



RESEARCH REVIEW

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

JANUARY, 2012

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, ATLA Religion Database, General Science, PubMed, EBSCO Psychology and Behavioral Sciences Collection, PsycARTICLES, PsycINFO, ScienceDirect, and Web of Science. The search terms were altruism, god, goddess, meditat*, prayer, relig*, ritual, 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 477 articles, 93 articles have been retained from 53 journals. There are 53 pre-publication citations from 27 journals.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Hasenkamp, Wendy, Christine D Wilson-Mendenhall, Erica Duncan & Lawrence W Barsalou. 2012. Mind wandering and attention during focused meditation: a fine-grained temporal analysis of fluctuating cognitive states. *NeuroImage* 59(1). 750–760.
doi:10.1016/j.neuroimage.2011.07.008.

Fourteen meditation practitioners performed breath-focused meditation while undergoing fMRI scanning. When participants realized their mind had wandered, they pressed a button and returned their focus to the breath. Four hypothesized intervals (mind wandering, awareness of mind wandering, shifting of attention, and sustained attention) were then constructed around these button presses. Researchers hypothesized that periods of mind wandering would be associated with default mode activity, whereas cognitive processes engaged during awareness of mind wandering, shifting of attention and sustained attention would engage attentional sub-networks. Analyses revealed activity in brain regions associated with the default mode during mind wandering, and in salient network regions during awareness of mind wandering. Elements of the executive network were active during shifting and sustained attention. Furthermore, activations during these cognitive phases were modulated by lifetime meditation experience. These findings support and extend theories about cognitive correlates of distributed brain networks.

Josipovic, Zoran, Ilan Dinstein, Jochen Weber & David J Heeger. 2011. Influence of meditation on anti-correlated networks in the brain. *Frontiers in Human Neuroscience* 5. 183.
doi:10.3389/fnhum.2011.00183.

This study used meditation as an experimental manipulation to test whether cognitive strategy can modulate competition (anti-correlation) between two brain systems: first, an “extrinsic” brain system, composed of brain areas that respond more to external stimuli and tasks; second, an “intrinsic” system composed of brain areas that

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respond less to external stimuli and tasks, can be modulated by cognitive strategy. Participants ($n=22$) experienced with meditation either fixated without meditation (fixation), or engaged in non-dual awareness (NDA) or focused attention (FA) meditations. Inter-area correlations (“functional connectivity”) between pairs of brain regions within each system, and between the entire extrinsic and intrinsic systems, were computed. Anti-correlation between extrinsic vs. intrinsic systems was stronger during FA meditation and weaker during NDA meditation in comparison to fixation (without meditation). However, correlation between areas within each system did not change across conditions. These results suggest that the anti-correlation found between extrinsic and intrinsic systems is not an immutable property of brain organization and that practicing different forms of meditation can modulate this gross functional organization in profoundly different ways.

Kozasa, Elisa H, João R Sato, Shirley S Lacerda, Maria A M Barreiros, João Radvany, Tamara A Russell, Liana G Sanches, Luiz E A M Mello & Edson Amaro Jr. 2012. Meditation training increases brain efficiency in an attention task. *NeuroImage* 59(1). 745–749.
doi:10.1016/j.neuroimage.2011.06.088.

Researchers applied a specific attentional task to measure the performance of participants with different levels of meditation experience, rather than evaluating meditation practice per se or task performance during meditation. The objective was to evaluate the performance of regular meditators and non-meditators during an fMRI adapted Stroop Word-Colour Task (SWCT), which requires attention and impulse control, using a block design paradigm with 20 meditators and 19 non-meditators matched for age, years of education and gender. Participants had to choose the color (red, blue or green) of single words presented visually in three conditions: congruent, neutral and incongruent. Non-meditators showed greater activity than meditators in the right medial frontal, middle temporal, precentral and postcentral gyri and the lentiform nucleus during the incongruent conditions. No regions were more activated in meditators relative to non-meditators in the same comparison. Non-meditators showed an increased pattern of brain activation relative to regular meditators under the same behavioral performance level. This suggests that meditation training improves efficiency, possibly via improved sustained attention and impulse control.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

Bloom, Paul. 2012. Religion, morality, evolution. *Annual Review of Psychology* 63. 179–199.
doi:10.1146/annurev-psych-120710-100334.

The author reviews data from survey studies (both within and across countries), priming experiments, and correlational studies of the effects of religion on racial prejudice to determine whether religion has evolved to enhance altruistic behavior toward members of one’s group. He concludes that religion has powerfully good moral effects and powerfully bad moral effects, but these are due to aspects of religion that are shared by other human practices. There is surprisingly little evidence for a moral effect of specifically religious beliefs.

Bulbulia, Joseph. 2012. Spreading order: religion, cooperative niche construction, and risky coordination problems. *Biology & Philosophy* 27(1). 1–27.
doi:10.1007/s10539-011-9295-x.

The author seeks to determine which cooperation problems religion has evolved to solve. He focuses on a class of symmetrical coordination problems for which there are two pure Nash equilibriums: (1) “all cooperate,” which is efficient but relies on full cooperation; (2) “all defect,” which is inefficient but pays regardless of what others choose. Formal and experimental studies reveal that for such risky coordination problems, only the defection equilibrium is evolutionarily stable. The following makes sense of otherwise puzzling properties of religious cognition and cultures as features of cooperative designs that evolve to stabilize such risky exchange. The model explains lingering puzzles in the data on religion, and better integrates evolutionary theories of religion with recent, well-motivated models of cooperative niche construction.

Gervais, Will M. & Ara Norenzayan. 2012. Like a camera in the sky? Thinking about God increases public self-awareness and socially desirable responding. *Journal of Experimental Social Psychology* 48(1). 298–302.

doi:10.1016/j.jesp.2011.09.006.

Three studies offered new and converging empirical support for the “supernatural monitoring hypothesis,” the view that thinking about God therefore might make believers feel as if their behavior is being monitored. Two variables that are sensitive to perceived social surveillance were used: public self-awareness and socially desirable responding. For believers, the effect of an explicit God prime on public self-awareness was comparable to the effect of thinking about how other people view oneself (Experiment 1). An implicit God concepts prime increased public self-awareness (Experiment 2) and socially desirable responding (Experiment 3) among believers. The authors conclude that these studies offer the first direct evidence that thinking of God triggers perceived social surveillance.

Gneezy, Ayelet & Daniel M T Fessler. 2012. Conflict, sticks and carrots: war increases prosocial punishments and rewards. *Proceedings. Biological Sciences / The Royal Society* 279(1727). 219–223.

doi:10.1098/rspb.2011.0805.

Unlike most species, humans cooperate extensively with group members who are not closely related to them, a pattern sustained in part by punishing non-cooperators and rewarding cooperators. Because internally cooperative groups prevail over less cooperative rival groups, it is thought that violent intergroup conflict played a key role in the evolution of human cooperation. Consequently, it is plausible that propensities to punish and reward will be elevated during intergroup conflict. Using experiments conducted before, during and after the 2006 Israel-Hezbollah war, researchers show that, during wartime, people are more willing to pay costs to punish non-cooperative group members and reward cooperative group members. Rather than simply increasing within-group solidarity, violent intergroup conflict thus elicits behaviors that, writ large, enhance cooperation within the group, thereby making victory more likely.

LaBouff, Jordan P., Wade C. Rowatt, Megan K. Johnson & Callie Finkle. 2011. Differences in Attitudes Toward Outgroups in Religious and Nonreligious Contexts in a Multinational Sample: A Situational Context Priming Study. *International Journal for the Psychology of Religion* 22(1). 1–9.

doi:10.1080/10508619.2012.634778.

The present study examined whether priming for religion may increase intergroup bias in both religious and nonreligious persons in a religiously and culturally diverse population using ecologically valid methods. Participants were recruited as they passed by either a religious or nonreligious structure in Western Europe. Participants in the religious context self-reported more negative attitudes toward non-Christian groups, more conservative political attitudes, and more personal religiousness and spirituality regardless of their personal belief in God. Results are discussed in terms of intergroup bias and salience of religious norms and stereotypes across cultures.

Laurin, Kristin, Aaron C. Kay & Gráinne M. Fitzsimons. 2012. Divergent effects of activating thoughts of God on self-regulation. *Journal of Personality and Social Psychology* 102(1). 4–21.

doi:10.1037/a0025971.

