The Buddhist Doctrine of Not-Self: Implications for Psychological Approaches to Anxiety

By

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April, 2012



Allegheny College

Department of Religious Studies & Department of Psychology

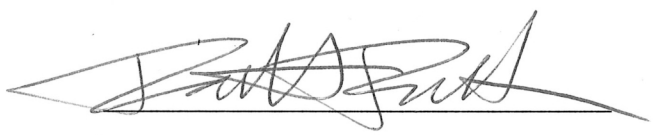
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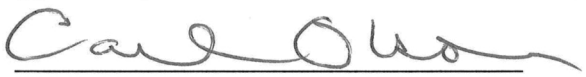
A Senior Comprehensive Project in Partial Fulfillment of the Requirements
for a Bachelor of Arts Degree from Allegheny College

I hereby recognize and pledge to fulfill my responsibilities as defined in the Honor Code and to maintain the integrity of both myself and the College community as a whole.

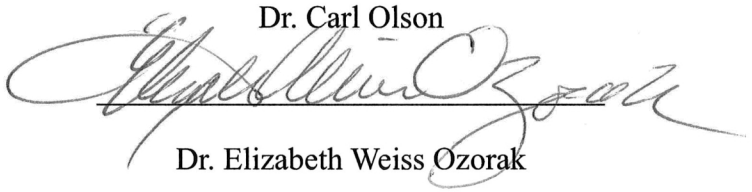


Pledge

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Introduction

The motivation for writing this work has stemmed from my own involvement in mindfulness meditation. Through exposure to various Buddhist practices which aim to cultivate mindfulness and the eradication of a conceptual self, I became increasingly interested in the Buddhist doctrine of not-self. In Buddhist philosophy, the self, among other defilements, is considered a delusion which prevents one from achieving *nirvāṇa*. However, one cannot strive for and achieve *nirvāṇa* unless one operates as a person (i.e., self) that enacts goal seeking behavior, which, ironically obstructs the goal itself. From a Buddhist understanding of Right Resolve (the second component of the Eight-fold Path) this paradox is unproblematic, yet it may be for practitioners engaging in secularized forms of Buddhist meditation such as Mindfulness Based Stress Reduction (MBSR). Based in Buddhist philosophical traditions that aim for the dissolution of self, these meditation programs have been adapted for a wider audience through the omission of Buddhist terminology. Such approaches aim instead for quantitative and qualitative reductions in distressing moods—especially stress. From a Buddhist perspective, aversive cognitions (including stress) stem from the formation of identity (i.e., self) in relation to the five aggregates (Bodhi, 2005, p. 308). Accordingly, an individual's anxiety can only be mitigated through the breakdown of the attachment to this fallacious identity—accomplished in Buddhist practice through the development of mindfulness.

By citing statistics attesting to the benefits of engaging in mindfulness practice, scientific approaches to Buddhist meditation may inadvertently establish objective goals to be adopted. In

turn, a scientific approach may encourage attachment to the aggregates, thereby reinforcing identification with a self and inhibiting the reduction of stress. This project therefore attempts to address the question of how participants involved in secularized forms of Buddhist meditation may be affected by the movement into a scientific paradigm. In doing so, the present work attempts to contribute to the current dialogue concerning the clinical utility of not-self (*anātman*) and address the problematic act of operationalizing "mindfulness."

This project is composed of two parts: the first is centered on Buddhist theory, while the second is an empirical psychological study of mindfulness meditation. Both approaches cooperatively investigate the effects that goal seeking behavior might have on anxiety. Since the possibility of reducing stress is bound in the Buddhist notion of selfhood, Part One will explore the Buddhist understanding of not-self to illustrate the processes involved in the breakdown of selfhood. Additionally, as a means of discussing the problems that stem from attachment to self, the conceptual notion of *nirvāṇa* will be used throughout. Finally, as a means of bridging Buddhist thought with current psychological research, I will discuss the implications that the Buddhist notion of self has for secularized meditation programs.

Part Two is comprised of a formal psychological study and follows the structure of a research article. Accordingly, it explains the study's hypothesis through a discussion of relevant research on the topic of expectation and mindfulness, details the methods used in the research and discusses the results as it pertains to the hypothesis. This project aims to generate critical thinking concerning mindfulness practices in the realm of psychology.

