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REVIEW ARTICLE

# Spirituality and Meditative Practice: Research Opportunities and Challenges

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**Abstract** Meditative practices have a long history in India and have influenced contemporary meditative programs elsewhere in the world. Over the last several decades, the use of meditation as a therapeutic tool has been investigated in regard to physical, emotional and behavioral effects with impressive results. In parallel to this has been a growing interest in research on spirituality, spiritual growth, and therapeutic modalities that incorporate the spiritual dimension of the person. Ironically, very little research has explored the interface between these two constructs, despite how closely linked they are traditionally. This paper addresses the range of ways in which spirituality and spiritual development might be fruitfully investigated in the context of meditative practice, bringing further understanding to both psychological constructs. Furthermore, the widely recognized significance of both meditative and spiritual experiences suggests that cross-cultural research may be particularly valuable at identifying factors that engage the universal human capacity of spirituality, and the particular potential for meditative practice in doing so.

**Keywords** Spirituality · Meditation · Mindfulness · Compassion · Cross-Cultural

Much of the interest in meditation practice in the West can be traced back to the influence of Indian culture coming through Europe and then into the USA dating back to the 1800s (Goldberg, 2010). Meditation has a rich, extensive history within Indian Yogic traditions, with many variations, and links to Hindu and Buddhist belief systems (Kristeller & Rikhye, 2008; Rao & Paranjpe, 2016). Although Western meditative or contemplative practices exist, particularly within the Catholic faith (Merton, 1969) and in the Protestant Quaker tradition (Huber, 2001), they are generally limited to use within those religious contexts.

Use of meditation as an explicitly therapeutic tool began to develop in the USA in the 1960s, with the introduction of Transcendental Meditation (TM) by the Maharishi Mahesh Yogi (1968). TM then informed Herbert Benson's development of the "relaxation response" program at Harvard University Medical School, the first wholly secular application of meditation to a range of health issues (Benson, 1975). Since then, interest has continued to grow with the introduction of a number of meditation-based approaches in the late 1970s and 1980s, led by a rapidly growing interest in mindfulness meditation (Kabat-Zinn, 1990), other Buddhist-based practices, including Tibetan (Goldstein, 2002), and other Hindu-based approaches, such as Easwaren's Eight-Point program (see Oman & Bormann, in review).

Somewhat in parallel, spirituality and spiritual growth are becoming increasingly viewed as valid psychological constructs, and an increasing range of therapeutic approaches are explicitly engaging the spiritual dimension and measuring spirituality as an outcome variable (Miller & Thoresen, 2003). This confluence leads us back to reconsidering how spiritual growth and spiritual well-being may be inherent to appreciating the full value of meditation practice (Bond et al., 2009; Kristeller, 2007). Indeed, as will be discussed below, many of the varied effects of meditative practice, such as emotional equanimity,

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heightened compassion, and engaging in "right action," overlap substantially with what is considered religious or spiritual engagement. Furthermore, engaging spiritual growth may contribute to other types of treatment goals.

While the value of spiritual engagement as part of the therapeutic use of meditation has been addressed for some time (Marlatt & Kristeller, 1999; Rubin, 1996), and is well recognized within Indian psychology (Rao & Paranjpe, 2016), relatively little research has focused on the spiritual effects of meditative practice, certainly in comparison with the thousands of studies that have now addressed the effects of meditation on emotional and physical well-being. This paper will explore ways in which the spiritual effects of meditation may occur, either independently or in interaction with other effects of practice. The intent is also to encourage further research, especially within cross-cultural contexts, that may shed light not only on the processes of spiritual experience, but how this may also lead to a deeper understanding of the value of meditation practice in optimizing human growth and functioning (see Oman & Singh, 2016).

