Focusing on the Nonreligious Reveals Secular Mechanisms Underlying Well-Being and
Prosociality

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Abstract

Greater attention to secular and nonreligious individuals has provided much-needed balance as well as alternative interpretations of commonly-held assumptions regarding religiosity/spirituality (R/S). Contrary to the theory that R/S provides unique benefits in areas such as prosociality and mental health, analogous secular mechanisms exist. The conflation of effects attributed to R/S together with secular effects represents a congruence fallacy. Studies often lack proper controls found in other areas of psychology (e.g., dismantling or placebo designs) that could detect when religion is acting as a proxy for more basic underlying influences. For example, an increased focus on the nonreligious has revealed that religious belief has often been confounded with factors such as strong worldview conviction, social engagement, and normative cultural fit. R/S differences co-occur with demographic, personality, cognitive, and epistemic variables that exert causal influence independent of any religious content. Experimental and treatment outcome studies featuring effects attributed to R/S often have not included equivalent secular conditions or stimuli. The association between spirituality and well-being has been artificially inflated because of conceptual blurring on assessment measures, leading to the mis-categorization of some nonreligious individuals into the spirituality domain. In sum, a more specified and critical approach is needed in order to validate assumptions that religiosity and spirituality exert unique effects.

Keywords: secular, nonreligious, spirituality, prosociality, well-being

An expansion of the psychology of religion to include a focus on the nonreligious not only provides much needed balance, but also a fresh vantage point from which to view religion and spiritual constructs themselves. Religion and spirituality are distinct from each other in that the former often refers to organizational and doctrinal elements whereas the latter refers to more private or subjective states. However, one view advanced in the literature that subsumes both religion and spirituality (R/S) is that these constructs share transcendent elements and exert unique or *sui generis* influences on psychological outcomes in a manner distinct from secular mechanisms. Proponents of this view refer to R/S-related concepts such as existential values (e.g., ultimate meaning), interventions (e.g., spiritual psychotherapeutic approaches), or techniques and practices (e.g., prayer and religious coping) as being distinct from, or superior to secular mechanisms in their content and impact. Some researchers suggest that attempts to isolate or distill effects attributed to R/S into underlying secular components are “psychologically meaningless” (Saroglou, 2014, p. 18). In regards to the association between religiosity and prosociality, Myers (2012) refers to social support, purpose, and feelings of ultimate acceptance as themselves “components of the religious factor” and that controlling for them would “be like studying the effects of a hurricane while controlling for the wind, rain, and storm surge” (p. 915). Likewise, Pargament, Magyar, and Murray-Swank (2005) state that religion has a unique point of reference (i.e., the sacred). However, an alternative “non-unique” view, presented here, is that R/S concepts are fundamentally reducible to secular processes.

The study of nonreligious individuals has relevance to such theories of R/S uniqueness. If R/S-related beliefs and practices are uniquely associated with well-being and prosociality, then it follows that those whose beliefs and practices lack R/S content (i.e., the nonreligious) must be at a relative disadvantage. In the clinical literature, treatments such as Alcoholics Anonymous or

religious methods of coping have been suggested to produce benefits that cannot be attained through secular alternatives (Pargament, 2002). In the domain of morality, some researchers have suggested that without the framework of religion, “people are often hard put to come up with compelling motivations for good behavior” (Zell & Baumeister, 2013; p. 509). Conversely, physical and mental well-being has been linked to aspects of religiosity such that secularity may be thought of as a “health liability” (Hall, Koenig, & Meador, 2008, p. 370). Likewise, some R/S-related emotional, cognitive, or existential constructs such as awe, collective effervescence, and a sense of ultimate purpose have been suggested as being uniquely produced by certain practices unavailable to the nonreligious.

Theories of R/S uniqueness have been constructed upon literature containing common methodological and interpretive errors. Many research designs are, by themselves, not dispositive in establishing that R/S beliefs are the actual causal mechanisms influencing outcomes. According to scientific principles of reductionism, validation of any given phenomenon as demonstrating uniqueness can only occur after eliminating the possibility that it is not derivative of more fundamental versions of the same construct. This can be stated as an empirically-based issue of incremental validity: What is the evidence that factors attributed to R/S are causally distinct from, or functionally superior to, equivalent secular factors?