Part I

Not-Self and *Nirvāṇa* in Buddhist and Western Scientific Thought

1 Not-Self and *Nirvāṇa*

> What makes the limit of *nirvāṇa* is also then the limit of *saṃsāra*,
> Between the two we cannot find the slightest shade of difference.
> Nagarjuna (as cited in Mistry, 1981, p. 92)

A Historical Perspective

The investigation of self and its existence is an enduring process not only in Buddhist thought, but in philosophical pursuits generally. In the context of Indian philosophy, the idea of a monistic self is rooted in the *védas* and yogic traditions which propounded the notion of a vitalistic soul (Reat, 1990, p. 172). The *Upaniṣads* later adopted and incorporated such principles into a larger world-view that included the "concepts of the soul, rebirth and release" (Reat, 1990, p. 283). Thus the Buddha taught in an environment where religious seekers acted from the perspective of a permanent, lasting self (*ātman*). The Buddha's unorthodox teaching of impermanence—a characteristic, according to him, of all phenomena including the soul—established the "doctrine that both the individual and objects are devoid of any unchanging, eternal, or autonomous substratum" (Keown, 2003, p. 13). When applied to the notion of selfhood (which is inherently characterized by permanence), what one discovers is a lack of a self: i.e., not-self (*anātman*).

This innovative principle had significant implications for the soteriological goals of religious seekers at the time. Those who had assumed the existence of a self, for example, were required to operate under the presupposition that there *is* an essential characteristic underlying

experience—that ultimately, an entity *can* be distinct from an external world. Consequently, the method of reaching spiritual realization was structured around the pursuit of a "true" form of self. With the rise of a not-self ideology, however, the basic intentions of religious practice became altered, and overcoming the delusion of self became the primary aim. Proponents of this method are considered the first followers of the Buddha.

Historically, to discuss questions concerning the nature of existence in *Abhidharma* text and elsewhere, Buddhist thought has taken divergent approaches in an attempt to define "self." Because "self-ness" and "selfless-ness" can be interpreted in different ways, questions naturally arose concerning the definition of "self." Indeed, to this day, whether the Buddha asserted the facticity of an essential self is moot. While it is widely accepted that the Buddha taught a doctrine of not-self, whether the Buddha asserted the existence of a soul that is transferred across lifetimes is left up to scholarly interpretation. This is because the origins of the not-self doctrine do not directly stem from the Sūtras—the Buddha refrained to comment on whether the soul did or did not exist to avoid taking an absolute stance of either annihilationism or eternalism, as is demonstrated in the *Majjhima Nikaya Sūtra*. As a result, the Buddha's teachings have been interpreted and reconceived by his disciples and the various schools which emerged around them.

The doctrine of personhood (*pudgalavāda*) was one approach espoused by some early schools of Buddhism such as the *Saṃmitīyas*. While rejecting an *ātman*, these Personalists believed that an enduring self—or an apparent entity that explained the continuity of *karma* and rebirth—comprises five personality-factors (*skhandas*). These are outlined by Harvey (1995) as the material body, feeling "tone" of experience (i.e., pleasant, unpleasant, or neutral), cognition, volition, and discernment (p. 4). The Personalists supposed that the self was made possible by

the personality-factor's very existence, yet also maintained that the self was neither the same as nor different from the personality-factors. In doing so, they avoided the problem proposed by normative Buddhism: namely, that we tend to ignorantly grasp at one of the five personality-factors as a way of experiencing a self. While the Personalists understood that the amalgamation of the personality-factors constituted a new entity, the non-Personalists acknowledged the self "as just a label, a nominal reality" (Harvey, 1995, p. 36). The non-Personalists recognized the necessities of appellations for communication, but solely this.

To elucidate the distinction between the two stances, often the analogy of a chariot and its constituent parts is employed. For the Personalist, when the necessary parts of a chariot (e.g., the wheels, the seat, the siding) are joined in a certain manner, a new and different entity is formed: "chariot." In contrast, the non-Personalists asserted that this form "chariot" engenders nothing further because it is nevertheless bound by disparate parts. The Personalist view was thus considered heretical from a normative Buddhist perspective that endorsed the doctrine of not-self.

