensions between the local and the global in the realm of interpretations of health meanings.

2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH

Belding, Jennifer N., Malcolm G. Howard, Anne M. McGuire, Amanda C. Schwartz & Janie H. Wilson. 2010. Social buffering by God: prayer and measures of stress. *Journal of Religion and Health* 49(2). 179-187.

doi:[10.1007/s10943-009-9256-8](https://doi.org/10.1007/s10943-009-9256-8).

To learn whether the implied presence of a supportive entity, God, would reduce acute stress, researchers randomly assigned participants to one of three conditions: prayer, encouraging self-talk, and control. They were subsequently placed in a stressful situation. Self ratings of stress were lower among the prayer and self-talk conditions relative to controls. Systolic and diastolic blood pressures only among those who prayed were lower than controls; however, prayer and self-talk did not differ. Prayer alone did not significantly reduce stress.

Belzen, Jacob A. 2010. Mourning Religion? Celebrating Transformation! From Loss to Gain, from Depression to Melancholia. *Pastoral Psychology* 59(3). 347-353.

doi:[10.1007/s11089-009-0266-y](https://doi.org/10.1007/s11089-009-0266-y).

The article raises questions about issues in the recently published volume Mourning Religion, edited by Parsons et al. (2008).

Carlin, Nathan. 2010. Introduction to the Forum on Mourning Religion. *Pastoral Psychology* 59(3). 345.

doi:[10.1007/s11089-009-0272-0](https://doi.org/10.1007/s11089-009-0272-0).

The author introduces the journal's special issue focused on the book Mourning Religion.

Cataldo, Lisa M. 2010. Mourning the Religious Self: An Experience of Multiplicity, Loss, and Religious Melancholia. *Pastoral Psychology* 59(3). 355-364.

doi:[10.1007/s11089-009-0222-x](https://doi.org/10.1007/s11089-009-0222-x).

As the loss of religion is not one thing to all people, nor even one thing to one person, this article asks the question, "when we are talking about the loss of religion, who is mourning what?" The author considers what the loss of religion looks like if we view the self as abiding in both multiplicity and melancholia, and claims that the loss of religion requires a reconfiguration of the inner landscape of centrality and marginality. A clinical example illustrates how one patient's "loss of faith" calls her to a complex mourning process that includes confronting many personal losses and their relation to her transgendered self. Part of a special issue of "Pastoral Psychology."

Cooper-White, Pamela. 2010. Mourning Religion: A Response. *Pastoral Psychology* 59(3). 365-371.

doi:[10.1007/s11089-009-0265-z](https://doi.org/10.1007/s11089-009-0265-z).

This essay poses questions concerning the role of theology as a mode of analysis; Ricoeur's concept of "second naiveté" in relation to disillusionment and religion; Celia Brickman's reflections on globalization, marginalization, and a shift in psychological language from "primitivity" to "vulnerability"; the role of the body in the work of religious studies; melancholia as "re-membering" amid multiplicity and fragmentation; and mourning as protest and resistance. The essay concludes with a reflection on ambiguity and transcendence in dialogue with Freud's essay "On Transience." Part of a special issue of "Pastoral Psychology."

Ellison, Christopher G., Lori A. Roalson, Janelle M. Guillory, Kevin J. Flannelly & John P. Marcum. 2010. Religious Resources, Spiritual Struggles, and Mental Health in a Nationwide Sample of PCUSA Clergy. *Pastoral Psychology* 59(3). 287-304.

doi:[10.1007/s11089-009-0239-1](https://doi.org/10.1007/s11089-009-0239-1).

The authors propose that there is a distinction between religious resources (i.e., support from church members, positive religious coping practices), and spiritual struggles (i.e., troubled relations with God, negative interactions with members, chronic religious doubts). Using data on a nationwide sample of ordained clergy members in the

Presbyterian Church (USA), researchers found that religious resources predict well-being more strongly, while spiritual struggles are more closely linked with psychological distress. There is some evidence that stressful life events erode mental health by fostering an elevated sense of spiritual disarray and struggle. They find limited support for the stress-buffering role of religious resources, and limited evidence for a stress-exacerbating effect of spiritual struggle.