Despite the cultural ubiquity of ideas and images related to God, relatively little is known about the effects of exposure to God representations on behavior. Specific depictions of God differ across religions, but common to most is that God is (a) an omnipotent, controlling force and (b) an omniscient, all-knowing being. Given these 2 characteristic features, how might exposure to the concept of God influence behavior? Researchers predict and test for 2 divergent effects of exposure to notions of God on self-regulatory processes and show that participants reminded of God (vs. neutral or positive concepts) demonstrate both decreased active goal pursuit (Studies 1, 2, and 5) and increased temptation resistance (Studies 3, 4, and 5). These findings provide the first experimental

evidence that exposure to God influences goal pursuit and suggest that the ever-present cultural reminders of God can be both burden and benefit for self-regulation.

- Lieberman, Debra & Thalma Lobel. 2012. Kinship on the Kibbutz: Coresidence duration predicts altruism, personal sexual aversions and moral attitudes among communally reared peers. *Evolution and Human Behavior* 33(1). 26–34.
doi:10.1016/j.evolhumbehav.2011.05.002.

In two studies conducted with the co-reared peers of Israeli Kibbutzim, researchers examined how co-residence duration – a cue that would have indicated genetic relatedness in ancestral environments – affects the development of kin-directed behaviors. In both studies, it was found that co-residence duration predicts levels of altruism and sexual aversions directed toward peers. In addition, it was found that total co-residence duration with opposite-sex peers predicts the intensity of moral wrongness associated with third-party peer sexual behavior, but not other behaviors, including sibling incest. More directly, it was found that the summed sexual aversion felt toward all opposite-sex peers predicts levels of moral wrongness associated with third-party peer sex. The authors conclude that childhood co-residence serves as a kinship cue, leading to greater sexual aversions and altruistic motivations, and that personal sexual aversions shape attitudes relating to third-party sexual behavior.

- Sasaki, Tatsuya, Ake Brännström, Ulf Dieckmann & Karl Sigmund. 2012. The take-it-or-leave-it option allows small penalties to overcome social dilemmas. *Proceedings of the National Academy of Sciences of the United States of America* 109(4). 1165–1169.
doi:10.1073/pnas.1115219109.

In investigating the problem of free-riders in a society of cooperators, researchers analyze the interplay of (a) incentives provided by institutions and (b) the effects of voluntary participation. They show that this combination fundamentally improves the efficiency of incentives. In particular, optional participation allows institutions punishing free-riders to overcome the social dilemma at a much lower cost, and to promote a globally stable regime of cooperation. This removes the social trap and implies that whenever a society of cooperators cannot be invaded by free-riders, it will necessarily become established in the long run, through social learning, irrespective of the initial number of cooperators. The authors also demonstrate that punishing provides a “lighter touch” than rewarding, guaranteeing full cooperation at considerably lower cost.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE

- Alisat, Susan & Michael W. Pratt. 2012. Characteristics of Young Adults’ Personal Religious Narratives and Their Relation with the Identity Status Model: A Longitudinal, Mixed Methods Study. *Identity* 12(1). 29–52.
doi:10.1080/15283488.2012.632392.

This longitudinal study investigated precursors to the formation of the life story in the particular context of the religious self in young adulthood using qualitative and quantitative methodologies. Religious or spiritual peak experience narratives told by 100 Canadian young adults at age 26 were examined in relation to earlier religious beliefs and identity statuses at ages 17, 19, and 23. Coherent relationships over time between identity status development and religious narratives supported a link between the development of a personal ego identity and characteristics of the life story, as expected. The authors conclude that the life story approach to identity development can be illuminating in the domain of religious experience and can enrich Eriksonian models of identity.

- Corstange, Daniel. 2011. Religion, Pluralism, and Iconography in the Public Sphere: Theory and Evidence from Lebanon. *World Politics* 64(01). 116–160.
doi:10.1017/S0043887111000268.

This article examines mass public discourse on religion and pluralism in diverse societies. It argues that religion enters the public sphere by defining countervailing narratives about sectarianism, which is exclusive and divisive, and ecumenism, which is inclusive and unifying. Most empirical studies focus on elites as the producers of discourse and ignore the regular people who comprise the “real” public. In contrast to prior work, this article systematically examines mass public discourse, with Lebanon, a religiously diverse developing world society, as its research venue. It uses a novel combination of original survey data and publicly displayed religious and political iconography to study the exchange of ideas about religion and pluralism among the mass public. It shows that sectarian discourse articulates ethnocentric and anti-pluralistic statements, whereas ecumenism, by contrast, mitigates ethnocentrism and valorizes pluralism.

Driessen, Michael D. 2012. Public Religion, Democracy, and Islam. *Comparative Politics* 44(2). 171–189.

Much of the scholarly debate over Islam and democracy has centered on what has been referred to as the “inclusion-moderation hypothesis,” and whether democratic institutions are capable of incorporating hostile religious actors. To build on this debate, the concept of inclusion and the expectations about its political effects should be broadened to include the interaction between religion-state relationships and democratization processes in predominantly Muslim societies. Inviting ambivalently democratic religious actors into the public democratic space produces dynamics of both political moderation and religious change. The mechanisms of this theoretical model can be evaluated by tracing the evolution of two Islamist political parties in Algeria, the MSP-Hamas and Ennahda-Islah.

Goddard, H. Wallace, James P. Marshall, Jonathan R. Olson & Steven A. Dennis. 2012. Character Strengths and Religiosity as Predictors of Marital Satisfaction in a Sample of Highly Religious and Divorce-Prone Couples. *Journal of Couple & Relationship Therapy* 11(1). 2–15.
doi:10.1080/15332691.2011.613308.

Some scholars have found a robust relationship between religiosity and marital satisfaction. Yet the state of Arkansas creates a paradox: both religiosity and marital dissolution are very high. What can explain this anomaly? This study drew a random sample of 829 married Arkansans who were surveyed with respect to various qualities of character, their church attendance, and their marital satisfaction. The analyses clearly demonstrated that empathy, commitment, and church attendance are reliable predictors of marital satisfaction. Some implications for relationship educators are clear: cultivating empathy and encouraging commitment can strengthen relationships. There may also be positive effects of participating in a faith community, although the elements of participation that contribute to marital stability are uncertain.

Hayward, R. David, Joanna Maselko & Keith G. Meador. 2011. Recollections of Childhood Religious Identity and Behavior as a Function of Adult Religiousness. *International Journal for the Psychology of Religion* 22(1). 79–88.
doi:10.1080/10508619.2012.635064.

This study examined changes between early and middle adulthood in retrospective perceptions of religious behavior and identity in childhood. Data from a population-based birth cohort sample were matched with data from individuals who participated in at least 2 of 3 adult follow-up studies, at intervals of approximately 10 years. Consistent with the predictions of temporal self-appraisal theory, participants’ perception of their religious identity as children tended to change over time to match their adult religious identity. Recollections of childhood religious behavior were more stable than recollections of religious identity, and change was unrelated to adult behavior. These results have implications for studying religious characteristics using retrospective measures, regarding their accuracy and their independence from contemporary measures.

Kane, Michael N. & Robin J. Jacobs. 2012. Perceptions of the Humanness of Religious Leaders Among University Students. *Journal of Spirituality in Mental Health* 14(1). 59–81.
doi:10.1080/19349637.2012.642672.

This exploratory study investigated perceptions of the humanness of religious leaders among 374 university students. Most respondents perceived that religious leaders were likeable, beneficial to the community, and experienced shortcoming similar to other persons. Items were factor analyzed to confirm variable groupings. Significant predictor variables included distrust of religious leaders, the likeability of nonreligious professionals, equality of religious leaders, personal experience with religious leaders, public scrutiny of religious leaders, and attendance at religious/spiritual events.

Krause, Neal. 2011. Assessing the Prayer Lives of Older Whites, Older Blacks, and Older Mexican Americans: A Descriptive Analysis. *International Journal for the Psychology of Religion* 22(1). 60–78.
doi:10.1080/10508619.2012.635060.

The purpose of this study was to see whether differences emerge between older Whites, older Blacks, and older Mexican Americans in 12 measures of prayer. These measures assess 4 dimensions of prayer: the social context of prayer, interpersonal aspects of prayer, beliefs about how prayer operates, and the content or focus of prayers. Data from two nationwide surveys of older adults suggest that with respect to all four dimensions, the prayer lives of older Whites appear to be less developed than the prayer lives of older Blacks and older Mexican Americans. In contrast, relatively few differences were found in the prayer lives of older African Americans and older Mexican Americans.

McFarland, Michael J, Cheryl A Smith, Loren Toussaint & Patricia A Thomas. 2012. Forgiveness of others and health: do race and neighborhood matter? *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences* 67(1). 66–75.
doi:10.1093/geronb/gbr121.