## Meditation and Spiritual Experience

Before exploring such questions, it may be helpful to more fully consider the meditative process from a psychological perspective. For example, an important empirical question is how spiritual experience may differ by type of meditative practice, and whether this perhaps varies by cultural context. As the breadth of contemplative and meditative traditions becomes better understood, there is increasing recognition of underlying similarities in process and experience between Buddhist and Hindu traditions, the most often studied, and practices associated with other world religions, such as Jewish Hasidic prayers, Sufi mystical traditions, and Christian contemplative prayer (Goleman, 1988; Kristeller, 2007).

Common elements across traditions include focusing attention, engaging a non-judgmental rather than analytic thought process, and the use of repetition (Bond et al., 2009), with a core intention of increasing ability to disengage from habitual reactive patterns of grasping and avoiding. Meditative traditions are often divided into concentrative and mindfulness practices. In the former, the focus of attention is on a particular object, such as a word, brief phrase or prayer, or mantra that is repeated over and over. The word "mantra" or "mantram" refers to a sound or word that often manifests spiritual meaning, but may also be more neutral. In true concentrative practice, the goal is to maintain focus as much as possible on this object with the intention to cultivate greater capacity for stability of awareness (Lutz et al., 2007), both within practice and at other times during the day, thereby decreasing habitual reactivity.

In mindfulness practices, attention is kept more open, either attending to a non-cognitive focus, such as the breath, or as part of open awareness practice, attending to whatever comes into the field of awareness. The quality of awareness is non-judgmental and entails simply observing with curiosity, rather than analytically or reactively. Because the breath is non-cognitive, disengaging from usual thought processes may be somewhat more challenging than with use of a mantra or repeated phrase/brief prayer, but substantive effects have been shown, even for novice practitioners.

The third type of practice, guided or self-directed meditation, has become a major component of meditation-based therapy programs in the USA and is particularly pertinent to spiritual engagement when it introduces an explicitly spiritual focus, such as extended chants, use of mandalas as in Tibetan tantric practices, Zen *koans*, or brief prayers. These can either be guided by others or self-directed; the distinction is that a focus is introduced within the practice, intended to have substantive meaning, while retaining non-judgmental awareness. A well-known guided practice in the Vipassana tradition is loving-kindness meditation, evoking feelings of compassion (Nhat Hanh, 1975). Passage meditation, one of eight parts of Easwaren's multifaceted program (1991), drawn from Hinduism, focuses on repeating spiritual passages to oneself, which has been shown to have valuable therapeutic effects (Oman, Hedberg, & Thoresen, 2006). Incorporating spiritual content almost certainly heightens spiritual experience as a function of meditation practice. Surprisingly, however, virtually no research directly compares the psychological or therapeutic effects of different meditation techniques, whether broadly or in regard to spiritual experience.

Although meditation traditions may draw primarily on one type of practice (concentrative, mindfulness, or guided/self-directed), elements of all three may exist, either explicitly or implicitly. For example, TM is a mantra meditation that emphasizes a more relaxed awareness of inner quiet, rather than the effortful focus characteristic of some other concentrative traditions, with the primary intent to promote self-growth, transformation, and transcendent spiritual experience (Mahesh Yogi, 1968). The meditation-based treatment programs that draw on Kabat-Zinn's Mindfulness-Based Stress Reduction (MBSR) (1990), including Mindfulness-Based Cognitive Therapy (MBCT) for depression (Segal & Williams, 2013), and Mindfulness-Based Eating Awareness Training (MB-EAT) for overeating (Kristeller, Baer, & Quillian-Wolever, 2006), use mindfulness training as the core but incorporate multiple guided/self-directed practices within them more specific to the target issue, such as depressive thoughts, triggers for overeating, or the experience of hunger. MBSR integrates Buddhist Vipassana meditation and yogic/body-

based practices, now investigated in hundreds of studies addressing medical and psychological issues, including chronic pain, anxiety, cancer, obesity, and depression. Another recently developed integrative approach, Spiritual Self-Schema (3-S+) therapy for the treatment of addiction, blends mindfulness, concentrative meditation practice, and cognitive behavioral therapy (Margolin et al., 2007). While explicitly drawing on Buddhist teachings, it is further tailored to each person's spiritual and religious beliefs. These approaches are clearly multifaceted and also present the challenge of separating out spiritual effects from the effects of other meditative and therapeutic components.