Ferguson, Jane K., Eleanor W. Willemsen & MayLynn V. Castañeto. 2010. Centering Prayer as a Healing Response to Everyday Stress: A Psychological and Spiritual Process. *Pastoral Psychology* 59(3). 305-329.

doi:[10.1007/s11089-009-0225-7](https://doi.org/10.1007/s11089-009-0225-7).

This study tested a contemporary form of Christian meditation called Centering Prayer (Keating 1986) on everyday stress and on Christians' approach to communicating with God. The impact of 10 weekly 2-hour group sessions and individual practice of Centering Prayer 2-times daily by 15 Roman Catholic congregants decreased participants' stress and increased their collaborative relationship with God. Pre-post quantitative and qualitative data on Centering Prayer versus comparison groups further highlighted the effectiveness of the practice.

Flannelly, Kevin J., Kathleen Galek, Christopher G. Ellison & Harold G. Koenig. 2010. Beliefs about God, psychiatric symptoms, and evolutionary psychiatry. *Journal of Religion and Health* 49(2). 246-261.

doi:[10.1007/s10943-009-9244-z](https://doi.org/10.1007/s10943-009-9244-z).

This study analyzed the association between specific beliefs about God and psychiatric symptoms among a representative sample of 1,306 U.S. adults. Three pairs of beliefs about God served as the independent variables: Close and Loving, Approving and Forgiving, and Creating and Judging. As hypothesized, the strength of participants' belief in a Close and Loving God had a significant salutary association with overall psychiatric symptomology, and the strength of this association was significantly stronger than that of the other beliefs, which had little association with the psychiatric symptomology. The authors discuss the findings in the context of evolutionary psychiatry, and the relevance of Evolutionary Threat Assessment Systems Theory in research on religious beliefs.

Galanter, Marc. 2010. Spirituality in psychiatry: a biopsychosocial perspective. *Psychiatry* 73(2). 145-157.

doi:[10.1521/psyc.2010.73.2.145](https://doi.org/10.1521/psyc.2010.73.2.145).

This paper reviews a body of findings in order to define the nature of spirituality from a biopsychosocial perspective and to illustrate its relevance to the field of psychiatry. The emergence of spirituality within the common culture is described, after which a number of sociobiologically related studies are presented to illustrate how its component dimensions can be defined. These are evolutionary adaptation, affectional ties, subjective experiences, and positive psychology. The relevance of spiritually related issues in psychiatric diagnosis are illustrated, along with examples of their role in symptom relief. The paper concludes with a description of a program implemented to integrate the issue of spirituality into resident training and into group support for hospital-based patients.

Goldenberg, Naomi R. 2010. A Gentle Critique of Mourning Religion. *Pastoral Psychology* 59(3). 373-377.

doi:[10.1007/s11089-009-0267-x](https://doi.org/10.1007/s11089-009-0267-x).

This article offers three points of critical reflection about Mourning Religion. It is suggested that the word "religion" and related terms ought to have been contextualized, that Melanie Klein's theories ought to have been used more extensively and that nostalgia expressed for the loss of an idealized paternal authority ought to have been made more explicit. Part of a special issue of "Pastoral Psychology."

Gonsalvez, C. J., A. R. Hains & G. Stoyles. 2010. Relationship between religion and obsessive phenomena. *Australian Journal of Psychology* 62(2). 93-102.

doi:[10.1080/00049530902887859](https://doi.org/10.1080/00049530902887859).

The study examined the relationship between religion and symptoms of psychopathology, particularly obsessive-compulsive (OC) and scrupulosity symptoms. Religious affiliation, religiosity variables (strength of faith, religious application, the beliefs about God's nature), and cognitive factors (e.g., obsessive beliefs) were studied as predictors of OC and scrupulosity symptoms in 179 non-clinical participants. The main groups (Catholic, Protestant, and no religion) were not different with regard to measures of wellbeing or symptoms of general psychopathology (depression, anxiety, and stress), but were different with regard to OC symptoms. Consistent with cognitive theory, OC beliefs strongly predicted both OC and scrupulosity symptoms, even when general levels of psychopathology were controlled. Religion bore a less major but significant association with OC phenomena. Religious affiliation (being Catholic) was associated with higher levels of OC symptoms, and higher levels of personal religiosity (strength of faith) were associated with higher levels of scrupulosity.