This study examines the relationship between interpersonal forgiveness and health for older Blacks and Whites, using data from two waves (2001 and 2004) of the Religion, Aging, and Health Survey, from a nationally representative elderly sample of 436 Blacks and 500 Whites. Results suggest that forgiveness of others was protective of health for Blacks but not Whites. Moreover, among Blacks, researchers found the following: (a) forgiveness was positively associated with self-reported health over time, (b) forgiveness was negatively associated with alcohol use and number of chronic conditions, and (c) forgiveness interacted with neighborhood deterioration such that the beneficial effects of forgiveness for self-reported health did not extend to those living in run-down neighborhoods.

van Oudenhoven, Jan Pieter, Boele de Raad, Carmen Carmona, Anne-Kathrin Helbig & Meta van der Linden. 2012. Are virtues shaped by national cultures or religions? *Swiss Journal of Psychology* 71(1). 29–34.
doi:10.1024/1421-0185/a000068.

The present paper examines the relative influence of religion and nation on conceptions of virtues. In a first study, conducted in the Netherlands, 926 respondents of different profession, age, sex, and religious background rank ordered a list of 15 virtues. A comparison of Dutch Muslims and non-Muslims showed a remarkably high resemblance in their ratings of virtues. Only faith was rated as being much more important by Muslims than by non-Muslims. In the second study, the influence of national cultures was examined. Adults (n=795) from two culturally relatively similar countries, Germany and the Netherlands, and from Spain rated the same list of virtues. Cross-national differences between the two Northern European countries and Spain by far exceeded the influence of religion on the importance ratings of virtues. The authors conclude that the influence of religion on the values of immigrants may be overemphasized and other important characteristics may be underestimated.

de Regt, Sabrina. 2011. Religiosity as a Moderator of the Relationship Between Authoritarianism and Social Dominance Orientation: A Cross-Cultural Comparison. *International Journal for the Psychology of Religion* 22(1). 31–41.

doi:10.1080/10508619.2012.635045.

In this study, the author examined the association between authoritarianism, social dominance orientation (SDO), and religiosity in three sociopolitical contexts (i.e., Italy, Finland, and Estonia) based on representative samples. In all three countries, religious people were found to be more authoritarian and less socially dominant. Results from earlier studies in Italy are replicated in this study, using a more advanced measure of religiosity. The author also obtained cross-cultural confirmation in Finland. In both countries, hardly any relation between authoritarianism and SDO at high levels of religiosity were found; moderate relations were found at moderate levels of religiosity, and strong associations were found amongst nonreligious respondents. The association between authoritarianism and SDO was not influenced by religiosity in Estonia, a country with a history of communism and a high secularization rate.

Renneboog, Luc & Christophe Spaenjers. 2012. Religion, economic attitudes, and household finance. *Oxford Economic Papers* 64(1). 103–127.

doi:10.1093/oeq/gpr025.

Using Dutch survey data, researchers found that religious households consider themselves more trusting, and have a stronger bequest motive and a longer planning horizon. Furthermore, Catholics attach more importance to thrift and are more risk averse, while Protestants combine a more external locus of control with a greater sense of financial responsibility. Religious households are more likely to save. Catholic households invest less frequently in the stock market. The authors conclude that economic attitudes are particularly helpful in explaining the financial decisions of Catholic households.

Soenens, Bart, Bart Neyrinck, Maarten Vansteenkiste, Jessie Dezutter, Dirk Hutsebaut & Bart Duriez. 2011. How Do Perceptions of God as Autonomy Supportive or Controlling Relate to Individuals' Social-Cognitive Processing of Religious Contents? The Role of Motives for Religious Behavior. *International Journal for the Psychology of Religion* 22(1). 10–30.

doi:10.1080/10508619.2012.634781.

This study examined whether perceptions of God as autonomy supportive and controlling were related to individuals' belief in a transcendent reality and to their social-cognitive style of approaching religious contents (i.e., literal and rigid vs. symbolic and flexible). Further, researchers examined whether individuals' motives for religious behavior (i.e., autonomous vs. controlled) would mediate these associations. In a sample of 267 religiously active participants, researchers found that the two types of perceptions of God were positively related to belief in transcendence but were differentially related to a symbolic approach. Specifically, a perception of God as autonomy supportive related positively and a perception of God as controlling related negatively to a symbolic approach. Some evidence was obtained for a mediating role of motives for religious behavior in these associations. Discussion focuses on how self-determination theory can contribute to research on the psychology of religion.

Vermeer, Paul, Jacques Janssen & Peer Scheepers. 2011. Authoritative Parenting and the Transmission of Religion in the Netherlands: A Panel Study. *International Journal for the Psychology of Religion* 22(1). 42–59.

doi:10.1080/10508619.2012.635055.

This study was designed to explore the effect of authoritative parenting, over and above the effect of explicitly religious parenting practices, on the juvenile and adult church attendance of offspring. Data were collected as part of a panel study in which 474 Dutch respondents were questioned in 1983 as youths and in 2007 as adults. In 2007 the respondents retrospectively answered questions about how they were raised by their parents. Analyses

revealed that juvenile church attendance depends mainly on parental and more specifically on maternal church attendance, whereas adult church attendance is largely an outcome of juvenile church attendance. No effects of an authoritative parenting style, that is, a simultaneous effect of responsiveness, strict control, and the granting of psychological autonomy as the three dimensions of authoritative parenting distinguished in this study, were observed. Only the dimension of strict control turned out to be a negative determinant of adult church attendance.

Webb, Jon R., Chris S. Dula & Ken Brewer. 2012. Forgiveness and Aggression Among College Students. *Journal of Spirituality in Mental Health* 14(1). 38–58.
doi:10.1080/19349637.2012.642669.

This article considers research describing religious attitudes toward mental illness, including assumptions that mental illness may be evidence of personal sin or demonic influence. These assumptions are critiqued based upon a review of relevant Scriptural passages. A reformulation of the theological conceptions of mental illness is then proposed, focusing on the following themes: heroism in frailty, freedom in finitude, complexity in disorder, and the stranger in our midst. In conclusion, the article offers potential implications of theologies describing a passable God for an understanding of human suffering in general, and the suffering in mental disorder in particular.

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

Farah, Martha J. 2012. Neuroethics: the ethical, legal, and societal impact of neuroscience. *Annual Review of Psychology* 63. 571–591.
doi:10.1146/annurev.psych.093008.100438.

Advances in cognitive, affective, and social neuroscience raise a host of new questions concerning the ways in which neuroscience can and should be used. These advances also challenge our intuitions about the nature of humans as moral and spiritual beings. Neuroethics is the new field that grapples with these issues. The present article surveys a number of applications of neuroscience to such diverse arenas as marketing, criminal justice, the military, and worker productivity. The ethical, legal, and societal effects of these applications are discussed. Less practical, but perhaps ultimately more consequential, is the impact of neuroscience on our worldview and our understanding of the human person.

Gottlieb, Eli & Sam Wineburg. 2012. Between Veritas and Communitas: Epistemic Switching in the Reading of Academic and Sacred History. *Journal of the Learning Sciences* 21(1). 84–129.
doi:10.1080/10508406.2011.582376.

Researchers compared how 8 religious believers (historians and clergy) and 8 skeptics (historians and scientists) read a series of documents on 2 topics: the Biblical Exodus and the origins of the first American Thanksgiving. Readings by religiously committed historians differed from those of their non-religious peers. Navigating between the competing commitments of their faith communities on the one hand, and an academic guild on the other, religious historians engaged in epistemic switching, varying epistemological criteria to align with the allegiances triggered by the document under review. To explain these findings, the authors propose that historical understanding be conceived not as a unitary construct but as a form of coordination between multiple axes: a vertical axis of increasing intellectual sophistication as defined by the discipline; and a horizontal axis of identification and commitment, along which individuals move between a variety of allegiances and affiliations as they engage the epistemological criteria of sacred history.

Kettell, Steven. 2012. Has Political Science Ignored Religion? *PS: Political Science & Politics* 45(1). 93–100.
doi:10.1017/S1049096511001752.

A common complaint from political scientists involved in the study of religion is that religious issues have been largely overlooked by political science. Through a content analysis of leading political science and sociology journals

from 2000 to 2010, this article considers the extent of this claim. The results show that political science publications involving religious topics have been significantly fewer than those engaging with subjects typically regarded as being more central to the discipline, and markedly less numerous than religious articles in leading sociology publications. Where political science publications have engaged with religious issues, these articles have also focused on a limited number of subject areas and been concentrated in specific disciplinary subfields. The proportion of articles covering religion has shown no real increase since the turn of the century. These findings underpin calls for political scientists to take religious issues more seriously.

Lukes, Steven. 2012. Is Durkheim's understanding of religion compatible with believing? *Religion* 42(1). 41–52.
doi:10.1080/0048721X.2011.637312.