Secular effect of social embeddedness and support

Religious belief often co-occurs with communal embeddedness such as group membership and social networking. For instance, in the U.S., the social networks of frequent church attenders are denser relative to non-attenders (Ellison & George, 1994). This represents a confound because well-being and prosociality outcomes are most strongly linked to being “religiously-engaged” or “actively-religious”, which is the combination of religiosity together with group

attendance (Diener et al. 1999). By comparison, religious belief itself, and individual practices (e.g., prayer) are unrelated to mental and physical well-being (Berthold & Ruch 2014; Powell, Shahabi, & Thoresen, 2003). Such findings indicate that the underlying secular mechanism of effect is actually identical for both believers and non-believers. Social engagement, such as attending church (for the religious) or volunteering (for the secular) has been shown to reduce mortality risk compared to either religious or nonreligious individualistic methods (active coping or prayer; McDougale et al., 2016). These findings also indicate that, because it is primarily the social component of religious attendance that accounts for relationships with prosociality and well-being (Hovey et al., 2014; Salsman, et al. 2005), simple comparisons between the religious and the unaffiliated conflate metaphysical beliefs with social embeddedness. Because controls for group and social connectedness indicate that belief in God itself adds little predictive validity for well-being, this has implications for framing nonreligiosity itself as detrimental (Galen & Kloet, 2011a).

Given that the social component of religiosity is more related to prosociality and well-being than the belief component, this raises questions regarding whether benefits are uniquely obtained from specifically religious, as opposed to nonreligious group participation. For example, the greater rate of charitable giving and volunteering found among religious attenders is attributable to factors such as positive social norms and networking, requests for donations, and engaging in structured social activities (Becker & Dhingra 2001; Campbell & Yonish 2003; Merino 2013). One interpretation of this is that even the nonreligious could benefit from religious group membership and practices (Lim & MacGregor 2012; Putnam & Campbell, 2010), although there is some evidence that engagement in religious groups may not have well-being benefits for the unaffiliated (Speed & Fowler, 2017). Another implication is that, although

religious engagement constitutes one possible avenue for these effects, they could also accrue to nonbelievers who “practice nonbelief” by engaging in secular groups, such as humanist, freethought, and Sunday Assembly organizations (Galen & Kloet, 2011a). Accordingly, the benefits of group embeddedness are best obtained by social engagement that matches individuals’ worldviews, whether religious or secular. A related implication is that, since both socially-engaged believers and nonbelievers alike display equivalent outcomes (Shor & Roelfs 2013), any resulting positive outcomes do not constitute effects of R/S.

Effects of clear and committed worldviews

Another factor that characterizes those who are highly religiously-engaged is that they typically have coherent and strongly-held worldviews. As with social embeddedness, this aspect -traditionally related to communal religious engagement - represents a confound when claims are made that the religious belief content is a uniquely causal force. Rather, factors such as commitment to, and clarity of a worldview are distinct from its metaphysical content. This confound has often resulted from basing conclusions on general population samples in which the unaffiliated represent the low end of the belief continuum (i.e., versus highly convicted religious believers). Most unaffiliated individuals and “low intrinsics” are not atheists. The Pew Research Center (2014) found that roughly two-thirds of the 23% of unaffiliated individuals in the United States believe in God. (By comparison, only 4% and 3% of the total population are agnostics and atheists, respectively). This is problematic because resulting comparisons are, in effect, between committed religious believers versus weakly committed believers combined with confident nonbelievers such as atheists. Therefore, religious belief content is confounded with strength of worldview conviction (as well as social engagement, as pointed out above).

When strength of belief itself is separated from religious content (comparing strongly convicted religious believers with strong nonbelievers), there are few differences on measures of well-being or prosociality (Galen & Kloet, 2011b; Moore & Leach 2016). One meta-analysis found that the strength of belief, whether atheistic or religious, moderated the relationship between belief itself and psychological health (Weber et al., 2012). The interpretation of any given study can be greatly influenced by the manner in which individuals are grouped (Figure 1).

Normative fit

A phenomenon similar to strength of worldview conviction is the degree to which individuals' beliefs resemble those of others in the surrounding culture. This is relevant because both religious belief and nonbelief are proxies for social normativeness. The "culture-fit" model posits that the relationship between religiosity and well-being as well as with prosociality varies as a function of the predominant beliefs of the cultural milieu (Stavrova, Fetchenhauer, & Schlösser, 2013). Religiously-involved individuals display, on average, greater well-being than secular people in regions where religiosity is the norm, whereas the opposite is true where secularity is the norm (Diener et al. 2011; Gebauer et al. 2016; Stavrova, 2015). This also applies to more circumscribed contexts such as within families. Adolescents' mental health is contingent upon whether they share the religious views of their parents, not whether those youths are themselves religious or nonreligious (Kugelmass & Garcia, 2016). Thus, well-being is attributable to contextual "matching" rather than the presence or absence of religiosity itself.

Taken together, findings on the secular influences of social support, culture-fit, and conviction indicate that beliefs, whether religious or secular, are associated with mental health if they are confidently held and consensually validated. This is consistent with findings that R/S impacts well-being and prosociality via secular mediators. For example, R/S appears to promote

health through building coping skills, social support, and healthy lifestyles (Ai et al., 2007; George et al. 2002). In a similar manner, the demographic, personality, and cognitive influences that can co-occur with religiosity typically have greater explanatory power relative to belief itself in predicting outcomes. The relationship between religiosity and well-being or prosociality largely disappears when controlling for the effect of demographics such as gender, income, and education (Galen & Kloet 2011a; Galen, Sharp, & McNulty, 2015). This has obvious implications when drawing conclusions about belief as well as nonbelief.