Green, Morgan & Marta Elliott. 2010. Religion, health, and psychological well-being. *Journal of Religion and Health* 49(2). 149-163.

doi:[10.1007/s10943-009-9242-1](https://doi.org/10.1007/s10943-009-9242-1).

Using 2006 GSS data, the authors assess the effects of religiosity on health and well-being, net of job satisfaction, marital happiness, and financial status. The results indicate that people who identify as religious tend to report better health and happiness, regardless of religious affiliation, religious activities, work and family, social support, or financial status. People with liberal religious beliefs tend to be healthier but less happy than people with fundamentalist beliefs.

Harris, Brian A., Ann M. Berger, Sandra A. Mitchell, Seth M. Steinberg, Karen L. Baker, Daniel L. Handel, Jacques L. Bolle, Eric G. Bush, Daniele Avila & Steven Z. Pavletic. 2010. Spiritual well-being in long-term survivors with chronic graft-versus-host disease after hematopoietic stem cell transplantation. *The Journal of Supportive Oncology* 8(3). 119-125.

Researchers found that in 52 participants with chronic graft-versus-host disease, spiritual well-being (Sp-WB) is an important factor contributing to the QOL of patients. There were no associations between Sp-WB and demographics, illness severity, or intensity of immunosuppression. Participants with the lowest Sp-WB reported inferior physical, emotional, social, and functional well-being, as well as lower overall QOL compared with those with higher Sp-WB. They also had inferior QOL relative to population norms. Differences between the group reporting the lowest Sp-WB and those groups who reported the highest Sp-WB scores consistently demonstrated a significant difference for all QOL subscales and for overall QOL. Controlling for physical, emotional, and social well-being, Sp-WB was a significant independent predictor of contentment with QOL.

Hasanović, Mevludin & Izet Pajević. 2010. Religious moral beliefs as mental health protective factor of war veterans suffering from PTSD, depressiveness, anxiety, tobacco and alcohol abuse in comorbidity. *Psychiatria Danubina* 22(2). 203-210.

In a study of 152 war veterans, moral belief index scores were negatively correlated to PTSD symptom severity and depressiveness. In addition, the score of moral belief index negatively correlated with presented anxiety. There was a negative association of severity of tobacco and alcohol misuse with the moral belief index.

Heiden Rootes, Katie M., Peter J. Jankowski & Steven Sandage. 2010. Bowen Family Systems Theory and Spirituality: Exploring the Relationship Between Triangulation and Religious Questing. *Contemporary Family Therapy: An International Journal* 32(2). 89-101.

doi:[10.1007/s10591-009-9101-y](https://doi.org/10.1007/s10591-009-9101-y).

Researchers examined the relationship between triangulation and religious questing. Results indicated that greater triangulation predicted greater questing. In addition, a significant quadratic relationship between triangulation and existential questioning was found. The authors conclude that moderate levels of spiritual exploration and seeking

may be a means of gaining space for self, and suggest that questing behavior may help individuals achieve increased self-differentiation.

Jennings, Patricia K. 2010. "God Had Something Else in Mind": Family, Religion, and Infertility. *Journal of Contemporary Ethnography*, 39. 215 -237.

The author explores how infertile women who profess some religious affinity utilize medicine and religion to achieve their reproductive goals. Findings suggest that religion intersects with gender in complex ways. For many of the women in this study, growing up in traditional "church-going" families coupled with their continued connection to mainstream religion reaffirmed their desire for a child-centered family. Most of the women in this study pursued some form of assisted reproductive technologies, even for those who affiliated with religions that opposed such technologies (e.g., the Roman Catholic Church).

Jones, James W. 2010. Mourning, Melancholia and Religious Studies: Is the "Lost Object" Really Lost? *Pastoral Psychology* 59(3). 379-384.
doi:[10.1007/s11089-009-0224-8](https://doi.org/10.1007/s11089-009-0224-8).