Émile Durkheim denied that his sociology of religion poses a challenge to the faithful; in debate, he portrayed religion not as “mere illusion” but as consisting in “moral forces” that command, comfort and strengthen the faithful, forces generated and regenerated within them by the “collective effervescence” of rituals. Thus empowered, the faithful imagine in symbolic form “the society of which they are members and the obscure yet intimate relations they have with it.” Durkheim’s answer is shown to have three components: a critique of naturalist and animist “error theories” of religion; a method of “deep interpretation,” uncovering the “reality” beneath the symbolism; and an explanation of why the meaning of religion thus interpreted should have been for so long unacknowledged by the faithful. It is argued that, in principle, they can, on certain assumptions, accommodate his sociology of religion, but these assumptions have been questioned: whether “religion” names a unified phenomenon, and whether Durkheim’s definition captures it. Recent revised “Durkheimian” accounts of religious thought and practice are considered, accounts that abandon these assumptions and also his “social realism,” while seeking to preserve his insights. It is argued that these too need not directly challenge religious belief in the way that the cognitive science of religion does.

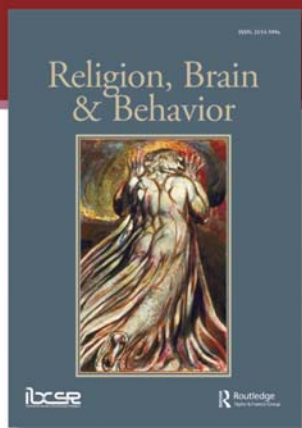
Van Pachterbeke, Matthieu, Johannes Keller & Vassilis Saroglou. 2012. Flexibility in existential beliefs and worldviews: Introducing and measuring existential quest. *Journal of Individual Differences* 33(1). 2–16.
doi:10.1027/1614-0001/a000056.

Being open to questioning and changing one’s own existential beliefs and worldviews is an understudied epistemological tendency scholars call “existential quest.” The authors found that existential quest is a specific construct that can be distinguished from related constructs such as searching for meaning in life, readiness to question pro-religious beliefs (i.e., religious quest), need for closure, and dogmatism. In five studies, researchers tested the psychometric qualities of a newly developed 9-item scale and the relationship of existential quest with individual difference variables reflecting ideological and epistemological needs (such as authoritarianism or regulatory focus) and behavioral tendencies (my-side bias in an argument generation task). Existential quest showed incremental validity over and above established constructs regarding the prediction of relevant cognitive biases and empathy. The findings indicate the relevance of existential quest as an epistemological construct that seems particularly interesting for research in the developing field of existential psychology.

Trapnell, Paul D & Delroy L Paulhus. 2012. Agentic and communal values: their scope and measurement. *Journal of Personality Assessment* 94(1). 39–52.
doi:10.1080/00223891.2011.627968.

Agency is the meta-concept associated with self-advancement in social hierarchies; communion is the partner concept associated with maintenance of positive relationships. Despite the wealth of data documenting the conceptual utility of agency and communion (A&C) as superordinate meta-concepts, no direct measures of global A&C value dimensions are currently available. The first part of this article presents structural analyses of data from 4 diverse data sets (3 archival and 1 new). Each included a broad inventory of values or life goals. All 4

data sets revealed higher order A&C dimensions that were either apparent or implicit. The second part details the development of the ACV, a 24-item questionnaire measuring global A and C values, and documents its psychometric properties. Four studies support their joint construct validity by positioning the value measures within a nomological network of interpersonal traits, self-favorability biases, ideology dimensions, gender, socio-sexuality, and religious attitudes.



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PART 2. ARTICLES IN SPIRITUALITY & HEALTH RESEARCH

2.1 SPIRITUALITY & HEALTH: GENERAL HEALTH & WELL-BEING

Bowden, Deborah, Claire Gaudry, Seung Chan An & John Gruzelier. 2012. A comparative randomised controlled trial of the effects of brain wave vibration training, Iyengar yoga, and mindfulness on mood, well-being, and salivary cortisol. *Evidence-Based Complementary and Alternative Medicine: eCAM* 2012. 234713.
doi:10.1155/2012/234713.

This randomized trial compared the effects of Brain Wave Vibration (BWV) training, which involves rhythmic yoga-like meditative exercises, with Iyengar yoga and Mindfulness, in 35 healthy adults. Participants completed 10 75-minute classes of BWV, Iyengar, or Mindfulness over five weeks and were assessed at pre- and post-intervention for mood, sleep, mindfulness, absorption, health, memory, and salivary cortisol. Better overall mood and vitality followed both BWV and Iyengar training, while the BWV group alone had improved depression and sleep latency. Mindfulness produced a comparatively greater increase in absorption. All interventions improved stress and mindfulness, while no changes occurred in health, memory, or salivary cortisol. In conclusion, increased well-being followed training in all three practices, increased absorption was specific to Mindfulness, while BWV was unique in its benefits to depression and sleep latency, warranting further research.

de Dios, Marcel A, Debra S Herman, Willoughby B Britton, Claire E Hagerty, Bradley J Anderson & Michael D Stein. 2012. Motivational and mindfulness intervention for young adult female marijuana users. *Journal of Substance Abuse Treatment* 42(1). 56–64.
doi:10.1016/j.jsat.2011.08.001.

This pilot study tested the efficacy of a brief intervention using motivational interviewing (MI) plus mindfulness meditation (MM) to reduce marijuana use among young adult females. Thirty-four female marijuana users between the ages of 18 and 29 were randomized to either the intervention group (n=22), consisting of two sessions of MI-MM, or an assessment-only control group (n=12). The participants' marijuana use was assessed at baseline and at 1, 2, and 3 months post-treatment. Participants randomized to the intervention group were found to use marijuana on 6.15, 7.81, and 6.83 fewer days at Months 1, 2, and 3, respectively, than controls. Findings from this pilot study provide preliminary evidence for the feasibility and effectiveness of a brief MI-MM for young adult female marijuana users.

Ebnezar, John, Raghuram Nagarathna, Bali Yogitha & Hongasandra Ramarao Nagendra. 2012. Effect of integrated yoga therapy on pain, morning stiffness and anxiety in osteoarthritis of the knee joint: A randomized control study. *International Journal of Yoga* 5(1). 28–36.
doi:10.4103/0973-6131.91708.

Two hundred and fifty participants with osteoarthritic knees were randomly assigned to yoga or control group. Both groups had transcutaneous electrical stimulation and ultrasound treatment followed by intervention (40 min) for two weeks with follow up for three months. The integrated yoga consisted of yogic loosening and strengthening practices, asanas, relaxation, pranayama and meditation. The control group had physiotherapy exercises. Post-intervention assessments were done on the 15 (post 1) and 90 (post 2) days later. Following intervention, pain, morning stiffness, state and trait anxiety, blood pressure and pulse rate were reduced more in the yoga than control group at post 1 and post 2.

Feinson, Marjorie C & Adi Meir. 2012. Disordered eating and religious observance: a focus on ultra-Orthodox Jews in an adult community study. *The International Journal of Eating Disorders* 45(1). 101–109.

doi:10.1002/eat.20895.

Detailed telephone interviews were held with community sample of adult Jewish women in Israel, including 261 ultra-Orthodox, and frequency of 14 symptoms of disordered eating behavior (DEB) assessed. Contrary to expectations, no significant differences were found in the frequency of serious DEB between the most and least religiously observant, ultra-Orthodox, and Secular women. Regressions reveal similar predictors of DEB severity (obesity followed by self-criticism) as well as substantial variations in amount of variance explained. The authors conclude that rigorous religious adherence does not protect ultra-Orthodox women from serious eating problems. Additional analyses can inform socio-cultural perspectives by examining the connection between body dissatisfaction and disordered eating in this insular and isolated religious community, whose exposure to secular media is prohibited.

Haber, Jon Randolph, Julia D Grant, Theodore Jacob, Laura B Koenig & Andrew Heath. 2012. Alcohol milestones, risk factors, and religion/spirituality in young adult women. *Journal of Studies on Alcohol and Drugs* 73(1). 34–43.

The current study examined data from an existing sample of 4,002 female adolescents/young adults and their families. Data analyses examined five demographic, nine religion/spirituality (R/S), and eight risk-factor variables as predictors of five alcohol milestones: initial drink, first intoxication, regular use, heavy consumption, and alcohol dependence. Results affirmed the known association between alcoholism risk factors and alcohol use milestones and also found moderate to strong associations between most R/S variables and these risk factors and milestones. Specific risk factors and specific R/S variables were significant predictors of alcohol use milestones after accounting for all other variables. Mediation and moderation tests did not find evidence that R/S accounted for or qualified the relationship between alcohol risk factors and alcohol milestones.