A notable advance in research on meditation is the development of measures to evaluate direct effects of practice (Baer, 2011). One widely used instrument, the Five Facet Mindfulness Questionnaire (FFMQ) (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), was developed by integrating items across several other measures of mindfulness and meditation; five dimensions of meditation effects (observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience) were identified. The FFMQ can be used both with non-meditators and experienced practitioners (Baer, Lykins, & Peters, 2012; Carmody & Baer, 2009; Kristeller & Wolever, 2011). Another measure, the Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003), with a single factor (also part of the FFMQ), has also been used extensively, including across varied populations (Deng et al., 2012). The research on meditation practice has been growing increasingly sophisticated in working with a range of questions (Davidson & Kaszniak, 2015), including increasing use of neuroimaging (Lutz, Jha, Dunne, & Saron, 2015).

## Understanding Spirituality: Identifying the Underlying Constructs

*Spirituality* is often defined in contrast to *religion*, with spirituality entailing more inner and personal experience, and religion entailing the organized and culturally specific expression of faith traditions, including aspects of worship, concepts of higher beings, ethical codes, and structure of religious organizations. Both are recognized to have a wide range of viable definitions (Oman, 2013). Further, as a category of human functioning, *spirituality* can be considered a higher order construct, similar to *emotion* or *thought*, requiring operational identification of how it is being used and measured for a given purpose.

To elaborate on the range of meanings, spirituality has been characterized as the search for existential meaning but more subjectively and personally compared to religion. It is still often oriented toward a sacred object or experience,

but this need not be a divine being. Indeed, there is increasing recognition that spirituality and religion, while overlapping in meaning, can by quite distinct, in that individuals who do not believe in divine beings may fully engage in spiritual experiences. In the USA, while the majority of individuals identify themselves as both religious and spiritual, a growing percentage (about 8%) identify as being spiritual but not religious, valuing spiritual experience without identifying with any religious organization (Pew Forum, 2012). Spirituality has also been identified with accessing feelings of inner meaning and peace (Peterman, Fitchett, Brady, Hernandez, & Cella, 2002), and suspension of self-concern, heightening compassion and an engaged altruism (Kristeller & Johnson, 2005; Neff, 2012). In traditional religious terms, this may be referred to as the "soul" in Western religious/philosophical traditions, or in Indian terms, *ātman,* the spiritual self (Rao & Paranjpe, 2016).

There continues to be considerable debate on how to define spirituality separately and in relation to religion. This debate, however, often takes on a Western bias because "spirituality" and "religion" may be considered Western terms and concepts (Oman, 2013). While definitions of religion and spirituality can seem elusive, it is the authors' contention that the factors that promote spiritual experience are worthy of deeper investigation, and meditation may offer a powerful, and underutilized, avenue for improving the conceptual clarity of spirituality.

Spirituality, as a complex individual capacity, most likely has multiple dimensions including a sense of contentment engaged through prayer and meditation, unity and purpose in life, and connectedness with the past, present, and future (Piedmont, Werdel, & Fernando, 2009). Adding to these perspectives is the transcendence of self ("no-self") and experiencing mystical and/or peak experiences. The range of these various ways of characterizing spirituality is striking, and this range suggests that meditation might have distinct relationships with the different components of spirituality.

Individual differences in religiousness and spirituality (R/S) are assessed through a variety of self-report measures. The earliest widely used measure was the Religious Orientation Scale (ROS) which distinguished between intrinsic (spiritual) and extrinsic religious motivations (Allport & Ross, 1967). The Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-Sp) subscale assesses two factors, Meaning/Peace and Faith, developed through state-of-the-art qualitative and quantitative research with individuals from a range of faith backgrounds (Peterman et al., 2002). The FACIT-Sp has most commonly been used in health contexts, and recent studies have demonstrated its usefulness in Arabic, Japanese, and Indian individuals (Ando et al., 2009; Kandasamy, Chaturvedi, & Desai, 2011; Lazenby, Khatib, Al-Khair, & Neamat, 2013).

