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Upward spirals of positive emotions and religious behaviors

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Abstract

Positive emotions feel good and build psychological, social, and biological resources (Broaden-and-Build Theory, Fredrickson, 1998, 2013). People who identify as religious or spiritual value them and report feeling them frequently. They are also prevalent in religious and spiritual practices, such as prayer, meditation, and collective worship. We review the literature on the reciprocal relationship between positive emotions and religion/spirituality and identify individual differences predicting greater positive emotions derived from engaging in religious practices. We suggest that beyond building religious/spiritual people’s well-being, positive emotions play a role in sustaining otherwise costly religious behaviors. We integrate our review in the proposed Upward Spiral Theory of Sustained Religious Practice.

Keywords: positive psychology, positive affect, religious practice, spirituality

 Upward spirals of positive emotions and religious behaviors

Positive emotions (PEs) are ubiquitous in religious practices and religious experiences. Research on the topic, however, is scant but growing. In the present contribution we pursue two aims: to review the available scientific research on the reciprocal relationship between PEs and religion/spirituality and to propose a new integration of such research in the form of the Upward Spiral Theory of Sustained Religious Practice. In doing so, we update — and extend to the religious domain — our previous theory and research on the unique functions of PEs for sustained engagement in positive health behaviors that we articulated in the Upward Spiral Theory of Lifestyle Change [1,2].

1. **Religious/Spiritual Practices and Positive Emotions**

PEs such as joy, love, gratitude, admiration and awe, are labeled positive because they are generally pleasant states. Beyond feeling good, PE can also be good for us. Many PEs *broaden* people’s momentary thought-action repertoires, enabling them to think and act in creative ways [3]. With the repetition over time of these moments of expanded awareness, PEs function to *build* psychological (e.g., resilience), social (e.g., good quality relationships), and biological (e.g., reduced illness symptoms) resources for survival [1,4]. While this review focuses on PE, we do not intend to suggest that negative emotions are absent, inappropriate, or useless when arising from religious and spiritual pursuits [5,6].

Religious/spiritual practices represent means through which people can experience various PEs, especially transcendent emotions such as awe or admiration that are elicited by witnessing the greater good or beauty, and do not directly contribute to self-interest [7-9]. Broadly, religion/spirituality is related to more positive affect [see for a review 10] and to happiness [11-13]. For example, daily experiences of spirituality are positively related to happiness [14,15] and to feelings of gratitude [16,17]. Religiosity is also related to a greater desire for PEs that strengthen religious beliefs (awe, gratitude, but not pride) [18]. Research further shows that the relationships between religion and PEs are reciprocal. Not only does inducing religious salience increase feelings of love [19], but, comparatively, inducing PEs of awe, admiration, and elevation, leads to greater self-reported religiosity and spirituality [20-22].

Specifically, individual religious/spiritual practices and behaviors, such as prayer or meditation, have been shown to promote the experience of PEs. We discuss here meditation because although sometimes practiced in secular context and by secular people, it a) shares similar psychological ingredients as prayer (quiet contemplation, focusing inward on the self as well as feeling love and care and extending that love to others) and b) is frequently practiced by people who identify as religious and spiritual [23]. Across multiple studies, prayer frequency was associated with gratitude, and engaging in prayer increased feelings of gratitude across time [24]. Moreover, engaging in formal and even informal (quick shift of awareness during the flow of daily activities) meditation practices has also been found to increase daily experiences of PEs [25,26].

Similarly, participating in collective practices, such as attending a place of worship, generates PEs such as happiness [13], gratitude [27] and awe [28]. Additionally, features of religious collective practices, such as music and synchronic behaviors, can evoke and amplify PEs [29,30].