This reflection on the book Mourning and Religion offers a reading of Freud's foundational text "Mourning and Melancholia" in which the relationship between mourning and melancholia is seen as clinically distinct responses to object loss: melancholia resulting from a more unconsciously ambivalent and complex relationship to the lost object; mourning is understood as more dialectical and less linear. Part of a special issue of "Pastoral Psychology."

Joo, Hye Myung, Sung Jae Lee, Yong Gu Chung & Il Young Shin. 2010. Effects of Mindfulness Based Stress Reduction Program on Depression, Anxiety and Stress in Patients with Aneurysmal Subarachnoid Hemorrhage. *Journal of Korean Neurosurgical Society* 47(5). 345-351.
doi:[10.3340/jkns.2010.47.5.345](https://doi.org/10.3340/jkns.2010.47.5.345).

Following 8 weeks of mindfulness based stress reduction, 11 patients with anxiety and depression symptoms following surgery for spontaneous subarachnoid hemorrhage, measurements of depression decreased in a statistically significant way. Although it was not statistically significant, a decreased tendency in anxiety was shown. Further, heart rate variability measurements improved, and physical stress was reduced.

Laufer, Avital, Zahava Solomon & Stephen Z. Levine. 2009. Elaboration on posttraumatic growth in youth exposed to terror: the role of religiosity and political ideology. *Social Psychiatry and Psychiatric Epidemiology* 45(6). 647-653.
doi:[10.1007/s00127-009-0106-5](https://doi.org/10.1007/s00127-009-0106-5).

Researchers found that both religiosity and political ideology mediated the effects of exposure and fear on growth in 2,999 Israeli youth exposed to terror, aged 13-15. Political ideology, but not religiosity, had a moderating effect, such that subjective fear was positively associated with growth only among those with stronger ideologies.

Mohr, Sylvia, Laurence Borrás, Carine Betrisey, Brandt Pierre-Yves, Christiane Gilliéron & Philippe Huguelet. 2010. Delusions with religious content in patients with psychosis: how they interact with spiritual coping. *Psychiatry* 73(2). 158-172.
doi:[10.1521/psyc.2010.73.2.158](https://doi.org/10.1521/psyc.2010.73.2.158).

The aim of this study was to compare patients with delusions with religious content (n = 38), patients with other sorts of delusions (n = 85) and patients without persistent positive symptoms (n = 113) clinically and spiritually. Outpatients (n = 236) were randomly selected for a quantitative and qualitative evaluation of religious coping. Patients presenting delusions with religious content were not associated with a more severe clinical status compared to other deluded patients, but they were less likely to adhere to psychiatric treatment. For almost half of the group (45%), spirituality and religiousness helped patients cope with their illness. Both groups of deluded patients valued

religion more than other patients, but patients presenting delusions with religious content received less support from religious communities.

- Murray, Scott A., Marilyn Kendall, Kirsty Boyd, Liz Grant, Gill Highet & Aziz Sheikh. 2010. Archetypal trajectories of social, psychological, and spiritual wellbeing and distress in family care givers of patients with lung cancer: secondary analysis of serial qualitative interviews. *BMJ: British Medical Journal* 340. c2581.

From interviews with 19 patients with lung cancer and their 19 family care givers, researchers found that family carers witness and share much of the illness experience of the dying patient. Carers followed clear patterns of social, psychological, and spiritual wellbeing and distress that mirrored the experiences of those for whom they were caring, with some carers also experiencing deterioration in physical health that impacted on their ability to care. Psychological and spiritual distress were particularly dynamic and commonly experienced. In addition to the "Why us?" response, witnessing suffering triggered personal reflections in carers on the meaning and purpose of life.

- Muturi, Nancy & Soontae An. 2010. HIV/AIDS stigma and religiosity among African American women. *Journal of Health Communication* 15(4). 388-401.
doi:[10.1080/10810731003753125](https://doi.org/10.1080/10810731003753125).