Forms of Self

For the purposes of this paper, the distinction between an empirical and metaphysical self must be made to properly define what is referred to as "self." An empirical self is the felt sense of an intentional actor, or the phenomenon which enables one to strive toward a goal. It is experienced as the receiver of an action's outcomes, as the I-ness latent in the phrase: *I* will achieve *nirvāṇa*. To comport oneself proximally in the world, one must operate with the notion of an empirical self, continuously making distinctions between objects. Thus an *arhat* may still function in the world in a conventional sense, although "free from [*mannati*, or conceited thoughts]" (Harvey, 1995, p. 23). For example, the *arhat* displays a distinct personality despite a

lack of self-ness. Accordingly, meditation instructors often assign certain forms of meditation depending upon their disciple's personality type (Shaw, 2009, p. 20). This personality spectrum is enabled by an experienceable individuality (an empirical self), while a metaphysical self is the foundation which enables the distinction between self and other to manifest. The empirical self necessarily takes a corporeal form and is dependent upon an individual's temporality (making the empirical self subject to impermanence), whereas the metaphysical self is independent. The concept of self is thus defined here as a permanent, distinct and essential element within an object (*svabhāva*): the metaphysical self. It is this sense of self which the Buddha taught is nonexistent.

The Buddha devoted energy to expounding the illusory nature of self because attachment to such a concept causes suffering. The logic of the Buddha's teaching follows that "if the soul changes, it is just like everything else, impermanent, conditioned, and thereby not self, not self-determined, not self-defined" (Reat, 1990, p. 292). Thus the absence of a soul rests in the assertion that "no independent, permanent entity can be observed in human consciousness" (Reat, 1990, p. 293). Yet, despite such examination, humans are habitually disposed to seek stability by attributing selfhood to some phenomenon that is ostensibly permanent. Consequently, because these items (conditioned phenomena) we attach ourselves to are characterized by change, suffering arises when the object of craving (*tṛṣṇā*) is ultimately ceased.

This way of acting—in which the self is experienced as *real*—is the default mode of being. That is, we generally operate as though the self is without a terminus. We might be absorbed in such a view if it were not for certain states that expose the self's impermanent nature, such as a sense that we are inevitably moving towards death. Heidegger (1927) puts this awareness succinctly as "*the possibility for the impossibility of any existence at all*" (Heidegger,

1927, p. 250). According to Heidegger (1927), such a possibility is often concealed, however, by a subtle belief that mortality is merely a concern for "others." Heidegger (1927) posited that one could discern the measurelessness of nonexistence in the mood of anxiety—similar, perhaps, to imagining the measurelessness of *nirvāṇa* (Heidegger, 1927, p. 250). Anxiety is thus a disclosive mood for Heidegger (1927) because it enables one to choose to be-in-the-world. Furthermore, it reveals our essential nature as beings that *care* about how we are in the world.

From a Buddhist understanding, one might suppose that anxiety stems from an insight into the nature of reality. This is described, for example, by Hakuin's notion of the Great Doubt in which one becomes "Aware that one has been conditioned to experience [the world] in certain prescribed ways" (Kasulis, 1981, p. 113). Accompanied by the Great Doubt is a dissatisfaction with one's life as it is and a feeling that one "no longer knows how to encounter things simply as they are" (Kasulis, 1981, p. 113). This parallels Heidegger's (1927) notion that anxiety is anxious about the "nothing and nowhere" (Heidegger, 1927, p. 244). In other words, it is anxious about the reality that all conditioned phenomena are empty, and particularly, the inevitable dissolution of the ego and body upon death. Unsurprisingly, this insight may prompt a disturbing sense of lack because of an "inescapable trace of nothingness in my 'empty'" (Loy, 2000, p. 161). In the struggle to assuage this uncanny feeling, the ego may redefine itself by forming attachments to another identity—in Heideggerian parlance: falling. Yet, because anxiety thrusts one out of this fallenness, the self is able to be concerned with its freedom to choose its possibilities of existence. One can continue in a similar fashion as before (i.e, returning to a world-view determined by conceptual categories) or one can choose an authentic mode of being-in-the-world.