Henderson, Virginia P, Lynn Clemow, Ann O Massion, Thomas G Hurley, Susan Druker & James R Hébert. 2012. The effects of mindfulness-based stress reduction on psychosocial outcomes and quality of life in early-stage breast cancer patients: a randomized trial. *Breast Cancer Research and Treatment* 131(1). 99–109.
doi:10.1007/s10549-011-1738-1.

The aim of this study was determine the effectiveness of an 8-week mindfulness-based stress-reduction (MBSR) program on quality of life (QOL) and psychosocial outcomes in 172 women with early-stage breast cancer, using a three-arm randomized controlled clinical trial. Follow-up was performed at three post-intervention points: 4 months, 1, and 2 years. Following intervention, those who were randomized to MBSR experienced a significant improvement in the primary measures of QOL and coping outcomes compared to the nutrition education program, usual supportive care, or both, including the spirituality subscale of the FACT-B as well as dealing with illness scale increases in active behavioral coping and active cognitive coping. Secondary outcome improvements resulting in significant between-group contrasts favoring the MBSR group at 4 months included meaningfulness, depression, paranoid ideation, hostility, anxiety, unhappiness, and emotional control. Results tended to decline at 12 months and even more at 24 months, though at all times, they were as robust in women with lower expectation of effect as in those with higher expectation. The MBSR intervention appears to benefit psychosocial adjustment in cancer patients, over and above the effects of usual care or a credible control condition. The universality of effects across levels of expectation indicates a potential to utilize this stress reduction approach as complementary therapy in oncologic practice.

Jung, Ye-Ha, Do-Hyung Kang, Min Soo Byun, Geumsook Shim, Soo Jin Kwon, Go-Eun Jang, Ul Soon Lee, Seung Chan An, Joon Hwan Jang & Jun Soo Kwon. 2012. Influence of brain-derived neurotrophic factor and catechol O-methyl transferase polymorphisms on effects of meditation on plasma catecholamines and stress. *Stress* 15(1). 97–104.
doi:10.3109/10253890.2011.592880.

Researchers posited that meditation may show differential effects on stress and plasma catecholamines based on genetic polymorphisms. Eighty adults (40 women) who practiced meditation regularly and 57 healthy control adults (22 women) participated in this study. Plasma catecholamine concentrations were measured, and a modified form of the Stress Response Inventory was administered. The results were analyzed using two-way analysis of covariance with control and meditation subjects, gene polymorphism as factors, and meditation duration as the covariate. Analysis affirmed the hypothesis that meditation produces different effects on plasma catecholamines according to brain-derived neurotrophic factor (BDNF) or catechol O-methyl transferase (COMT) polymorphisms.

Kemppainen, Jeanne, Jill E Bormann, Martha Shively, Ann Kelly, Sheryl Becker, Patricia Bone, Wendy Belding & Allen L Gifford. 2012. Living with HIV: Responses to a Mantram Intervention Using the Critical Incident Research Method. *Journal of Alternative and Complementary Medicine (New York, N.Y.)* 18(1). 76–82.
doi:10.1089/acm.2009.0489.

Researchers studied the efficacy of a spiritually based intervention of silently repeating a mantram (sacred word or phrase) as a coping strategy for outpatient adults living with HIV (n=32). Participants reported a total of 185 incidents. Analysis and classification of the incidents resulted in eight mutually exclusive categories, including Increasing calm and/or peace, Mastering the technique, Changing my viewpoint, Increasing personal awareness, Adjusting behaviors, Managing physical symptoms, Increasing spirituality, and Enhancing relationships. Follow-up telephone interviews shows support for the benefits of the mantram intervention for adults with HIV. Additionally, the spiritually based mantram repetition intervention was found to be more helpful in providing a convenient, portable tool for managing a wide range of situations related to living with HIV disease.

Khalsa, Sat Bir S., Lynn Hickey-Schultz, Deborah Cohen, Naomi Steiner & Stephen Cope. 2012. Evaluation of the Mental Health Benefits of Yoga in a Secondary School: A Preliminary Randomized Controlled Trial. *The Journal of Behavioral Health Services & Research* 39(1). 80–90.
doi:10.1007/s11414-011-9249-8.

In this study, students were randomly assigned to either regular physical education classes or to 11 weeks of yoga sessions based upon the Yoga Ed program over a single semester. Students completed baseline and end-program self-report measures of mood, anxiety, perceived stress, resilience, and other mental health variables. Independent evaluation of individual outcome measures revealed that yoga participants showed statistically significant differences over time relative to controls on measures of anger control and fatigue/inertia. Most outcome measures exhibited a pattern of worsening in the control group over time, whereas changes in the yoga group over time were either minimal or showed slight improvements.

Khoury, Amal, Tolulope A Oyetunji, Oluwaseyi Bolorunduro, Leia Harbour, Edward E Cornwell, Suryanarayana M Siram, Thomas Mellman & Wendy R Greene. 2012. Living on a prayer: religious affiliation and trauma outcomes. *The American Surgeon* 78(1). 66–68.

A total of 2,303 patients admitted to an urban Level I trauma center in 2008 were included in the study. Forty-six per cent endorsed a religious affiliation. Patients with a religious affiliation were more likely to be female, Hispanic, and older than those who reported no affiliation. There was no difference in length of hospital stay. On bivariate analysis those without religious affiliation were more likely to die, but this difference disappeared after adjusting for covariates. There was an association with injury severity suggesting religious patients were less severely injured.

Melville, Geoffrey W, Dennis Chang, Ben Colagiuri, Paul W Marshall & Birinder S Cheema. 2012. Fifteen minutes of chair-based yoga postures or guided meditation performed in the office can

elicit a relaxation response. *Evidence-Based Complementary and Alternative Medicine: eCAM* 2012. 501986.

doi:10.1155/2012/501986.

This study compared acute (15-min) yoga posture and guided meditation practice, performed seated in a typical office workspace, on physiological and psychological markers of stress. Twenty participants completed three conditions: yoga, meditation, and control (i.e., usual work) separated by ≥ 24 -hrs. Yoga and meditation significantly reduced perceived stress versus control, and this effect was maintained post-intervention. Yoga increased heart rate while meditation reduced heart rate versus control. Respiration rate was reduced during yoga and meditation versus control. Domains of heart rate variability were significantly reduced during control versus yoga and meditation. Systolic and diastolic blood pressure were reduced secondary to meditation versus control only. Physiological adaptations generally regressed toward baseline post-intervention.

Moulton, Benjamin E. & Darren E. Sherkat. 2012. Specifying the effects of religious participation and educational attainment on mortality risk for U.S. adults. *Sociological Spectrum* 32(1). 1–19.

doi:10.1080/02732173.2012.628552.

Both education and religious involvement provide beneficial resources that can positively impact health and mortality outcomes. However, it is unclear whether these important resources work in concert to influence mortality risk. Indeed, religious resources are often placed in opposition to secular knowledge, and this may limit the scope of the positive influence of religious factors on health outcomes. The present study relies on a large ($n=22,080$), nationally representative sample of non-institutionalized U.S. adults administered in 1987 and linked to the National Death Index through 2006 to test this relationship. Analysis suggests that religious involvement has a negative impact on the risk of mortality for those who did not complete college. However, estimates show that religious participation increases the risk of mortality among those with the highest levels of educational attainment.

Salman, Khlood Faik. 2012. Health beliefs and practices related to cancer screening among Arab Muslim women in an urban community. *Health Care for Women International* 33(1). 45–74.

doi:10.1080/07399332.2011.610536.

The author investigated the participation status in breast and cervical cancer screening of a group of American immigrant Arab Muslim women (AMW). Perceived knowledge of and barriers to screening participation, relationships among demographic variables, health practice and beliefs, and self-reports of traditionalism and acculturation also are studied. Factors including religious and cultural beliefs, economic concerns, and modesty and embarrassment were considered. To reach the goals of Healthy People 2010, an effective and meaningful educational initiative to raise awareness about breast and cervical cancer of AMW will require specific interventions consistent with their cultural and religious traditions.

Selman, L E, J Williams & V Simms. 2012. A mixed-methods evaluation of complementary therapy services in palliative care: yoga and dance therapy. *European Journal of Cancer Care* 21(1). 87–97.

doi:10.1111/j.1365-2354.2011.01285.x.

Researchers evaluated two complementary therapy services: yoga classes and dance therapy [The Lebed Method (TLM)], both run as 6-week group courses. Patients completed the Measure Yourself Concerns and Wellbeing questionnaire pre- and post-course. Eighteen patients participated; 10 were doing yoga, five TLM, and three both yoga and TLM; 14 completed more than one assessed course. Patients' most prevalent concerns were: mobility/fitness ($n=20$), breathing problems ($n=20$), arm, shoulder and neck problems ($n=18$), difficulty relaxing ($n=8$), back/postural problems ($n=8$), fear/anxiety ($n=5$). Patients reported psycho-spiritual, physical and social benefits. Concern scores improved significantly for both therapies; improved well-being was clinically significant for yoga.