Researchers show that religiosity is a significant factor predicting the level of religious stigma toward people with HIV/AIDS. Those with high religiosity displayed significantly higher stigma, associating HIV/AIDS with a curse or punishment from God. Verbatim responses to an open-ended question also revealed seemingly ingrained prejudice against HIV/AIDS from a religious perspective.

- Payman, Vahid & Bridget Ryburn. 2010. Religiousness and recovery from inpatient geriatric depression: Findings from the PEJAMA Study. *The Australian and New Zealand Journal of Psychiatry* 44(6). 560-567.
doi:[10.3109/00048671003606078](https://doi.org/10.3109/00048671003606078).

A total of 94 patients (71% women; mean age = 76) with major depression were assessed on admission to a psychogeriatric unit, and then reviewed at 6, 12 and 24 months. High intrinsic religiosity on admission predicted lower depression scores at 24. Intrinsic religiosity's effect was independent of social support as well as other demographic, treatment and health variables.

- Pruitt, Irene T. & Eric E. McCollum. 2010. Voices of Experienced Meditators: The Impact of Meditation Practice on Intimate Relationships. *Contemporary Family Therapy* 32(2). 135-154.
doi:[10.1007/s10591-009-9112-8](https://doi.org/10.1007/s10591-009-9112-8).

Researchers explored 7 advanced meditators' understandings of the effect of the meditation traits on close relationships. The meditative traits that the participants identified were: awareness of body sensations and emotions; disidentification from emotions and thoughts; acceptance of situations, oneself, and others; and, compassion and loving kindness for oneself and others. The relational effects of these traits were less reactivity in relationships, greater freedom and safety in relationships, and a new understanding of the nature of connection between people, marked by unity, separation, intimacy and independence.

- Rudaleviciene, Palmira, Virginija Adomaitiene, Thomas Stompe, Andrius Narbekovas, Kazimieras Meilius, Nijole Raskauskiene, Jurgis Rudalevicius & Robertas Bunevicius. 2010. Delusions of persecution and poisoning in patients with schizophrenia: sociocultural and religious background. *Medicina* 46(3). 185-192.

A total of 295 patients suffering from schizophrenia participated in this study; 74.7% reported delusions of persecution. The prevalence of delusions of persecution was lower in the group of persons for whom their faith was

personally important (73.4%) than in the atheistic group (86.7%). Personal importance of the faith was not associated with prevalence of delusions of persecution and poisoning in patients with schizophrenia.

Sandage, Steven, Peter Jankowski & Deborah C. Link. 2010. Quest and spiritual development moderated by spiritual transformation. *Journal of Psychology and Theology* 38(1). 15-31.

A relational model of spirituality and transformation based on the dialectic of spiritual dwelling and seeking was tested in a sample of Christian graduate seminary students (N= 181). Results included modest positive correlations between Quest and Spiritual Instability, Spiritual Disappointment, and Mental Health Symptoms and modest negative correlations between both Realistic Acceptance and Mental Health Symptoms.

Sun, F., J. I. Kosberg, J. Leeper, A. V. Kaufman & L. Burgio. 2010. Racial Differences in Perceived Burden of Rural Dementia Caregivers: The Mediating Effect of Religiosity. *Journal of Applied Gerontology* 29(3). 290-307.

doi:[10.1177/0733464809343205](https://doi.org/10.1177/0733464809343205).

This study explores whether religiosity explains racial differences in caregiving burden for a rural sample of dementia family caregivers. Data are from a probability sample of 74 non-Hispanic White and 67 African American dementia caregivers in rural Alabama. White caregivers report higher burden, are less likely to use religious coping, and less likely to engage in organized religion than do African American caregivers. Church attendance is found to significantly mediate the racial differences on caregiving burden. Religious involvement in general, and church attendance in particular, seem to provide both spiritual and social psychological benefits to dementia caregivers.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

Bailly, Nathalie & Nicolas Roussiau. 2010. The Daily Spiritual Experience Scale (DSES): Validation of the Short Form in an Elderly French Population. *Canadian Journal on Aging* 29(2). 223-231.

doi:[10.1017/S0714980810000152](https://doi.org/10.1017/S0714980810000152).