More research is needed to better understand the particular flavor and function of positive emotions elicited in *religious* vs. *spiritual* pursuits and associated with each of the practices discussed here. Although discussed together for the sake of this review, we believe religion differs from spirituality in at least two ways that may have implications for positive emotions: 1) religion implies institutionally defined sets of beliefs and practices, which contrast with spirituality’s individualized approach. This difference probably has implications for the kinds of emotions that are valued and would lead to greater homogeneity in emotional experiences among people who are affiliated with one particular religious tradition. For example, evidence from multiple sources suggest that Christianity value more high arousal positive emotions and less low arousal positive emotions than Buddhism [31]. More research is needed to know if these differences in the emotions people ideally want to feel generate related specific emotions associated with particular religious and spiritual practices. 2) religion involves more collective practices compared to spirituality’s more individual practices. Research in cultural psychology informs us that collectivism translates into an interdependent model of the self, where one is fundamentally connected to others and concerned about how their emotions might affect others, whereas individualism translates into an independent model of the self, where one is distinct from others and emotional expression not influenced by the group [32]. This has further implications for the kind and intensity of positive emotions one may feel as well as for differential functions of emotions (e.g., to connect with others or with the self). We note that in filling this gap in research, one may want to also address another limitation of the available research: its reliance on self-report measures of both frequency of positive emotions and of frequency of religious/spiritual behaviors. This limitation is of particular concern given that people who are religious also tend to respond to questionnaires in socially desirable ways [33] (see also paper X in this special issue), which can include the over-reporting of positive emotions.

1. **Upward Spiral Theory of Sustained Religious Practice**

The summarized research above is well known to psychologists of religion. But why do these PEs matter in the context of religious/spiritual practices? In general, much research shows that PEs promote well-being [34,35] and a few studies show that they represent one mechanism explaining the relationship between religion/spirituality and well-being [36-38]. Specifically, growing evidence indicates that feeling PEs, and especially self-transcendent emotions, *within a religious context* partially explains this relationship [27,28,39,40], see also paper X in this special issue.

In addition, why do people persist in their religious/spiritual practices despite obstacles such as time scarcity or geographic relocation [41]? We propose that PEs experienced during religious/spiritual practices function to build long term adherence to these behaviors. To describe these processes we build upon the Upward Spiral Theory of Lifestyle Change, which describes the maintenance of positive health behaviors such as exercising and healthy eating. Applied to the religion domain, this theory is expanded in at least two directions. First, the range and quality of positive affect is greater for religious/spiritual behaviors. It ranges from everyday gratitude when praying to intense feelings of awe during mystical experiences. Many of the positive emotions experienced in the context of religion are considered self-transcendent, pulling people out of themselves. These emotions may also take on a particular flavor, because they are connected to the sacred. Indeed, they can become sacralized (or sanctified) as defined by acquiring divine or transcendent quality and significance [42]. In addition, researchers have suggested that what is considered sacred becomes salient, more powerful, and significant in people’s lives, and further drives engagement in situations promoting this sacredness [43]. Therefore, the inner loop of the model may be even stronger in the context of religious and spiritual behaviors because sacralized positive emotions might be more potent than their secular version in driving engagement. Second, to the difference with exercising for example, religious/spiritual behaviors are adopted within a broader meaning system that colors every aspect of one’s life. Therefore, over time, the experience of positive emotions during religious/spiritual behaviors may well become intimately connected with this broader meaning system and any positive cues can become imbued with sacredness (i.e., sacralizing or sanctifying the environment). This provides new opportunities to experience positive emotions connected to religion/spirituality, thereby adding a new path to the inner and outer loop (see Figure 1, far right box).



Figure 1. Upward Spiral Theory of Sustained Religious Practice

As unpacked below, we suggest that when positive emotions are experienced while worshipping, praying, or meditating, they function as a motivational factor to continue the practice. This maintenance process is mediated by nonconscious motives to repeat the behavior: behavior-related cues in the environment become more salient. This process is reflected in the inner loop of the model (Figure 1). Then, as these behaviors, and the concurrent experience of PEs, are repeated, psychological, social, and biological resources are built. Importantly, we argue that these built resources will over time allow an even greater enjoyment of the activity. Therefore, we call these endogenous factors “vantage resources” following Pluess and Belsky [44]. This process is reflected in the outer loop of the model (Figure 1).