Svalina, Suncica S & Jon R Webb. 2012. Forgiveness and health among people in outpatient physical therapy. *Disability and Rehabilitation* 34(5). 383–392.
doi:10.3109/09638288.2011.607216.

Participants from southern Appalachia (n=141) completed cross-sectional self-report measures of forgiveness, lifetime religiousness, health behavior, health status and pain. Forgiveness of self was associated with: (i) overall health status, physical health status and current pain in an indirect-only fashion and (ii) mental health status and chronic pain in a direct-only fashion. Feeling forgiven by God was associated with health-related social functioning in a direct-only fashion. Forgiveness of others was not associated with the health-related outcomes. Results indicate that forgiveness of self appears to be the most important to health, yet the most difficult to achieve. Religious culture may influence whether feeling forgiven by God is also important. Forgiveness-based intervention may be useful in the context of rehabilitation, physical therapy in particular.

Zaid, Hilal, Michael Silbermann, Eran Ben-Arye & Bashar Saad. 2012. Greco-Arab and Islamic herbal-derived anticancer modalities: from tradition to molecular mechanisms. *Evidence-Based Complementary and Alternative Medicine: eCAM* 2012. 349040.
doi:10.1155/2012/349040.

This review presents research data related to the anticancer activities of herbs used in Arab-Islamic medicine and allude to their potential role in improving the quality of life of cancer patients. Traditional Arab-Islamic medicine offers a variety of therapeutic modalities that include herbal, nutritional, and spiritual approaches, and historical physicians and scholars such as Avicenna (980-1037), Rhazes (965-915), Al Zabranvi (936-1013), and Ibn al Nafis (1218-1288) referred to cancer etiology in various medicinal texts and suggested both preventive and therapeutic remedies to alleviate suffering.

2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH

Abdel-Khalek, Ahmed M. 2012. Subjective well-being and religiosity: a cross-sectional study with adolescents, young and middle-age adults. *Mental Health, Religion & Culture* 15(1). 39–52.
doi:10.1080/13674676.2010.551324.

The aim of this study was to explore the relationship between religiosity and subjective well-being (SWB) as assessed with the Oxford Happiness Inventory, the Satisfaction with Life Scale, Love of Life Scale, and the self-rating scales of happiness, physical health, mental health, and religiosity among Muslims. Three cross-sectional samples of Kuwaiti Muslim adolescents, college students, and middle aged were recruited (n=1,420). Sex-related differences were significant on SWB variables favoring men in general. All the correlations between the SWB variables were significant and positive as well as the SWB-religiosity associations. A high-loaded factor of “SWB and religiosity” was extracted among all the six groups as well as the total sample. It was concluded that religiosity is an important element in the lives of the majority of the present Kuwaiti samples during three age stages.

Damianakis, Thecla & Elsa Marziali. 2012. Older adults’ response to the loss of a spouse: the function of spirituality in understanding the grieving process. *Aging & Mental Health* 16(1). 57–66.
doi:10.1080/13607863.2011.609531.

Twenty-four older adults, ranging in age from 65 to 82, whose spouses had died in the previous year, were assigned, in groups of six, to a 14-week group therapy intervention facilitated by trained, experienced co-therapist social workers. Qualitative analysis of the four therapy groups at beginning, middle and ending sessions yielded salient themes that illustrate associations between spirituality and shifts in self-identity, mourning the loss and

social re-engagement. Observed were within process acknowledgement of the role played by spiritual beliefs in mourning the loss of a spouse.

- Graybill, Arjan & Giselle Esquivel. 2012. Spiritual Wellness as a Protective Factor in Predicting Depression Among Mothers of Children With Autism Spectrum Disorders. *Journal of Religion, Disability & Health* 16(1). 74–87.

doi:10.1080/15228967.2012.645591.

This study examined the predictive power of spiritual wellness on depression in 83 mothers of children with autism spectrum disorders. Spiritual wellness is a multidimensional construct that consists of four components: meaning and purpose in life, inner resources, transcendence, and positive interconnectedness. The spiritual wellness components of meaning and purpose in life and inner resources were significant predictors of lower depression symptoms and therefore served as protective factors in maternal depression.

- Gyntelberg, F, H O Hein & P Suadiciani. 2012. Psychosocial stress among Danish vicars. *Occupational Medicine* 62(1). 12–16.

doi:10.1093/occmed/kqr160.

Data for this cross-sectional study were collected by means of a self-administered questionnaire sent to all employees in 500 Danish parishes (n=2,254). Compared with other employees, vicars felt quiet and relaxed less often (53% versus 67%), had less time for pleasure and relaxation (28% versus 11%) and felt happy and satisfied (53% versus 67%) less often. Vicars had significantly higher quantitative, cognitive and emotional work demands, lower work support, less influence on whom to collaborate with and less influence on their workload. Psychosocial workloads were more favorable for the vicars who had greater influence on job decisions and on job organization. The higher prevalence of stress-related symptoms among vicars was strongly modified by high work demands, in particular high quantitative demands.

- Miller, Lisa, Priya Wickramaratne, Marc J Gameroff, Mia Sage, Craig E Tenke & Myrna M Weissman. 2012. Religiosity and major depression in adults at high risk: a ten-year prospective study. *The American Journal of Psychiatry* 169(1). 89–94.

doi:10.1176/appi.ajp.2011.10121823.

Participants were 114 adult offspring of depressed and nondepressed parents, followed longitudinally. The analysis covers the period from the 10-year to the 20-year follow-up assessments. Offspring who reported at year 10 that religion or spirituality was highly important to them had about one-fourth the risk of experiencing major depression between years 10 and 20 compared with other participants. Religious attendance and denomination did not significantly predict this outcome. The effect was most pronounced among offspring at high risk for depression by virtue of having a depressed parent; in this group, those who reported a high importance of religion or spirituality had about one-tenth the risk of experiencing major depression between years 10 and 20 compared with those who did not. The protective effect was found primarily against recurrence rather than onset of depression.

- Moss, Aleezé Sattar, Nancy Wintering, Hannah Roggenkamp, Dharma Singh Khalsa, Mark R Waldman, Daniel Monti & Andrew B Newberg. 2012. Effects of an 8-week meditation program on mood and anxiety in patients with memory loss. *Journal of Alternative and Complementary Medicine* 18(1). 48–53.

doi:10.1089/acm.2011.0051.

This study assesses changes in mood and anxiety in a cohort of 15 subjects with memory loss who participated in an 8-week Kirtan Kriya meditation program. The meditation training program resulted in notable improvement trends in mood, anxiety, tension, and fatigue, with some parameters reaching statistical significance. All major trends correlated with changes in cerebral blood flow (CBF). There were nonsignificant trends in spirituality scores that did not correlate with changes in CBF.

Rosik, Christopher H & Andrea Soria. 2012. Spiritual well-being, dissociation, and alexithymia: examining direct and moderating effects. *Journal of Trauma & Dissociation: The Official Journal of the International Society for the Study of Dissociation* 13(1). 69–87.
doi:10.1080/15299732.2011.606739.

Researchers surveyed 131 adults seeking psychotherapy and pastoral care in an intensive outpatient psychotherapy program for full-time religious workers. They found that Dissociative Experiences Scale-II (DES-II) total scores were inversely related to Spiritual Well-Being Scale (SWB) scores. No association was found between alexithymia and SWB, nor did alexithymia moderate the relationship between dissociation and SWB. Subscale analyses revealed that lower SWB and Existential Well-Being (EWB) were associated with greater nonpathological dissociation, which was unrelated to Religious Well-Being (RWB). By contrast, lower RWB was predicted by higher pathological dissociation, which displayed no relationship to SWB or EWB.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

Baspure, Shubhangi, Aarti Jagannathan, Santosh Kumar, Shivarama Varambally, Jagadisha Thirthalli, G Venkatasubramanian, Hr Nagendra & B N Gangadhar. 2012. Barriers to yoga therapy as an add-on treatment for schizophrenia in India. *International Journal of Yoga* 5(1). 70–73.
doi:10.4103/0973-6131.91718.