Secular needs, experiences, and practices

Some argue that religious worldviews uniquely provide for epistemic and existential needs such as a sense of control, meaning, purpose, and positive emotional states. By contrast, secular worldviews are said to be incomplete in providing a full understanding of emotions and experiences (Reber 2006). However, there is evidence that nonbelievers are able to satisfy their epistemic and existential needs from sources other than supernatural beliefs or religious rituals. Belief in external deities can provide believers a sense of order and control, but in the same manner, stable socio-political institutions (as evidenced by the culture-fit research) satisfy equivalent needs in the nonreligious (Kay et al, 2010). Terror Management Theory research posits that belief in stable worldviews provides a psychological defense against death anxiety. However, supernatural entities are not the only sources that provide this function (Rutjens et al. 2013; Tracy et al. 2011). When nonreligious individuals are reminded of their mortality, belief is heightened in scientific theories that provide order and predictability (Farias et al. 2013). Just as religious believers may derive existential meaning from the belief that God guides humans' existence, nonbelievers derive equivalent meaning from belief in orderly processes (e.g., evolution by natural selection; Rutjens et al. 2010). Belief in scientific progress is linked with

greater life satisfaction; an effect mediated by a sense of control (Stavrova, Ehlebracht, & Fetchenhauer, 2016). Again, the degree to which concepts successfully satisfy psychological needs is contingent upon whether the content matches with individuals' worldviews.

The key message is that uniqueness arguments must only make comparisons between constructs that are functionally equivalent for religious and nonreligious believers alike. This is not to say that all epistemic and existential functions are identical or emphasize the same sources for believers and nonbelievers. Religion may indeed provide more elaborate and specified content regarding ultimate meaning and purpose (e.g., "what is the meaning of existence?"). The nonreligious tend to report having an objectively lower level of *ultimate* meaning in life compared to R/S believers. However, this difference may not involve the same negative psychological sequelae in nonbelievers as it does for believers; the former can experience a lower sense of meaning without having a "crisis of meaning" (Galek et al., 2015; Schnell & Keenan, 2011). A *general* sense of meaning is not lower in nonbelievers compared to the religious but rather it differs in being generated internally or endogenously, as compared to the religious who derive meaning externally or exogenously (Speed, Coleman, & Langston in press).

In addition to existential and epistemic functions, many rituals and contexts associated with R/S have been suggested to produce unique emotional states such as awe, collective uplift, and flow. Some theories suggest that R/S-related contexts particularly elicit these experiences via the "unique footing" found in features such as the monumental architecture of religious buildings or emotional effervescence of collective worship rituals (Van Cappellen et al., 2016, p. 499). However, as we have seen, when comparisons are equivalent in all aspects except R/S content, the outcomes for believers and nonbelievers are indistinguishable. For example, exposure to secular contexts such as natural grandeur also produces feelings of awe and enhances

prosociality independent of religious belief (Piff et al., 2015; Prade & Saroglou, 2016). Likewise, in one study, the presence of positive emotions and flow were equivalent in those who were engaged in nonspiritual social activities as well as those attending Catholic mass (Rufi et al., 2016). In regards to the elicitation of awe, one study found that reported physical health was improved when Christians were immersed in a cathedral (versus a mosque or museum). By contrast, atheists reported the greatest health while disengaging from this religious setting (Ysseldyk, Haslam, & Morton, 2016). What may be labelled as “spiritual” experiences for the nonreligious tend to be elicited via different sources than for the religious (e.g., nature, science, secular versions of yoga or meditation; see Figure 1), although these may ultimately function via shared common pathway with R/S versions of experiences (Preston & Shin, 2017).

The equivalence between secular and R/S influences can also be observed in studies that elicit positive outcomes via exposure to contexts or stimuli (e.g., semantic priming). Although this literature is frequently referred to as demonstrating effects attributable to R/S, this is typically a result of the use of conditions lacking equivalent secular stimuli. Many studies have found that religious priming can indeed increase prosociality. For instance, Shariff and Norenzayan (2007) used exposure to religious words (“cross”) to increase participants’ generosity and fairness. However, the same outcome was obtained using equivalent secular concepts (e.g., “court”). Other studies utilizing priming of secular authority concepts also find evidence of increased prosociality (Ma-Kellams & Blascovich, 2013). It is apparent that, when properly matched, it is not the specifically religious or spiritual content of concepts that elicits prosociality. Stimuli semantically associated with positivity or rewards (relative to those with a negative valence) have a prosocial impact regardless of religious content (Harrell, 2012; Yilmaz & Bahçekapili, 2016). Likewise, priming social affiliation increases morality regardless of

religiosity (Thomson, 2015). Also, it appears that the effect of religious priming is typically not moderated by the participants' degree of personal belief in God (with the possible exception of complete atheists; Willard, Shariff, & Norenzayan, 2016) suggesting that the effect is dependent upon cultural stereotypes and ideomotor associations rather than exclusively religious content. Therefore, it is not accurate to characterize this body of work as illustrating the "effects of religion and spirituality".