The study's purpose was to evaluate the psychometric properties of the short form of the Daily Spiritual Experience Scale (DSES) in an elderly French population. Results of factor analysis (studies 1-2) and confirmatory factor analysis (Study 2) indicated that the DSES can be conceptualized on a single general factor. The reliability of the DSES appeared to be satisfactory with good internal consistency and good temporal stability. As expected, higher scores were correlated with good life satisfaction and good self-evaluation of health, but no correlation was found with depression.

Bentur, Netta, Shirli Resnitzky & Abram Sterne. 2010. Attitudes of stakeholders and policymakers in the healthcare system towards the provision of spiritual care in Israel. *Health Policy* 96(1). 13-19.

doi:[10.1016/j.healthpol.2009.12.006](https://doi.org/10.1016/j.healthpol.2009.12.006).

After conducting interviews with 16 individuals in the healthcare system, researchers found that most of the interviewees had little knowledge of spiritual care and many mentioned barriers and challenges to its implementation in the healthcare system. These issues include: lack of knowledge and understanding about spiritual care precluding impeded their ability to evaluate its suitability for the healthcare services; confusion between spiritual care and religion; concerns about potential conflict with other professionals, especially social workers; barriers to funding of the new services; barriers to the successful integration of new ideas; and concerns about formal training and accreditation of the new profession.

Berkley-Patton, Jannette, Carole Bowe-Thompson, Andrea Bradley-Ewing, Starlyn Hawes, Erin Moore, Eric Williams, David Martinez & Kathy Goggin. 2010. Taking It to the Pews: a CBPR-

guided HIV awareness and screening project with black churches. *AIDS Education and Prevention: Official Publication of the International Society for AIDS Education* 22(3). 218-237.
doi:[10.1521/aeap.2010.22.3.218](https://doi.org/10.1521/aeap.2010.22.3.218).

This community-based participatory research describes a church-based HIV awareness and screening intervention (Taking It to the Pews [TIPS]) that fully involved African American church leaders in all phases of the research project. Findings from the implementation and evaluation phases indicated that church leaders delivered TIPS Tool Kit activities on an ongoing basis (about twice a month) over a 9-month period. TIPS church members were highly exposed to TIPS activities (e.g., 91% reported receiving HIV educational brochures, 84% heard a sermon about HIV). Most (87%) believed that the church should talk about HIV, and 77% believed that the church should offer HIV screening.

Bjorck, Jeffrey, Robert Braese, Joseph Tadie & David Gillland. 2010. The Adolescent Religious Coping Scale: Development, Validation, and Cross-Validation. *Journal of Child & Family Studies* 19(3). 343-359.
doi:[10.1007/s10826-009-9305-7](https://doi.org/10.1007/s10826-009-9305-7).

The authors developed the Adolescent Religious Coping Scale and used its seven subscales to examine the relationship between religious coping and emotional functioning. A cross-sectional research design was used with both a validation sample of Christian school students (Sample 1, N = 500, ages 12–19) and a cross-validation sample of Christian youth group attenders (Sample 2, N = 62, ages 11–18). For both samples, religious coping was significantly related to religious support, parental support, and emotional functioning, respectively. In general, positive religious coping strategies were related to more support and better functioning, whereas the reverse was true for negative religious coping strategies.

Boswell, Gracie E. H. & Kirstin C. Boswell-Ford. 2010. Testing a SEM model of two religious concepts and experiential spirituality. *Journal of Religion and Health* 49(2). 200-211.
doi:[10.1007/s10943-009-9254-x](https://doi.org/10.1007/s10943-009-9254-x).

This study tested the validity of two dimensions of religiosity and one dimension of spirituality. It then examined the extent to which each dimension of religiosity influenced having spiritual experiences for 221 chronically ill older adults. Substantive findings were that private religiosity (prayer and coping), but not public religiosity (participation and other church involvement) may influence reporting spiritual experiences by the older adults in the study. Findings revealed a good model fit to the data and strong factor loadings revealed sound construct validity for the latent variables.