The Brief Multidimensional Measure of Religiousness/Spirituality is a broad measure of the R/S construct; recent factor analysis identified seven factors (Masters et al., 2009). Three of these include spiritual content: Experiential Comforting Faith (e.g., "spiritually touched by creation"), Personal Spirituality (e.g., "deep peace or harmony"), and Private Religious Practices (e.g., "how often meditate"). The Spiritual Transcendence Scale and the related Assessment of Spirituality and Religious Sentiments scale (Piedmont et al., 2009) were constructed under the assumption that spirituality is a universal human capacity, and questionnaire items were developed by a diverse group of religious and/or spiritual practitioners.

## Meditation, Mindfulness, and Spirituality: Mediating Growth

Spirituality has increasingly been examined as an important individual difference variable that predicts a variety of outcomes (McCullough, Friedman, Enders, & Martin, 2009). A related research question is whether spiritually attuned individuals are more drawn to undertaking meditative practice or would be more likely to continue with practice. Spirituality has also been examined, though to a lesser degree, as a dependent variable, particularly important to assess within longitudinal studies of meditation practice. What follows is a summary of the nascent empirical literature on the relationship between meditation practice and aspects of spirituality. Table 1 summarizes research questions to be explored further, with a particular focus on considering the cultural context of these processes.

## Spirituality as a Sense of Inner Peace and Higher Meaning

As described above in regard to the various meanings of spirituality, a sense of tranquility is common when a person engages in practices such as meditation. The Meaning and Peace factor of the FACIT-Sp (Peterman et al., 2002) captures this aspect of spirituality. The sense of inner peace has been shown to vary independently from mood and depression (Bekelman et al., 2010). Framed as a search for meaning, spirituality may influence how a person perceives, appraises events, copes with events, and makes meaning out of them (Park, 2007). Therefore, the FACIT-Sp is a frequently used measure, particularly in research exploring how people cope with serious medical illness, such as cancer and HIV. Using Kabat-Zinn's MBSR program in a cancer population, Carlson, Speca, Faris, and Patel (2007) observed significant improvements in spiritual well-being (Mackenzie, Carlson, Munoz, & Speca, 2007). An increased sense of meaning and peace helped to explain improvements in physical health and well-being in participants going through Kabat-Zinn's MBSR program (Carmody, Reed, Kristeller, & Merriam, 2008). Participants with significant problems with compulsive overeating and obesity, many of whom were also clinically depressed, showed increases in meaning and peace while enrolled in the MB-EAT program (Kristeller & Wolever, 2011; Kristeller, Wolever, & Sheets, 2014), along with improvement on other aspects of eating and emotion regulation. Further, improvement on the FACIT-Sp was also related to improvement on several mindfulness sub-scales of the FFMQ (Kristeller & Jordan, 2015).

Bormann et al. (2006) examined the effect of a mantram-based spiritual intervention in ninety-three HIV+ men and women. The chosen mantram was frequently repeated in the back of the mind throughout the day. Significant improvement was observed in Spiritual Faith, the second factor of the FACIT-Sp, which taps into religiousness. After 10 weeks, the participants also reported greater meaning/peace, and overall quality of life. The intervention may have promoted a disengagement from typical reactions to stress, along with cultivation of multiple aspects of spiritual engagement. Also see Oman & Bormann (in press).