This momentary loss of self is paralleled in McNamara's (2009) neurological self "decentering" process as well. McNamara (2009) argues that "religious practices help to build up a centralized executive Self by reducing the discrepancy between an ideal Self and the current Self" (p. 44). He posits that it is through repeated decentering processes that these two selves (i.e., the ideal and current) are aligned, thereby constructing an "executive self." The executive self-concept guides one's neurocognitive system, for example, by retrieving previously formulated goals (McNamara, 2009, p. 45). When a momentary loss of agency occurs (for instance, when one has conflicting desires), "the updating process essentially displaces the old Self and instantiates the new Self" (McNamara, 2009, p. 53). The process (displayed in figure 1 below) whereby this discrepancy is resolved demonstrates how the self conception can be reformulated.

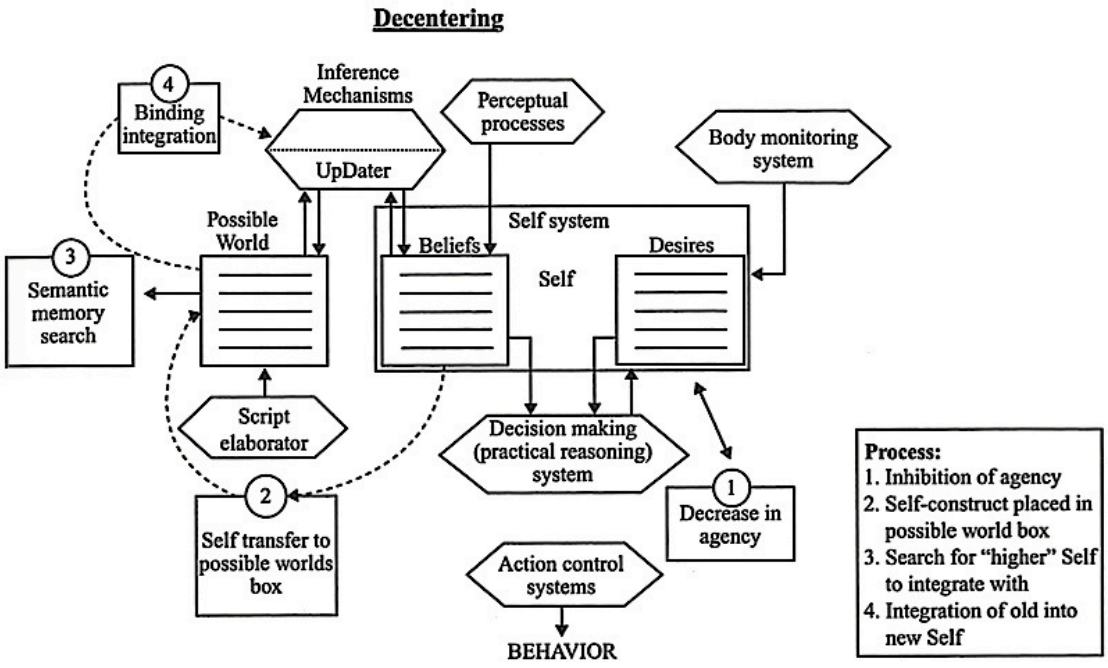


Figure 1. The decentering process proposed by McNamara (2009, p. 49). This figure builds off of Nichols & Stich's (2000) cognitive model of the Self system. In the decentering process, the self-concept is experienced as inadequate. Through a four step process, the self is experienced as lacking agency (triggered, perhaps, through a discrepancy of the current and ideal self), and is eventually reified by a "solution identity."