Classification of spiritual versus secular

The difficulties and controversies involved in conceptualizing spirituality are, by now, well-recognized (de Jager Meezenbroek et al., 2012; Koenig, 2008). The problematic aspect of this topic receiving the most attention relates to the implications of not properly distinguishing religiosity from spirituality. For example, because spirituality rather than religiosity is linked to greater mental well-being (e.g., lower neuroticism, greater life satisfaction, and prosocial behavior), those who are "religious and not spiritual" are more likely to have relative deficits compared to "spirituals" (Raney, Cox, & Jones, 2017; Streib & Hood, 2015). However, the association of spirituality and well-being is related to conceptual problems that also have relevance to conclusions regarding the nonreligious. First, scales described as measuring spirituality often include non-transcendent material of the sort that metaphysical naturalists could endorse (e.g., "It is important for me to give something back to my community", "I feel an emotional bond to all humanity"). Second, "spiritual" content frequently also shares variance with well-being outcomes (e.g., positive mental states; Garssen et al. 2016). As a result of this conceptual blurring, metaphysical beliefs (e.g., certainty of belief in God) have been suggested as predicting well-being based upon content that mixes the two domains, artificially inflating such relationships (i.e., criterion contamination).

This also has relevance to empirically-based arguments for religious uniqueness, which make reference to spirituality as adding “special” predictive validity beyond general secular indices. An example of this type of argument is Pargament et al., (2005, pp. 669-670), referring to Emmons et al.’s (1998) findings that the correlations between measures of well-being and “spiritual” strivings were stronger than with other types of strivings. Emmons (1999) defined spiritual strivings as pertaining to the “transcendent realm of experience, most notably those making reference to God or some conception of the Divine...” (p. 89). However, in Emmons et al.’s (1998) empirical study, the researchers coded as spiritual any responses that contained “self–transcendent” striving themes including: “to immerse myself in nature and be part of it” or “to approach life with mystery and awe” (p. 409). Using such criteria, much of the “spiritual” strivings content was actually naturalistic in the sense that could be endorsed by atheists (e.g., strivings to: “be humble”, “remove self-centered thoughts”, and “live life more simply”, p. 403). In a similar example, a study of engagement in group rituals with coordinated movements found an effect on increased prosocial behavior mediated by “sacred” values (Fischer et al., 2013). However, the latter concept included content referring to inviolability or pricelessness rather than a spiritually sacred sense, which (as the authors themselves pointed out) could just as well include secular absolutes such as rationalism, humanism, justice, democracy, truth, scientific method, or beauty. Consequently, this expanded type of spirituality subsumes a wide range of dissimilar metaphysical beliefs.

More relevant to predictive validity, the expansive terminology conflates concepts such as transcendence or sanctity used in the secular sense of “beyond the self” and “cherished”, respectively, with a metaphysical sense of connection to higher powers, making it impossible to determine which is predictive of well-being. In fact, studies statistically separating R/S from

secular content find that the former add little to latter when predicting psycho-social outcomes (Piedmont 2004; Schuurmans-Stekhoven; 2013). Such findings illustrate that the beneficial aspects of what is referred to as “spiritual” are actually attributable to non-transcendent content. Conceptual blurring is also problematic for group comparisons between believers and nonbelievers because it designates nonbelievers who endorse the blended spiritual/ well-being content as representing “nonreligious spirituality” and categorizes the remainder as non-spiritual, lending the impression that nonbelief is associated with lower well-being (see Figure 1).

It is common for many researchers to endorse an expansive definition of spirituality that includes nonreligious individuals, based largely upon respondents’ endorsement of “spiritual” item content. A substantial proportion of those with no belief in God or Higher Powers, report experiencing or engaging in practices contained in most definitions of spirituality. According to the Pew Research Center (2014), of those who do not believe in God, forty-five percent report feeling spiritual peace and well-being, two-thirds report feeling wonder about the universe, and one-quarter report meditating (all refer to a frequency of at least 1-2 times per month or more). However, as mentioned above, most atheists specify the sources of their self-transcendent experiences as being naturalistic (e.g., science, music, art, or cooperation) and they often reject labelling these as “spiritual” in a supernatural sense (Caldwell-Harris et al., 2011; Coleman, Silver, & Holcombe, 2013). The nonreligious not only differ regarding whether the term spiritual should be used to characterize emotionally uplifting experiences, but also whether secular individuals or practices should even strive to provide analogues to such experiences. It is not uncommon for some atheists to disparage engagement in “secular churches” or attempts to mimic R/S experiences. In one survey of the organized nonreligious, only a minority felt that collective rituals increased their sense of community (Cimino & Smith, 2014).