* 1. **The inner loop: PEs predict further engagement through nonconscious motives**

The inner loop states that PEs experienced during a behavior promote further engagement in that behavior. In the Upward Spiral Theory of Lifestyle Change we review research demonstrating that positive emotions experienced during positive health behaviors, such as exercising, predict future maintenance of these behaviors [2,45]. When behaviors are pleasant, we can make conscious decisions to repeat them. Yet, conscious decision making and willpower, even for pleasant behaviors, are sometimes not enough to drive actual behavioral engagement (e.g., I haven’t meditated today even though I know it makes me feel good). A vast literature has shown the importance of nonconscious motives in driving behavior [46,47] and, interestingly, positive emotions also set this process in motion. This is certainly true for behaviors outside the religious/spiritual context. Across multiple studies, associating positive affect with primed behavioral goals increased both one’s want to pursue these goals as well as one’s effort to work harder towards attaining these goals [48,49]. Therefore, the inner loop further suggests that positive emotions play a key role in the nonconscious processes that support behavioral maintenance.

As we discussed above, religious/spiritual practices can also be accompanied by positive emotions, particularly those that are self-transcendent. In turn, multiple experimental studies have found that self-transcendent PEs promote religious and spiritual beliefs [20,21,50], which may well prompt people to engage in relevant activities. Along those lines, Van Cappellen and Saroglou [21] found that when highly religious/spiritual people experienced awe, a self-transcendent emotion, they showed an enhanced willingness to visit a sacred place (in comparison to an equally attractive but hedonic place). Similarly, Corcoran [51] found that experiencing emotional excitement during religious services predicted greater engagement in volunteering for the congregation. Among novice meditators, those who experience high PEs during their first meditation session are more likely to be still meditating three weeks [52] to 15 months later [53]. The extent to which people experienced PEs when introduced to meditation was the sole psychological predictor of keeping meditation as a regular habit more than a year later [53]. Research on prayer is more limited, but we note one correlational study showing that more frequent expressions of praise and gratitude to God are associated with more frequent worship participation [54].

The inner loop further clarifies one mechanism through which religious/spiritual behaviors that are enjoyed may be repeated: because the behavior itself is accompanied by PEs, its cues are also imbued with positivity, and as a consequence, become attention-grabbing, facilitating the repetition of the behavior. Rice and Fredrickson [55] have studied such nonconscious motives by measuring the presence of positive spontaneous thoughts: pleasant thoughts related to the activity that spontaneously pop into one’s mind. Across multiple correlational and experimental studies, activities that were enjoyed produced more frequent positive spontaneous thoughts about that activity, which led to future engagement in that activity [55,56]. We suspect, although this awaits direct testing, that positive spontaneous thoughts mediate the relationship between liking a religious activity in the past, and wanting to engage in it in the future.

* 1. **The outer loop: Increasing enjoyment of behavior built through vantage resources**

Below we review the research on a) vantage resources or individual differences (biological, social, psychological) that allow individuals to experience even more PEs during religious/spiritual behaviors, and b) how, for some resources, religious/spiritual behaviors, through the experience of PEs, build such vantage resources, thereby creating the potential for upward spirals.

* + 1. **Biological Resources.**

A review of 34 recent empirical studies on psychedelic drugs (e.g. psilocybin, LSD) provide support for their role in creating mystical-type experiences accompanied by intense positive emotions, deep feeling of meaning, sacredness, and interconnectedness [57] and lasting self-report changes in spirituality corroborated by peer-ratings [58]. However, in the one study measuring future engagement in spiritual practices, psylocibin did not induce change [59].

Oxytocin and cardiac vagal tone (CVT) are two other biological vantage resource identified for their role in amplifying the positive emotions people experience during meditation. Oxytocin is studied by psychologists for its relationship with social bonding [60]. In one experimental study, intranasal administration of oxytocin (versus a placebo) in males modestly increased self-reported spirituality (controlling for religious status) and critically, this led to greater PEs experienced during a first-time guided meditation [61]. CVT refers to the function of the vagus nerve, a key component of the parasympathetic nervous system, that signals rest, digest, and connect [62]. In a longitudinal field experiment, baseline participants’ high-frequency heart rate variability (HF-HRV) at rest, an index of CVT, amplified the PEs (measured daily during a six-week workshop on loving-kindness meditation) that stemmed from meditation [63]. In turn, PEs and the practice of meditation itself may increase oxytocin levels and CVT, setting the stage for upward spiral dynamics. Watching a moral elevation video increased lactation in breastfeeding mothers, a process attributed to the secretion of oxytocin [64]. Additionally, one study found that a mindfulness intervention (vs. control) increased salivary oxytocin [65]. Finally, in the same study cited above, HF-HRV improved from baseline to nine weeks later to the extent that participants’ meditation practice evoked positive affect and positive social connections [63].