**Table 1** Potential research questions regarding the role of meditation practice in cultivating spiritual experience

| Research Questions on Meditation and Spirituality |
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| 1. Does spiritual experience differs by type of meditation practice (concentrative, mindfulness, or directed/guided)? |
| 2. Does spiritual experience differ by the type and content of guided spiritual practice? Is this affected by whether the guided practice occurs within a meditative experience? |
| 3. How much are these affected by cultural context? In what way? |
| 4. What is the validity of measures of meditation experience/mindfulness in different cultural contexts? Is this affected by level of practice? |
| 5. Increasing capacity to engage from habitual reactivity is a hallmark of the therapeutic value of meditative practices. How might cultivation of spiritual experience interface with or mediate this effect of meditative practice? |
| 6. What are the different cultural understandings of attachment and non-attachment? How might these different cultural understandings influence the relationship between meditation and spirituality? |
| 7. Clearly, meditation and spirituality have intrapersonal effects. But are there recurring patterns of social behavior (i.e., interpersonal effects) that are related to meditation and spirituality? And do these recurring patterns of social behavior vary across culture? |

Grabbe, Nguy, and Higgins (2012) conceptualized spirituality as a source of resilience and found that mindfulness meditation led to increases in spirituality in a sample of homeless youth as measured by the FACIT-Sp. They also found that mindfulness meditation led to improvements in psychological symptoms. Homeless youth face many chronic stressors, and building up a source of resilience such as spirituality may help reduce reactivity to recurring stressors. Some notable work has integrated meditation practice into Indian prison systems using Goenka's Vipassana-based program, showing effects in regard to well-being and sense of purpose (Kishore, Verma, & Dhar, 1996), and in the USA, showing decreases in addictive behavior post-release (Bowen et al., 2006). Other meditative approaches, including TM and MBSR, have also demonstrated valuable effects within prison environments in the USA (Himelstein, 2011).

## Spirituality as Love and Compassion

Most of the world's religions promote the virtues of forgiveness, compassion, and gratitude, and there is a developing literature on compassion and its health effects (Steffen & Masters, 2005). Some forms of meditation explicitly cultivate aspects of compassion (Neff & Germer, 2013), and given the association between meditation and beneficial physiological responses in cancer patients (Carlson et al., 2007), one might expect compassion-oriented meditation to have beneficial outcomes in the general population (Pace et al., 2009). Mindfulness practices cultivate the capacity to suspend critical judgment of either oneself or others. It may be that this ability is a necessary, if not sufficient, element in cultivating a sense of altruistic love and compassion for others (Kristeller & Johnson, 2005).

As aspects of spirituality, the cultivation of love, compassion, and acceptance can be emphasized in guided meditation, and this has been shown to be effective within mindfulness-based treatments for couples and families (Carson, Carson, Gil, & Baucom, 2004). The use of meditation to increase compassion and reduce self-criticism has been demonstrated in several recent studies (Baer et al., 2012; Kozasa et al., 2015; Shahar et al., 2015; Oman, 2015).

Someone who regularly engages in compassion-oriented meditation may also create a warmer social environment around themselves. Recent research also demonstrates less prejudice in individuals who practice compassion-based meditation (Hunsinger, Livingston, & Isbell, 2014). As someone directs loving-kindness inward and outward (Nhat Hanh, 2007), more beneficial social interactions are likely.

The mirror opposite of compassion for oneself or others is anger or negative self-judgment. Substantial evidence is accruing that spiritual distress or negative religious coping, measured by the Negative RCOPE Scale (Pargament,

Koenig, & Perez, 2000), is a distinct aspect of religious belief and experience (Johnson, Sheets, & Kristeller, 2008) that is particularly toxic in terms of both physical health and psychological adjustment. Recent research has shown that these maladaptive forms of spirituality are associated with hostile interpersonal styles and adverse outcomes such as lower social support (Jordan, Masters, Hooker, Ruiz, & Smith, 2014), and the effects of meditation on this measure might be valuable to investigate.

## Spirituality in Relation to Self

The Buddhist tradition of mindfulness and meditation has been a significant impetus behind the development of mindfulness meditation practices in the USA. Transcendence of self, or no-self, is a cornerstone of Buddhism, and this core element of spirituality has the potential to reduce *dukkha*, or distress. While the concept of self within Hinduism is described differently, Rao and Paranjpe (2016) make the argument that from a psychological perspective the concept of self is similar between Buddhism and Hinduism.