Therapeutic treatment outcome studies

The problems involved with the conceptualization and assessment of spirituality are also relevant to the interpretation of treatment research. Interventions or techniques referred to as R/S do not result in outcomes distinct from secular alternatives, and differ only in regards to their concepts and terminology. One example of this is the categorization of practices such as meditation, yoga, and prayer as being spiritual. Although this description is accurate in regard to historical background and content, there is no evidence that their efficacy or operative mechanisms are distinct from equivalent formulations utilizing solely naturalistic content. For example, the effects of meditation are attributable to components such as relaxation, exposure-based habituation, and de-centering from thoughts. Versions with non-transcendental emphases (e.g., mindfulness and acceptance-based therapy) are equally effective in buffering stress and improving well-being (Vollestad et al. 2012).

Similarly, although the designation of therapeutic prayer as an R/S practice may be historically and conceptually appropriate, it does not follow that resultant outcomes are attributable to the R/S components. The methodological concept of “dismantling” – separating a treatment method into its constituent parts- is useful in these instances because many “spiritual” practices such as prayer combine religious content with secular mechanisms (e.g., self-talk) which provide equivalent coping effectiveness in stressful situations (Belding et al., 2010). Other secular mediating processes such as self-disclosure (present in relationships requiring meaningful communication such as psychotherapy) account for the relationship between prayer and mental health (Black et al. 2015). In accordance with the above-mentioned “matching” principle, any therapeutic practice based on a rationale that accords with the patient’s beliefs and expectations is likely to result in improvement via placebo effects. For example, one study of the use of prayer

for pain reduction found that the effect for believers and nonbelievers alike was attributable to the expectational nature of their beliefs rather than some intrinsic properties of the prayers (Jegindø et al., 2013). Again, when R/S treatments are compared with fully equivalent secular versions (i.e., identical except for the R/S components) there is no evidence of differential outcomes. In one meta-analysis, Worthington, Hook, Davis, and McDaniel (2011) found no evidence that the addition of R/S components to secular psychotherapy led to superior outcomes, even for clients with R/S beliefs.

When differences have been reported between secular interventions and those labelled as R/S, this has almost always been attributable to one of three methodological reasons: 1) absence of a fully comparable secular control condition; 2) the use of outcome measures assessing R/S-related, rather than secular outcomes; and 3) the use of overwhelmingly R/S participant samples. Studies illustrative of the first reason are those that have not been completely “dismantled” in a manner that the secular/ control versions of the intervention are equivalent to the R/S version in all aspects, save R/S. In the above-mentioned study by Jegindø et al., the authors indeed found that the use of prayer resulted in lower pain intensity for religious compared to nonreligious participants. However, whereas the spiritual version of prayer was, appropriately, directed to “God”, the “secular prayer” was directed to “Mr. Hansen”, which is not equivalent in meaning. In another example, Wachholtz & Pargament (2008) compared the use of spiritual meditation mantras such as “God is love” and “God is peace” to “external secular” mantras such as “grass is green” and “cotton is fluffy”. Given the evidence that semantic priming with religious words is dependent upon positive valence and not R/S content, it is questionable that these represent equivalent comparisons. In fact, the use of more comparable spiritual and secular meditation techniques indicates no differences in effectiveness (Feuille & Pargament, 2015).

In regards to the second source of spurious differences between R/S and secular interventions, some studies have shown that outcomes of patients receiving the former differed from the latter, but only on measures reflecting R/S content. In a series of studies comparing a religious version of Cognitive Behavioral Therapy (RCBT) with a secular version (CCBT), Koenig and colleagues examined a number of outcomes and found limited evidence of differential effectiveness. For example, in Koenig et al. (2016) RCBT was indeed more effective than CCBT in increasing daily spiritual experiences (although, again, this particular measure contained the same blended/ non-transcendent content mentioned previously). Somewhat surprisingly, other studies in the same series found that the type of CBT received (i.e., religious versus secular) did not moderate patient outcomes, even on quasi-spiritual variables. Secular and religious CBT were equally effective in decreasing spiritual struggles (Pearce & Koenig 2016), and increasing generosity (Pearce et al., 2015). More to the present point, aside from R/S-related outcome measures, Koenig et al.'s (2015) parent study indicated no moderating effect of treatment method for the main objective outcome: depression severity. Religious and secular CBT were equally effective for religious individuals. This is essentially the same conclusion of Worthington et al.'s (2011) meta-analysis in which equivalent versions of secular and religious therapies yielded indistinguishable outcomes (those not defined as R/S in nature).