In a randomized control trial, patients with schizophrenia were randomized into one of three limbs: Yoga therapy, physical exercise and waitlist. Of 857 patients screened, 392 (45.7%) patients were found eligible for the study. Among them, 223 (56.8%) declined to take part in the trial. The primary reasons for declining were (a) distance from the center (n=83; 37.2%); (b) no one to accompany them for training (n=25; 11.2%); (c) busy work schedule (n=21, 9.4%); (d) unwilling to come for one month (n=11; 4.9%), (e) not willing for yoga therapy (n=9, 4.0%); (f) personal reasons (n=3, 1.3%); (g) religious reasons (n=1, 0.4%). In 70 patients (31.6%), no reasons were ascribed. No patient refused citing research nature of the intervention as a reason.

Bornsheuer, Jennifer, Yvonne Garza & Mary Nichter. 2012. Biblically-based parenting and child-parent relationship training: common ground for helping religious clients. *Mental Health, Religion & Culture* 15(1). 53–64.
doi:10.1080/13674676.2011.552487.

This article demonstrates the interface between biblically based parenting and an empirically validated parenting model. The authors compared the relationship between Child-Parent Relationship Training's (CPRT) theoretical tenets and values espoused by families utilizing biblically based parenting practices. The authors propose that certain constructs of CPRT, from theoretical tenets to techniques, interface with important biblically based parenting values of many religious families. The authors purport that this common ground will allow clinicians to utilize the foundational ideas and practical techniques of the CPRT model for specific work with religious clients seeking biblically based parenting education.

Byrne, Libby & Elizabeth MacKinlay. 2012. Seeking Meaning: Making Art and the Experience of Spirituality in Dementia Care. *Journal of Religion, Spirituality & Aging* 24(1-2). 105–119.
doi:10.1080/15528030.2012.633416.

How do people find meaning in the experience of dementia? Can people living with dementia be supported in meaningful activities that may alleviate depression and increase their sense of well-being? Many programs are offered for people in residential aged care, but little is known about the effectiveness of these programs. This article reports on the qualitative component of a study engaging 15 older adults with dementia and depression in a program of person-centered art making. The weekly facilitated study groups met over an 18-month period, with a three-month follow up.

Dick, Helen V. 2012. "Knowing the Person Is Happy That You Were There": The Spiritual Resources Staff in a Residential Aged Care Facility Use to Cope With Resident Deaths. *Journal of Religion, Spirituality & Aging* 24(1-2). 164–176.
doi:10.1080/15528030.2012.633056.

Studies of nurses have demonstrated that chronic exposure to patient deaths can have detrimental personal and workplace effects. However, there is little research on staff experience of deaths in residential aged care facilities (RACFs). This research project aimed to examine this experience and to explore the inner support mechanisms utilized by staff. A qualitative methodology was used. Seventeen staff from one RACF were recruited and asked to describe their experiences in semi-structured interviews. While only one participant mentioned extrinsic religious practices as a support, all reported being substantially supported by intrinsic spiritual resources, such as meaning, hope, and relationships with others.

Ellison, Christopher G, Matt Bradshaw & Cheryl A Roberts. 2012. Spiritual and religious identities predict the use of complementary and alternative medicine among US adults. *Preventive Medicine* 54(1). 9–12.
doi:10.1016/j.ypmed.2011.08.029.

Analyzing data from the 1995-1996 National Survey of Midlife Development in the United States (n=3032), researchers found that, compared with "spiritual only" persons, the odds of using energy therapies are 86% lower for "spiritual and religious" persons, 65% lower for "religious only" persons, and 52% lower for "neither spiritual nor religious" persons. Compared to spiritual only persons, spiritual and religious individuals are 43% more likely to use body-mind therapies in general; however, when this category does not contain prayer, meditation, or spiritual healing, they are 44% less likely. Religious only individuals are disinclined toward CAM use.

Elolemy, Ahmed Tawfik & Abdullah M N Albedah. 2012. Public knowledge, attitude and practice of complementary and alternative medicine in Riyadh region, Saudi Arabia. *Oman Medical Journal* 27(1). 20–26.
doi:10.5001/omj.2012.04 (27 February, 2012).

Researchers carried out a cross-sectional descriptive household survey study of the people living in Riyadh city, as well as the surrounding governorates. About 89% of the participants had some knowledge of CAM. Mass media, and family, relatives and friends, represented the main sources of CAM knowledge, (46.5% and 46.3% respectively). Nearly 85% of participants or one of their family members has used some form of CAM before, and the most common users of CAM practices were females, housewives, and illiterate subjects (or those who could just read and write), as well as participants aged 60 years and above. Medical herbs, prayer, honey and bee products, hijama and cauterization or medical massage therapy were the commonly used CAM practices. Most participants agreed that there are needs for: CAM practices (93.8%), regulations for CAM (94.9%), health education (96.6%), specialized centers (94.8%) and CAM clinics (92.7%). Only 8.3% of participants usually discussed CAM with their physicians.

Ford, Dee W, Lois Downey, Ruth Engelberg, Anthony L Back & J Randall Curtis. 2012. Discussing religion and spirituality is an advanced communication skill: An exploratory structural equation model of physician trainee self-ratings. *Journal of Palliative Medicine* 15(1). 63–70.
doi:10.1089/jpm.2011.0168.

The authors examined surveys of physician trainees (n=297) enrolled in an ongoing communication skills study at two medical centers in the northwestern and southeastern United States to determine self-assessed competence in discussing religion and spirituality. They found that discussion of religious and spiritual issues is a communication skill that trainees consider more advanced than other commonly taught communication skills, such as discussing "do not resuscitate" orders.

Geiger, Martha. 2012. Through the Eyes of Children: Theological Lessons with and from Children with Severe Communication Disabilities. *Journal of Religion, Disability & Health* 16(1). 102–113. doi:10.1080/15228967.2012.645615.

Case studies of children with severe communication disabilities are discussed, including their attitudes to disability in general and communication disabilities in particular. Additionally, the article discusses some of the children's expressions of their awareness of their relationship with God. The author concludes that there is a need for a hermeneutical competence for health, rehabilitation, and pastoral workers in engaging with children with severe disabilities directly and interpreting their awareness of their relationship with God to others to embrace them not only as recipients but also as contributors in faith communities and in society at large.

Hall, Ronald E. 2012. Islamic spirituality vis-à-vis Asia Pacific Muslim populations: A resource for western social work practice. *International Social Work* 55(1). 109–124. doi:10.1177/0020872811409472.

Among Asia Pacific Muslims who migrate West, spirituality is fundamental. The implications include the need for Western social workers when appropriate to apply Islamic-specific spiritual criteria. The dampening effects of Western social work absent Islamic spiritual resources will impair the potential of the profession. Effective social work practice involving Asia Pacific Muslim populations must necessarily incorporate knowledge of Islamic spirituality and if necessary apply it. The ability of Western social workers to accurately perceive, conceptualize, and interact therapeutically with Asia Pacific Muslim populations is a necessity where such populations have recently migrated West.

Harrington, Ann. 2012. A Beginning Understanding of Caregivers' Spiritual Needs When Relinquishing a Loved One to a Palliative Care Setting. *Journal of Religion, Spirituality & Aging* 24(1-2). 131–145. doi:10.1080/15528030.2012.633055.

To establish what was expected from caregivers of patients who had been diagnosed with life-limiting illness, 15 participants were recruited and semi-structured interviews were conducted. Qualitative analysis demonstrated that the importance of spirituality and spiritual care could be classed as positive, negative, or positive and negative. Although the majority of participants indicated spirituality was an important component of their lives, five people did not indicate they had an interest in this area with two participants unclear as to the benefits of spirituality.

Kevern, Peter. 2012. In search of a theoretical basis for understanding religious coping: initial testing of an explanatory model. *Mental Health, Religion & Culture* 15(1). 23–37. doi:10.1080/13674676.2010.550278.

There is now good evidence that some religious ideas and perspectives have an influence on their adherents' ability to cope with life stresses. However, there have been few attempts to explain this effect by recourse to experimentally-tested models of human cognition. In the present paper, the author argues that this shortfall both limits the usefulness of statistically-based studies and impedes the acceptance of religious or spiritual care as part of healthcare practice. A model based on that developed by cognitive psychologists of religion is subjected to initial, inductive testing in terms of its ability to explain some of the essential features and counter-intuitive results from the research literature on religious coping. The author concludes that, in the particular context represented by an individual in hospital, the model has significant explanatory potential and clarifies some recurring themes in the literature on coping.

Kingdon, Bianca L, Sarah J Egan & Clare S Rees. 2012. The Illusory Beliefs Inventory: a new measure of magical thinking and its relationship with obsessive compulsive disorder. *Behavioural and Cognitive Psychotherapy* 40(1). 39–53. doi:10.1017/S1352465811000245.