Disrupting the usual course of critical or judgmental self-observation can lead to a more accepting attitudes and has been applied in the MB-EAT program (Kristeller & Wolever, 2011). Kristeller and associates found that compulsive overeaters were able to recognize this principle of no-self in regard to habits, feelings, or, in particular, thoughts. The conceptual understanding that "I am not my thoughts" is very liberating for participants, providing them with the opportunity to disengage from habitual reactive behavior, and to de-identify with these habitual patterns. This liberation provides a conduit for the actual experience of no-self.

While the measurement of the experience of no-self is fraught with conceptual challenges, a recent measure has been developed to assess a related concept—non-attachment—and there is a literature developing on its usefulness as an important individual difference variable (Sahdra, Shaver, & Brown, 2010). Parallel to the different understandings of the sacred and the secular described below, the different cultural understandings of attachment and non-attachment will be a challenge to address within international collaboration.

## From a Sense of the Sacred to Peak and Mystical Experience

Hill and Pargament (2003) identify a sense of the sacred as a core component of spirituality. This sense of the sacred is related to the process of sanctification in which the "mundane" can be transformed into the extraordinary. The sense of the sacred might be cultivated through meditation

and other religious observances such as pilgrimages. Temples, ashrams, and other religious sites provide a portal to the sacred, and significant benefit in terms of well-being has been reported in individuals visiting these holy places (Raguram, Venkateswaran, Ramakrishna, & Weiss, 2002).

Similar to the sense of the sacred is the notion of transcendence and a higher order to reality. This conceptualization of a higher order to reality can be linked to a divine being when congruent with a person's belief system. Wachholtz and Pargament (2008) found that incorporating a brief spiritual phrase as a meditative focus significantly decreased the frequency of migraine headaches and increased pain tolerance more than did secular variations.

In regard to the interface between meditation and this component of spirituality, two separate studies found that the MBSR program increased participants' sense of engagement and closeness with their sense of a higher power or God (Astin, 1997; Shapiro, Schwartz, & Bonner, 1998). The desire to connect to a transcendent God might be intimately related to the concept of no-self described above. As the usual sense of self is suspended, one's experience and connection with God is likely to be deepened.

Though relatively unusual, mystical and/or peak experiences are generally associated with religious experience, and frequently with contemplation, meditation, and intense periods of prayer. Qualities of mystical and/or peak experiences include non-judgmental absorption, reduced inner conflict, awe, detachment from self and world, all-embracing love, and sacred connection with all aspects of the world. Meditation has neurobiological correlates that may heighten mystical experiences (Lazar, 2013; Newburg, D'Aquili, & Rause, 2002). Recent research suggests that meditation may be more strongly associated with mystical experiences compared to either yoga or prayer (de Castro, 2015), possibly because the more sustained change in one's usual sensory experiences sets the stage for the cultivation of mystical experiences.

Similar to the concept of no-self, this aspect of spirituality is difficult to measure, but there are a variety of questionnaires well-suited to address unusual spiritual experiences including the Mysticism Scale (Hood et al., 2001). A new measure—the Effects of Meditation Scale—is another assessment tool that demonstrates an association between meditation practice and mystical experiences (Reavley & Pallant, 2009; Skipper, O'Donovan, Conlon, & Clough, 2015).

### Individual Differences in Capacity for and Interest in Spiritual Engagement

Regardless of how spirituality is defined, an ability to engage these experiences is presumed to be present in most individuals, yet the level of capacity to do so may vary, as may the degree to which individuals resonate to practices such as meditation for deepening these experiences. The concept of spiritual intelligence (SI) (Emmons, 2000), an extension of Gardner's model of multiple intelligences (2004), has been proposed as a way to frame this inherent variation, and measurement tools have been developed for assessing SI (King, Mara, & DeCicco, 2012). Emmons identifies five characteristics of spiritual intelligence: capacity for transcendence; ability to enter into heightened spiritual states of consciousness; ability to invest everyday events and relationships with a sense of the sacred; ability to utilize spiritual resources for problems in living; and the capacity to be virtuous. Both the traditional and contemporary literature on meditation support the relevance of practice to cultivating these core aspects of spiritual intelligence (Mittal & Akhtar, 2011). The neurological basis for these experiences (d'Aquili & Newberg, 1998) as well as the existence of exceptional practitioners and teachers lends credence to the notion of spiritual intelligence.