William James (1985) explored a similar phenomenon where the self momentarily perishes and the ordinary conception of objective entities disappears. For James (1985), this culminates in a mystical experience. In *The Varieties of Religious Experience,* he states that "So long as the egoistic worry of the sick soul guards the door [of the religious experience], the expansive confidence of the soul of faith gains no presence" (James, 1985, p. 174). The soul (i.e. *ātman*)—the source of anxiety—bars a transcendent religious experience. James (1985) goes on to site an anecdote of the missionary, David Brainerd, where the dissolution of egoistic tendencies and the subsequent effects are described:

> My soul was so captivated and delighted with the excellency of God, that I was even swallowed up in him; at least to the degree that I had no thought about my own salvation, and scarce reflected that there was such a creature as myself. (p. 176)

As a means of illuminating the implications of Brainerd's religious experience, however, first we must qualitatively define such an experience. Following James' methodology of compiling qualitative accounts in an attempt to define what such an experience would be like, Pahnke (as cited in McNamara, 2009) has distilled certain characteristics of religious experience down to an enumerated list:

1. Unity or a sense of integration within oneself and with others;
2. Transcendence of time and space;
3. Deeply felt positive mood;
4. Sense of sacredness;
5. A noetic quality or feeling of insight;
6. Paradoxicality or the ability to respectfully hold opposing points of view;
7. Alleged ineffability (the experience is felt to be beyond words);

8. Transiency of euphoria, but

9. Persisting positive changes in attitude and behavior. (p. 15)

In reviewing this list, we can observe that Brainerd's experience is characterized by the qualities of transcendence of space (his individuality has disappeared), a positive mood, and noetic quality. Further, though Brainerd's experience may have been temporary, later he notes that he decided to take his life in a new direction by complying with this "blessed way," indicating a persisting change in behavior (James, 1985, p. 176). In Buddhist thought, one could characterize his experience as a sudden, albeit temporary enlightenment experience—an initial insight that provides the foundation for further realization. Such realization ultimately culminates in the fourth and final stage of awakening whereby the attachment to the metaphysical self is destroyed.

The Theory of *Nirvāṇa*

The *arhat*, having reached the fourth and final stage of awakening, is freed from the delusion of a metaphysical self. Yet in the *Theravāda* conception of the path, prior to reaching this ultimate destination exist a succession of stages, each signifying a possible number of rebirths required before the attainment of *arhatship*. Thus, only until one has eradicated doubt (marking the first stage, stream-entry), "weakened" the forms of sensual desire, hatred and ignorance (marking the second stage, once-returner), and eradicated desire and hatred (marking the third stage, non-return), is one prepared for the rebirth whereby *arhatship* will be attained (Shaw, 2009, p. 16). It is this fourth and final stage where the attachment to the metaphysical self is eradicated—up to this point a trace of I-ness persists. The stages are sequentially related, and each stage represents a cessation or weakening of some form of wrong-view predicated on the last. This relationship suggests the relative difficulty of destroying the wrong-view of selfhood, namely, that it is the highest and most difficult task.

According to Buddhist thought, one should strive for a release from rebirth because, as stated in the First Noble Truth, life is characterized by the whole gamut of suffering (*duḥkha*). Buddhist philosophy has attempted to conceptualize the interrelated forces that propel *saṃsāra* through the schema of Dependent Origination. The fundamental principle of Dependent Origination states that "nothing (other than *nibbana*) arises or ceases except in dependence on certain conditions" (Harvey, 1995, p. 5)—a main tenet of Buddhist thought. This presumption of existence is termed "*karma*" and can be mapped out with twelve causal links of dependence. Comprehension of the schema aids in the process of disillusionment because the logic of *ātman* is "undermined…by claiming that there [is] not a self-existent thing because all things [depend] on something else for their existence" (Olson, 2009, p. 220).

In Buddhist cosmology, any form of attachment is considered ignorance (*avidyā*) since it keeps one in the cycle of rebirth (*saṃsāra*). Within the scheme of Dependent Origination, Harvey (1995) has proposed that "the root cause of continued involvement in samsara and the experience of suffering by which one remains confused about the true nature of reality" (p. 27), is the state of ignorance and craving. For example, because attachments to impermanent phenomena inherently result in a painful loss, one can readily comprehend the ignorance involved in the act of repeatedly seeking satisfactoriness through transient objects. Yet we humans continue in this inveterate fashion. While one cannot escape, for example, the six senses (including mind or mental objects), one can mitigate the human tendency of craving.