* + 1. **Social Resources.**

Positive emotions experienced during *collective* religious/spiritual practices particularly may be amplified through social resources such as feelings of unity and shared identity. Durkheim [66] discussed the process of “collective effervescence” to describe the amplification of emotions when experienced in unison in a group event. More recently, Fredrickson [67] discussed “positivity resonance,” an experience stemming from shared positive affect, mutual care and concern, and biobehavioral synchrony and that feeds bonding and commitments to others. Although more research is needed in the context of religious rituals, one study on pilgrims attending a Hindu festival provides evidence that feelings of a shared social identity during this collective religious event amplified the positivity of the emotions experienced [68]. In turn, these feelings of connectedness and unity are developed through the direct experience of PEs [69] and of other features of the ritual, such as synchrony [70] or emotional expressiveness [40].

Positive attitudes toward God, such as trusting God or feeling loved and supported by God, have also been found to correlate with religiosity and religious participation [71]. Logically, having a positive relationship with God allows greater enjoyment of actions that are directed toward him. On the flip side, having negative attitudes toward God, such as anger toward God, has been found to relate to more distress [72]. In addition, such a positive relationship is probably also built through communicating with God. Specifically, if prayer is accompanied by the disclosure and feelings of PEs, relationship research suggests that this should lead to greater closeness and relationship well-being [73]. Future research should test whether prayers focused on praise and thanksgiving are particularly apt at building a good quality relationship with God.

* + 1. **Psychological Resources.**

Well-being is a malleable psychological resources that provides the ability to enjoy pleasant events more.In a longitudinal study using the day reconstruction method, participants categorized as flourishers (i.e., with optimal levels of well-being) showed greater PE reactivity, compared to non-flourishers or depressed participants, to spiritual activities such as prayer, worshipping, and meditating. This boost, in turn, led to greater mindfulness, a cognitive resource, which subsequently predicted positive changes in flourishing [74]. Other correlational research shows indeed that PEs experienced during church attendance and measured daily during a meditation workshop explained the relationship between religiosity/spirituality and psychological well-being [39]. Similarly, greater church attendance was found to lead to greater awe of God, and being in awe of God [28] was indirectly related with greater life satisfaction through greater feelings of connectedness. In a longitudinal study, church attendance led to increases in gratitude, which over time, lowered depressive symptoms [27].

A sense of sacredness can be an attribute assigned to an affective experience. Multiple studies have shown that attributions to God/the divine are more likely to be made when the situation has positive (rather than negative) attributions [75-77]. Other studies, using ecological momentary assessment, showed that participants’ religiosity was related to a greater tendency to attribute meaning and significance to everyday events, which in turn led to greater experience of relevant positive emotions [36-38]. An interesting area for future research may be the study of the tendency to imbue events, especially positive ones, with sacredness and significance. This individual difference, probably reinforced over time through the learned association between positive emotions and religion, may represent a resource predicting salience and significance of the positive emotions experienced during religious/spiritual behaviors.

In sum, although there is ample room for future research, some evidence suggests possible upward spirals between PEs and religious/spiritual behaviors through biological, social, and psychological vantage resources. Each resource warrants further research specifically in the context of religious/spiritual practices such as private prayer and collective worship.

1. **Conclusion**

In conclusion, growing evidence suggest that PEs are valued and experienced at a greater frequency by people who identify as religious and spiritual. The very practices these people engage in (prayer, meditation, worship) cultivate opportunities to experience such emotions. In turn, these emotions have been found to promote spiritual beliefs and psychological well-being.In addition, we presented a theory, and relevant empirical support, that highlights the mechanisms through which PEs experienced during religious/spiritual practices build long term adherence of these behaviors, the Upward Spiral Theory of Sustained Religious Practice.

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