The third methodological problem in studies featuring spurious R/S superiority is that conclusions are often based on samples consisting overwhelmingly of R/S believers. This is not necessarily a problem for circumscribed conclusions such as "R/S believers can benefit from, or are more comfortable with, treatments utilizing R/S concepts". However, such comparisons do not constitute evidence that the R/S component is unique or superior in the general sense of being distinct from *secular* effects operative with *secular* participants. The exclusion, either from

participation or analysis, of those who are nonreligious limits the ability to extrapolate regarding the superiority of influences attributed to R/S beyond their relevance to those endorsing merely greater versus lesser levels of religiosity. In the previously-mentioned series of studies by Koenig et al., the exclusion criteria limited participation to those for whom religiosity was at least somewhat important. Although these studies may provide evidence of the differential effect of R/S methods for samples consisting of R/S believers, this evidence is not dispositive regarding whether or not R/S practices themselves are unique compared to secular versions.

Other examples of this practice includes Pargament et al. (2005), which argues that religious coping measures predict health and well-being above and beyond the effects of other explanatory variables, as exemplified by empirical studies such as Mickley, Pargament, Brant, and Hipp (1998). The latter study found that religious appraisals (e.g., redefining the dying process as a benevolent act from God) were predictive of meaning in life and greater well-being relative to general nonreligious appraisals (e.g., redefining the dying process as a growth opportunity). However, only 2.2% of the sample lacked a religious preference and 89% rated themselves as being moderately to very religious. In effect, this study was equipped to assess the efficacy of religious versus nonreligious appraisals *among the religious*, but not to assess the relative superiority of religious versus secular appraisals in general. Likewise, Pargament et al., (2005), in reference to Tix and Frazier (1998), argued that the inclusion of R/S contributed something “special” (p. 676). The latter study found that religious coping predicted life satisfaction above and beyond secular methods. However, Tix and Frazier themselves stated that, given samples consisting of less than 9% with no religious preference, “the generalizability of our findings may be limited to religious individuals coping with stressful circumstances” (p. 420). If researchers make a claim of superiority for R/S relative to secular methods based upon

such findings, this is accurate only in the sense of “superior among R/S participants”, a more circumscribed assertion than claims of superiority to secular methods or of unique efficacy in general. Basing the latter type of claim on exclusively religious samples is tantamount to arguing that, say, Christian prayer is superior to shamanic chanting based on a sample that is 90% Christian with no separate analysis by religious identity. Studies purporting to demonstrate generalized superiority of R/S forms of therapy must include non R/S participants in sufficient numbers to allow treatment by identity comparisons. Researchers could assign religious and non- (not low) religious patients to either R/S or secular treatments. Only this would indicate whether or not R/S interventions used with R/S participants are superior to secular interventions used with secular participants.

One set of diagnoses and associated therapy practices notable for the putative involvement of R/S factors are the substance use disorders and twelve-step treatment methods (e.g., Alcoholics Anonymous or AA). Spiritual concepts (e.g., a Higher Power) are suggested to play not only an etiological role (e.g., references to “psycho-social-spiritual” disorders) but also a role in the mechanisms of therapeutic change. As such, it is perhaps not surprising that the same confounding factors complicating other R/S research also affect the interpretations of outcome studies of addiction and the extension of their relevance to nonreligious individuals. Despite the centrality of spiritual concepts to the method, studies separating the effects of spiritual belief from secular features such as group engagement and social support find that the former play the primary role in actual drinking reduction (Kelly et al., 2012; Tonigan, Miller, & Shermer, 2002). In a recent review featuring simultaneous comparisons of secular and spiritual mediators, Kelly (2017) concluded that spirituality itself is of negligible importance in AA outcomes relative to mechanisms such as social support and self-efficacy. Aside from patients’ involvement in AA

itself, R/S concepts are often suggested to play a role in the etiology and recovery from substance abuse. In one study, Robinson et al., (2011), identified “spiritual” factors predictive of future drinking. But these represented a mixture of transcendent (e.g., private practices, spiritual experiences) and non-transcendent (forgiveness of self, purpose in life) content, making it difficult to ascertain the relevance to nonreligious individuals due to the conceptual blurring problem. This study found that increased belief in God and religious practices were not predictive of future drinking. In terms of specific relevance to the nonreligious, atheists and agnostics appear to derive equivalent benefits from “spiritual” AA types of treatment as R/S believers, however they may be put off by the emphasis on spiritual principles of the program, as evidenced by less frequent attendance and greater drop-out rate (Kelly et al., 2006). Overall, belief in God appears to be relatively unimportant to the ability to derive benefit from AA (Tonigan, Miller, & Schermer, 2002).

A summary of treatment outcome research with a focus on nonreligious individuals indicates that there are no differences in actual clinical outcomes between secular interventions and those with R/S components. Factors such as the greater familiarity or willingness of believers to engage in R/S treatments may be important in terms of enhancing the appeal of such methods to believers, but this does not indicate that the efficacious mechanisms of effect are spiritual in nature. The most parsimonious explanation is that the therapeutic mechanisms are substantively secular. One broad implication of this disjunction between putative content and established mechanism of effect is that the aspects of R/S-related practices most salient to practitioners and believers alike are irrelevant to the actual efficacy of interventions.