It is a result of the human potential to rationalize these problems that one can become an *arhat*. Yet, by merely comprehending how the process of rebirth continues, one cannot abandon it. First, one must undertake diligent practice to cultivate the proper conditions for insight to be triggered. The limitations of rational problem solving are central in Buddhist practice, hence "the

Abhidharma…aims at nothing less than to open man's eyes to that which is not speculatively arrived at by the logical method of hypothesis and deductive verification, but which can be immediately apprehended and is applicable to ourselves" (Guenther, 1976, p. 3).

In contrast to other theologies, the attainment of *nirvāṇa* is unlike a return to a kind of beginning, or union with the supernatural. Instead, *nirvāṇa* implies a transcendence of the world, an end to cyclical rebirth (*saṃsāra*). *Nirvāṇa* does not "exist," rather it points to the emptiness or absence of things. Defining *nirvāṇa* is somewhat like identifying the space within a vacuum: it is void and boundless, yet it also factors into how we can comprehend existence by serving as a medium for relating to and understanding the universe. Hence, Guenther (1976, p. 1) appropriately suggests that the *Abhidharma* functions only to point to that which is ineffable. It points to the presence of something that is amorphous, or "an unconditioned Existent (a *dharma*) outside place and time" (Collins, 2010, p. 8), at once a felicity and a non-place. Collins (2010, p. 20) suggests that in the narrative approach to the world—whereby our existence is defined by linear stories—*nirvāṇa* functions to determine a necessary ending point. In doing so, *nirvāṇa* establishes order by delineating boundaries within an infinite cosmos (Collins, 2010, p. 17). It thus provides the possibility of release from chaos (where chaos is defined as the absence of its antithetical: order). In this way, it sets itself up as a reality to be attained—a goal—regardless of its metaphorical nature.

In the path to *nirvāṇa*, by implying a goal to be sought, one necessarily sets up the fallacy that there is a spiritual destination to be arrived at, thereby making a goal salient for the practitioner. Consequently, as will be explored further, in the process of attempting to cast off the delusion of selfhood, the practitioner may inadvertently reinforce a sense of self. This paradoxical process occurs when one pursues a goal with the assumption that certain actions will

lead to a result for the self. This subtle problem stems from the fact that self-ness is a property of goal-ness—for indeed the goal must be someone's. Buddhists were aware of this irony: it was understood that "the very ideal of 'Self'…eventually gets burnt away in the process [of the eightfold path] itself" (Harvey, 1995, p. 51). In other words, at a certain point in the path of awakening, the self-ness which initially allowed one to pursue the goal is destroyed as well.

Accordingly, when examining Buddhist commentary on Right Resolve, one finds that the desire for *nirvāṇa* is considered a beneficial form of desire, namely Right Resolve (Collins, 2010, p. 58). In response to the question of whether one can desire *nirvāṇa*, Collins (2010) distinguishes between the connotations of the English word "desire," noting two distinct modes: one based in craving (*tṛṣṇā*) or clinging (*upādāna*), and another based in "Right Resolve." Thus the Buddhist pursuit of *nirvāṇa* is characterized by an *orientation* towards the goal—a subtle difference in approach which avoids the connotations associated with craving or clinging. Still, a specious aspiration could be a state of craving for a release from suffering (i.e., *nirvāṇa*).

Akin to the understanding of selflessness, in the Sōtō Zen tradition, disciples sometimes have a *satori* experience, or a sudden realization. This experience happens according to the process by which, under certain circumstances, the student is able to perceive beyond her or his construction of the world (as defined by a self/other dichotomy). The Buddha emphasizes the consequential relationship between suffering and attachment to experiences as "self." Accordingly, "the meditator is sometimes encouraged to 'let go' of any experiences," or to not rely on experiences for satisfactoriness (*duḥkha*) because "all experiences…partake of impermanence (*anicca*)…They are not 'mine', and are hence 'non-self' (*anatta*)" (Shaw, 2009, p. 31). Further, in the Zen tradition, it is standard "to regard minor 'openings' or even 'peak experiences' as nothing special. Zen trainees are advised to *let go* of 'their' experiences of

enlightenment and not to view them as attainments that were 'achieved'" (Austin, 2009, p. 44). Austin's use of scare quotes for the words "their" and "achieved" indicates that these terms are used in the same way that the Non-Personalists understood the term "chariot"—as merely a linguistic phenomenon. Clearly, strategic measures are taken to break the attachment to self through refined practice. The self-ness which holds *nirvāṇa* as its goal is exceptionally subtle, however, and would likely be destroyed late in an extended process of formal training (the implications of this point will be explored further in Part Two).