The authors developed and validated a new 24-item measure of magical thinking, the Illusory Beliefs Inventory (IBI), using a validation sample of 1,194 individuals. Factor analysis identified three subscales representing domains relevant to the construct of magical thinking: Magical Beliefs, Spirituality, and Internal State and Thought Action Fusion. The scale had excellent internal consistency and evidence of convergent and discriminant validity. Evidence of criterion-related concurrent validity confirmed that magical thinking is a cognitive domain associated with OCD and is largely relevant to neutralizing, obsessing and hoarding symptoms.

Lake, James, Chanel Helgason & Jerome Sarris. 2012. Integrative Mental Health (IMH): paradigm, research, and clinical practice. *Explore* 8(1). 50–57.
doi:10.1016/j.explore.2011.10.001.

This paper provides an overview of the rapidly evolving paradigm of “Integrative Mental Health (IMH),” which aims to reconcile the bio-psycho-socio-spiritual model with evidence-based methods from traditional healing practices. The International Network of Integrative Mental Health was established in 2010 with the objective of creating an international network of clinicians, researchers, and public health advocates to advance a global agenda for research, education, and clinical practice of evidence-based integrative mental health care. The paper concludes with a discussion of emerging opportunities for research in IMH, and an exploration of potential clinical applications of integrative mental health care.

Laverty, Martin J., Elizabeth M. Callaghan, Nicolas G. Mersiades, Matthew Peel & Susan Sullivan. 2012. The Resilience of Pastoral Care in Australian Catholic Aged Care Services. *Journal of Religion, Spirituality & Aging* 24(1-2). 68–79.
doi:10.1080/15528030.2012.633422.

The majority of regulated residential aged care in Australia is provided by faith-based providers, with the Catholic Church in Australia providing one in ten of all such services. Despite challenges caused by the decline in active involvement of clergy and religious and government regulatory and financial constraints, pastoral care in Catholic residential aged care is present, evolving, and thriving. Fostering a holistic pastoral environment is also essential to the viability and effectiveness of pastoral care in aged care. The author holds that a new approach to government funding is needed to foster innovation and a holistic response to the needs of older Australians.

MacKinlay, Elizabeth & Colin Dundon. 2012. An Exploration of Health and Religion in Elderly People Through the Lens of Scriptural Reminiscence. *Journal of Religion, Spirituality & Aging* 24(1-2). 42–54.
doi:10.1080/15528030.2012.632714.

An extensive body of quantitative research associates well-being in later life with religious involvement. This article reports on a pilot study of one specific aspect of religious involvement hitherto insufficiently investigated, namely, Scriptural Reminiscence (SR). SR is the interpreting of biography in the light of Scripture in recognition of Scripture’s unique place in the self-as-narrative of older people of faith. The study was of two small groups of older people meeting weekly over a six-week period with a follow-up focus group to explore SR, their faith journey, practice of religion, and mental health. The qualitative findings are reported in this article.

Novšak, Rachel, Tina Rahne Mandelj & Barbara Simonič. 2012. Therapeutic Implications of Religious-Related Emotional Abuse. *Journal of Aggression, Maltreatment & Trauma* 21(1). 31–44.
doi:10.1080/10926771.2011.627914.

In this article the authors discuss the emotional repercussions of religious-related abuse in the family, an aspect that is rarely documented in the field of psychotherapy, but has many negative consequences. Religious-oriented emotional abuse is traceable to several levels of human functioning: the individual’s internal level of experiencing themselves, the interpersonal and systemic levels, where the individual enters relationships, as well as within the framework of the individual’s relationship with God.

Pouchly, Cara A. 2012. A narrative review: arguments for a collaborative approach in mental health between traditional healers and clinicians regarding spiritual beliefs. *Mental Health, Religion & Culture* 15(1). 65–85.

doi:10.1080/13674676.2011.553716.

This review explores the possibility of a more collaborative approach between mental health clinicians and traditional healers, from a clinical psychology perspective, for clients with spiritual beliefs. Spiritual beliefs are incorporated into the identity and functioning of clients within a cultural context and prevalence rates reveal this is not uncommon. It is argued that working collaboratively would address many access difficulties to mental health services and support is generated through a number of studies and case reports in the United Kingdom, worldwide and across cultures. This approach appears to be in accordance with current theories of acculturation.

Reid, Gillian A. 2012. Spirituality and End of Life Issues: A Review. *Journal of Religion, Spirituality & Aging* 24(1-2). 120–130.

doi:10.1080/15528030.2012.633054.

This article explores theories related to the development of spirituality and its relationship to end of life circumstances. It also considers the source of spiritual well-being, and its place in the context of the third (older, but still living independently) and fourth (frail elderly, needing care support) stages of life, and how a sense of spirituality affects and hopefully enhances the end of life experience, increasing resilience to adverse events that might otherwise hasten death. It concludes that spiritual as well as religious issues are important for people facing terminal illness and death.

Schultz, Michael, Kassim Baddarni & Gil Bar-Sela. 2012. Reflections On Palliative Care From The Jewish And Islamic Tradition. *Evidence-Based Complementary and Alternative Medicine: eCAM* 2012. 693092.

doi:10.1155/2012/693092.

The authors outline Jewish and Islamic attitudes toward suffering, treatment, and the end of life. They discuss the religions' approaches to treatments deemed unnecessary by medical staff, and consider some of the cultural reasons that patients and family members might object to palliative care, concluding with specific suggestions for the medical team.

Steffen, Patrick R. 2012. Approaching religiosity/spirituality and health from the Eudaimonic perspective. *Social and Personality Psychology Compass* 6(1). 70–82.

doi:10.1111/j.1751-9004.2011.00411.x.

The author asserts that a key difficulty in understanding the relationship between religion/spirituality and health lies in the theoretical perspectives used in research. Health and well-being is typically assessed from the hedonic perspective which emphasizes pleasure and happiness as important outcomes and assumes that difficult life situations contribute to negative health. The eudaimonic perspective, on the other hand, emphasizes meaning and relationships, and assumes that difficult life situations can contribute to increased meaning in life and stronger relationships. The eudaimonic perspective provides a better framework for understanding why RS leads to better health for disadvantaged groups for three reasons. First, having meaning in life and strong relationships are related to positive health outcomes and buffer the negative effects of stress. Second, in addition to being more religious, disadvantaged groups report lower hedonic well-being and report higher eudaimonic well-being. Third, low socioeconomic status religious individuals have better than expected health outcomes and low socioeconomic status materialistic individuals have worse than expected health outcomes.

Webb, Marcia. 2012. Toward a Theology of Mental Illness. *Journal of Religion, Disability & Health* 16(1). 49–73.

doi:10.1080/15228967.2012.645608.

This article considers research describing religious attitudes toward mental illness, including assumptions that mental illness may be evidence of personal sin or demonic influence. These assumptions are critiqued based upon a review of relevant Scriptural passages. A reformulation of theological conceptions of mental illness is then proposed, focusing on the following themes: heroism in frailty, freedom in finitude, complexity in disorder, and the stranger in our midst. In conclusion, the article offers potential implications of theologies describing a passable God for an understanding of human suffering in general, and the suffering in mental disorder in particular.

Williams, Anna-leila, Peter Van Ness, Jane Dixon & Ruth McCorkle. 2012. Barriers to Meditation by Gender and Age Among Cancer Family Caregivers. *Nursing Research* 61(1). 22–27.
doi:10.1097/NNR.0b013e3182337f4d.

The article discusses a study examining whether barriers to meditation differ by gender and age among a sample of cancer family caregivers at an outpatient chemotherapy center. The study developed the Determinants of Meditation Practice Inventory (DMPI) and evaluated explanatory variables including demographic characteristics. It was concluded that barriers to meditation did not significantly vary by age or gender.

Yorgason, Donald J., James P. Whelan & Andrew W. Meyers. 2012. Perceived religious support for problem gambling: Does church doctrine influence help-seeking? *Mental Health, Religion & Culture* 15(1). 87–102.
doi:10.1080/13674676.2011.558497.

This project explored church members' willingness to use religious resources to overcome a gambling problem. Participants from congregations with divergent doctrine on gambling (Roman Catholic, n=156; Southern Baptist, n=93) were randomly assigned to imagine having gambling or depression problems. Expected religious support and the likelihood of asking for help were evaluated. Church doctrine on gambling did not relate with anticipated social support or likelihood of seeking help. Most participants expected support from church, and were willing to seek help from church members. Southern Baptists, compared to Catholics, did expect more forgiveness. Participants in the gambling condition, compared to the depression condition, expected more judgment. Individuals in the gambling condition, compared to the depression condition, were more likely to seek help from church resources. These findings suggest that religious individuals view gambling as a moral problem, and that the church will be seen as a treatment resource.

PART 3. BOOKS

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3.2 SPIRITUALITY & HEALTH RESEARCH

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PART 4. ARTICLES IN PRESS

4.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR

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