### Stage of Experience in Meditation

To the extent that cultivating mindful awareness is a learned process, stages of response can be posited to occur within all domains of meditative experience, whether in regard to decreasing emotional reactivity, physiological regulation, or spiritual growth (Kristeller, 2003). Wallace (2006), in describing stages within Buddhist practice, emphasizes shifts in attentional processes that slowly develop across thousands of hours of practice (Davidson & Kaszniak, 2015). Early stages entail cultivating access to spiritual experiences and becoming more aware of these aspects of self, followed by bringing such qualities more readily into daily life. More intensive practice is associated with the mystical traditions and attaining states of spiritual ecstasy. As is already evident from the research presented above, shifts in spiritual experience may occur after relatively brief experience with meditation practice, while other research focuses on the advanced practitioner with at least 10,000 h of practice (Lutz et al., 2007). Saron and his associates (Zanesco, King, MacLean, & Saron, 2013) recently documented meaningful shifts in cognition and other effects in advanced practitioners after a 1-month mindfulness retreat, part of an increasingly sophisticated body of research on neurocognitive processes related to meditation that could be extended even further by examining spiritual aspects of experience (Lutz et al., 2015).

Several issues are relevant here to studying spiritual shifts within the context of meditative practice. What is the specific type or level of spiritual experience that is of interest? Research in several settings already well

documents that increases in spiritual well-being can occur in novice meditators, even independent from this being a focus (Carmody et al., 2008; Kristeller & Jordan, 2015). However, extraordinary transformational experiences are less likely in these populations. More experienced meditators may be most appropriate for such studies. Yet the more advanced the meditation practice, the more that self-selection may play a role, or a "ceiling" effect may occur, such that commonly used measures of spirituality would not be sensitive to the changes in these advanced practitioners. Therefore, in considering the applicability of research on more advanced practitioners (e.g., Lutz et al., 2007) to understanding change in novices, it is important to keep not only level of practice in mind, but how this may intersect with individual differences in capacity and motivation to engage spiritual experience.

## Conclusions

Traditionally, meditation practice and spirituality have been strongly linked but always tied to specific religious traditions that, while generating rich literature and powerful personal accounts, were not separable from their distinct cultural roots nor considered appropriate for scientific study. Only recently have both meditative experience and spirituality come to be considered from a psychological perspective as valid and universally applicable aspects of human functioning. As spirituality is understood as a universal psychological capacity, and one that is measurable, it becomes viable to explore this aspect of human functioning in the context of meditative practice, both in regard to therapeutic value and to better understand the underlying processes of meditation and spiritual change. The extent to which these practices have been traditionally embedded within distinct cultural contexts presents both challenges and opportunities, to enrich our understanding further. To what degree are measurement approaches valid cross-culturally? How can they be made more so? Do individuals who share the same language and broader culture experience spirituality and meditative experiences similarly, even if from different religious backgrounds?

To date, very little research has examined the interface of these practices. Spiritual well-being can become a primary focus of meditation research, or be easily added to other studies. Does engaging spirituality within secularized meditation practice deepen or distract from other potential values of such practice, such as better regulation of emotion, making healthier behavioral choices, decreasing physiological stress reactions, or augmenting capacity for self-acceptance and compassion for others? In other words, is the cultivation of spiritual growth independent from these effects, facilitative, or perhaps distracting from them?

Traditional perspectives suggest that there is a powerful synergy between spiritual well-being and general emotional and physical health, but how such questions would translate into carrying out systematic investigations is challenging, particularly across cultural domains. Whether engaging the spiritual self, either implicitly or explicitly, contributes to these effects within mindfulness-based programs is an exciting and challenging question to continue to explore. Expanding this exploration cross-culturally might further illuminate important individual differences—and commonalities—in these experiences.

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