Implications of introspective reports on R/S content

This review of literature emphasizing the nonreligious perspective concludes by raising broader questions regarding the phenomenology and epistemology of R/S itself. We have seen that research is often reliant upon R/S believers' self-reported interactions with spiritual agents, connection with the divine via prayer, perceptions of assistance from higher powers, and the like. This introspective content is typically taken as dispositive regarding the presence of effects attributed to R/S. Essentially, this type of argument can be summarized as: "individuals are known to be influenced by R/S effects because they report that they are". Indeed, one criticism of the psychology of religion field is that its emphasis on scientific reductionism has historically excluded such reports of "the divine" and is "not really studying religion as many religious people experience it" (Reber, 2006, p. 200). However, given the absence of objective differences in outcomes definitively linked to R/S beliefs, questions should be raised regarding whether reports of R/S content constitute reliable evidence of operative mechanisms.

Consider a hypothetical treatment study consisting of several components. Obviously, any assertion that one particular component has a unique effect compared to another must be based on a method that allows for separate assessment of each. Dismantling methods have revealed that many components commonly believed to be efficacious only appear so due to confounds such as nonspecific effects or spontaneous remission. For example, a substantial portion of the improvement of patients receiving anti-depressant medication is attributable to factors other than the medication itself such as the placebo effect (Khan & Brown, 2015). This is analogous to a similar debate pertaining to treatments for Post-Traumatic Stress Disorder. Eye Movement Desensitization and Reprocessing (EMDR) therapy is based on the theory that a reduction in anxiety is optimized by clients' visually tracking objects while recalling traumatic memories. However, the elaborate explanatory framework attempting to justify this explanation

is vitiated by a failure to consistently demonstrate that eye movements improve efficacy beyond the (more parsimonious) simple exposure component contained within EMDR (Powers et al. 2010), indicating that eye movements are superfluous.

Would this conclusion, absent any measurable outcome differences, require alteration if participants themselves believed in the unique efficacy of one treatment component? Parsimony would dictate that such self-reports are irrelevant to the actual mechanism of effect, which can only be determined by the group comparison. Even if a given individual: a) engages in a practice, b) experiences an improvement, and c) attributes the change to the content of the practice, these factors are still insufficient to validate that the practice itself was causally efficacious (as with patient testimony regarding pseudoscientific “alternative” treatments). Rather, in order to conclude that a specific component of an intervention is efficacious *for the reasons specified by the theory*, there must be evidence of incremental predictive variance relative to an equivalent alternative. Introspectively-based reports of participants coupled with positive mental health or prosocial outcomes (e.g., “religion helped me cope” or “my generosity is attributable to spiritual guidance”) are not themselves dispositive of the existence of R/S effects.

Why would R/S-related factors be presumed to exert a uniquely salubrious influence on well-being or prosocial effect if this were not actually the case? Why are beneficial outcomes not correctly attributed to underlying secular influences? One cause of these misattributions stems from stereotypic effects. Because R/S constitutes a meta-physical worldview that has historically included ethical and therapeutic content, believers naturally assume that their beliefs and behavior must be affected and motivated by this content. This can be seen in claims of greater prosociality on the part of the religious (Galen, 2012) as well as their moral mistrust of nonbelievers (Gervais, Shariff, & Norenzayan, 2011). However, such self-reports must be

interpreted in light of findings that R/S belief is accompanied by higher levels of self-enhancement and overclaiming in areas related to morality (Gebauer, Sedikides, & Schrade, 2017). As a result, many beliefs regarding R/S and prosociality/ well-being are influenced by social desirability. For example, Jones and Elliot (2017) identified a contrast between reports of intrinsic religiosity and spiritual experiences made under bogus pipeline conditions compared to normal conditions. Conversely, negative religious coping (e.g., “I feel God has abandoned me”) was under-reported due to social desirability. Taken together with the previously-mentioned disjunction between presumed versus actual influences, such results reveal a congruence fallacy in which beneficial outcomes are misattributed to R/S beliefs.

Clearly, one risk of mistaken associations and conceptual blending of R/S with well-being/ prosociality is particularly relevant to the nonreligious: the perpetuation of the stereotype (endorsed by many nonreligious themselves) that the absence of R/S has deleterious consequences. This may result in self-stereotyping or a self-fulfilling prophecy in that the nonreligious may be discouraged from prosocial engagement as a result of stereotype threat. The view that religion has uniquely prosocial effects can imply a deficit remediation model in which the nonreligious are advised to “get religious” or join a church— as some have recommended (Tierney, 2008; Putnam & Campbell, 2010). By contrast, a more supported recommendation is that atheists should have meaningful social engagement with others holding similar worldviews.