Gill, Carman, Casey A. Barrio Minton & Jane E. Myers. 2010. Spirituality and Religiosity: Factors Affecting Wellness Among Low-Income, Rural Women. *Journal of Counseling and Development* 88(3). 293-302.

A study including measures of spirituality, religiosity, and wellness was conducted to identify coping strategies for the multiple challenges to wellness faced by low-income, rural women. Total spirituality and religiosity accounted for 39% of the variance in wellness, with purpose and meaning in life, unifying interconnectedness, and private religious practices composing the main contributions.

Goyal, Madhav, Jennifer Haythornthwaite, David Levine, Diane Becker, Dhananjay Vaidya, Felicia Hill-Briggs & Daniel Ford. 2010. Intensive meditation for refractory pain and symptoms. *Journal of Alternative and Complementary Medicine* 16(6). 627-631.
doi:[10.1089/acm.2009.0372](https://doi.org/10.1089/acm.2009.0372).

In a survey of 1,119 patients at various clinics in Baltimore, 39% reported interest in attending an intensive 10-day meditation retreat. Among those reporting moderate to severe pain or stress, the percentages were higher (48%

and 59%). Eighty percent reported use of some CAM therapy in the past, 35% thought that learning meditation would improve their health, and 49% thought it would reduce stress.

Hall, Daniel E., Harold G. Koenig & Keith G. Meador. 2010. Episcopal measure of faith tradition: a context-specific approach to measuring religiousness. *Journal of Religion and Health* 49(2). 164-178. doi:[10.1007/s10943-009-9240-3](https://doi.org/10.1007/s10943-009-9240-3).

Precise measurement of religiousness remains a vexing problem. In addition to relying almost exclusively on self-report, existing measures of religiousness pay little attention to the specific context of religious beliefs. The authors describe a modified form of narrative content analysis that could eventually sort respondents into distinct theological traditions. A pilot test among Episcopalians demonstrates encouraging reliability, and tests for convergent and discriminate validity suggest that the context of religious belief is both relevant and insufficiently assessed by the existing paradigm of religious measurements.

Labbe, E. E. & A. Fobes. 2010. Evaluating the Interplay Between Spirituality, Personality and Stress. *Applied Psychophysiology and Biofeedback* 35(2). 141-146. doi:[10.1007/s10484-009-9119-9](https://doi.org/10.1007/s10484-009-9119-9).

Eighty participants completed trait-state anger, personality and spirituality questionnaires and were grouped into low, average and high spirituality. Participants' physiological responses were monitored before and during a stressful event. Significant differences were found between low, average and high spirituality groups' respiration rate and emotional response to the stressor. Significant differences were also found between spirituality groups in extraversion, agreeableness, conscientiousness, trait anger and neuroticism. Females reported higher levels of spirituality and conscientiousness than males.

Menezes, Adair & Alexander Moreira-Almeida. 2010. Religion, spirituality, and psychosis. *Current Psychiatry Reports* 12(3). 174-179. doi:[10.1007/s11920-010-0117-7](https://doi.org/10.1007/s11920-010-0117-7).

This review discusses the relationships between religion, spirituality, and psychosis. The authors comment on the concept of spiritual and religious problems, which, although they may seem to be psychotic episodes, are actually manifestations of nonpathological spiritual and religious experiences.

Whitley, Rob. 2010. Atheism and mental health. *Harvard Review of Psychiatry* 18(3). 190-194. doi:[10.3109/10673221003747674](https://doi.org/10.3109/10673221003747674).

The author argues that atheism should be treated as a meaningful sociocultural variable in the study of mental health. Atheism, like theism, is an appropriate domain of study for social and cultural psychiatrists and allied social scientists interested in exploring socio-environmental stressors and buffers relating to mental health.

PART 3. BOOKS

3.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR

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- Dingley, James. 2010. *Terrorism and the politics of social change : a Durkheimian analysis*. Farnham Surrey, England ; Burlington, VT: Ashgate.
- Feuchtwang, Stephan. 2010. *The anthropology of religion, charisma, and ghosts : Chinese lessons for adequate theory*. Berlin ; New York: W. de Gruyter.
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