The presence of stereotypic biases and self-enhancement effects can also impair introspective accuracy in distinguishing when one is experiencing an R/S versus a secular influence. At first glance, any bias regarding the origin of associations between R/S and well-being may appear unproblematic for believers, even if it represents a misattribution. However, the belief that one’s well-being or prosociality is enhanced by R/S belief can perpetuate

disjunctions between belief and behavior (Galen, 2012). For instance, moral licensing research indicates that perceptions that one has accrued moral capital can result in greater immoral behavior in a compensatory “backfire” (Merritt, Effron, & Monin, 2010). More relevant to therapeutic engagement, R/S believers may be unable to distinguish between the truly beneficial mechanisms of their treatment and inert or even iatrogenic components.

Categorizing the efficacious component of an intervention as R/S rather than secular can affect individuals’ expectations and experiences. Because R/S believers endorse an epistemology in which valid knowledge about the world is thought to be accessible via subjective spiritual experiences, religious treatment methods such as prayer are held to a lower standard of evidence than secular-based methods (McPhetres & Zuckerman, 2017). In general, whenever competing “alternative treatments” are used in conjunction with known efficacious components, patients’ ability to correctly attribute causality is reduced, which can lead to noncompliance with the components constituting the actual mechanisms of effect (Matute et al., 2015).

Conclusions

An examination of the putative effects of religion and spirituality can yield divergent implications as a function of how nonreligious individuals and secular viewpoints are incorporated into the process. In the introduction, the question was raised regarding whether opposing religion’s causal role with that of secular mechanisms is even psychologically meaningful (Saroglou, 2014). Based upon the above-mentioned evidence, this can be answered affirmatively for several reasons. When secular mechanisms are identified as causally-influential, with R/S components adding little unique variance, this can lead to quite different interpretations than if the opposite occurred. One way to illustrate this is to view claims of the uniqueness of R/S as forming an ordering in terms of expansiveness. As levels increase, there is an

enhancement of the putative role of R/S processes vis a vis secular ones. Studies on religion and spirituality have characterized the contrast with secular alternatives as...:

- 1) Parallel: An emphasis on R/S versions of existing secular concepts (religious CBT, positive religious coping).
- 2) Parochial: An exclusive focus on how an R/S version operates among R/S believers (e.g., studying prayer use only among the devout).
- 3) Unique: Viewing R/S concepts as existing or functioning differently for R/S believers (e.g., religious worldviews provide more meaning and purpose for believers compared to their other secular worldviews).
- 4) Indirectly causal: The R/S component influences outcomes indirectly via secular mediators (e.g., church boosts social support).
- 5) Directly causal: The R/S beliefs themselves are responsible for differences between believers and nonbelievers (e.g., religious teachings motivate believers' generosity).
- 6) Superior: The R/S component is more effective than the secular version; unique content is not accessible to the nonreligious.

As we have seen, findings that are supported at a "lower" level have often been extrapolated to higher levels. For example, if religious concepts are more effective than secular ones for believers but the reverse is true for nonbelievers (the secular one is more effective for the nonreligious), this does not constitute evidence of R/S uniqueness or superiority. Rather, it reflects a (more modest) matching principle that outcomes are optimal if the therapeutic rationale matches the clients' worldviews. This is compatible with the more limited claim that R/S processes can function for believers in an equivalent way to secular processes. Examples of the latter include findings that aspects of religion can be associated with prosociality or that a

spiritual version of an intervention works equivalently to a secular version for R/S believers. However, to imply that “religion increases prosociality” or “spiritual therapies are effective” shifts the focus onto the uniqueness of R/S factors beyond more parsimonious secular ones.

A similar response could be given to the question posed as “Is it psychologically meaningful to compare secular with R/S treatment methods”. The purpose of creating dismantled conditions in clinical research is not only to address questions such as “can a religious version of a therapy be useful for religious clientele?” but also “is the phenomenon or technique efficacious above and beyond any secular equivalent?” The first therapeutic outcome studies conducted over a half-century ago raised similar questions regarding whether lengthy and expensive forms of psycho-dynamic therapies were justified by outcomes beyond those obtained by cognitive-behavioral methods.

Outside the domain of clinical psychology, some areas of research such as the Cognitive Sciences of Religion (CSR) have debated the origin and effect of R/S concepts produced by the evolved human mind. For example, the supernatural monitoring (Johnson, 2016) and Big Gods (Norenzayan, 2013) theories posit that concepts associated with the perception of being watched by morally-concerned supernatural agents played a role in promoting the emergence of prosocial societal norms. An alternative interpretation, however, would be that secular concepts based upon social monitoring intuitions produce equivalent effects (as demonstrated by the above-mentioned priming results). This distinction shifts the phenomenon of interest from specifically religious mechanisms to a view that religious mechanisms are one variant of a broader underlying set of intuitions based on social mechanisms. Finally, such distinctions in emphases are meaningful to the nonreligious themselves, who may resist attempts to frame what they view as naturalistic phenomena as being derivative of unique R/S effects.

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Figure 1: Conceptual overlap in broadly-defined spirituality affects comparisons between religious and nonreligious individuals