To complicate the practitioner's task of discernment, *nirvāṇa* can take on the semblance of a self—"both being permanent, beyond suffering, and unconditioned" (Harvey, 1995, p. 34). Harvey (1995) explains that *nirvāṇa* "is everything that Self might be except that it is empty of I-ness, controllability and agency" (p. 53). For "While, the spiritually undeveloped person conceives that…'*nibanna* is mine'…all these positions are seen as inappropriate, *nibanna* cannot be seen as standing in any relation to a real 'I,' or Self" (Harvey, 1995, p. 23). To explain this phenomenon of I-ness, the Personalists rationalized that "it must be feeling, or one of the other personality-factors, which work in unison with feeling" (Harvey, 1995, p. 32). However, the argument that self is feeling (*vedanā*) can be refuted (or deemed "unacceptable") by the notion that feelings are in flux (and therefore also subject to change) between pleasure, pain, and neutrality (Harvey, 1995, p. 31). The attachment to a metaphysical self inhibits one in the pursuit of the Buddhist soteriological goal, namely *nirvāṇa*, since we inherently lack a constant entity underlying experience.

The Problematic Goal of *Nirvāṇa*

As previously outlined, although one cannot comprehend what *nirvāṇa* would be like, one nonetheless has it as a goal. And because the task of achieving *nirvāṇa* is generally

considered a long-term undertaking that can span a myriad of lifetimes, the novice meditator must be resolute. However, this resoluteness has a precondition. Namely, that the self is a projection of a future state (i.e., *nirvāṇa*) onto the present moment, which concurrently is a moment that has the capacity to forestall future suffering. To be resolute, one must believe that one's particular comportment in the moment will result in a certain future. Thus, someone who strives for *nirvāṇa* will reflexively investigate and juxtapose their current state with an imagined future in an attempt to eliminate any discrepancies (McNamara, 2009, p. 25). This process, whereby a "possible self" is continually formulated in the present, occurs regularly in meditation as a form of discursive thought. Indeed, as Johansson (1970) put it: "Nibbana may not ultimately be a psychological concept, but there may be psychological aspects, or conditions, or consequences" (p. 3).

The fact that one cannot know *nirvāṇa* because it has no shape or form and is "free from time" (Collins, 2010, p. 37) can nevertheless serve as a tool for reaching insight. For example, if one suddenly supposes that they have achieved *nirvāṇa,* then they can recognize with confidence that indeed they have not done so. Moreover, attaining *arhatship* requires psychological and physical self-control: "*citta* that is not shaken by the input of the senses" (Harvey, 1995, p. 58). This quality, however, rarely arises on its own. Rather, it must be practiced in action, speech and thought as outlined in the Eightfold Path. Additionally, for those who have formally renounced the lay life and become ordained, "The *Vinaya* describes rules of conduct for monastics: 227 for monks and 311 for nuns" (Shaw, 2009, p. 12). These rules serve as a way to support the practice of mindfulness by freeing the practitioner of defilements. Thus, attaining *arhatship* is a matter of perfecting the factors outlined in the Eightfold Path in addition to accruing enough *karmic* merit. It can be conceived of as the metaphorical, narrative destination of someone who practices

according to the instructions outlined by the Buddha. Additionally, because a metaphysical self does not exist (and never did according to Buddhist thought), an *arhat* is someone who fully awakens to this condition and no longer becomes ensnared by attachments to such fallacious constants.

As the practitioner's attachment to self is weakened through various meditation techniques, the mind "becomes more objective about what it chooses to witness [and] less disturbed by what it finds" (Austin, 2009, p. 79). Austin is interested in mapping specifically which areas of the brain construct the conventional notion of the self. He proposes that the Buddhist path leads toward measurable transformations of consciousness and that "these enlightened states enter experience directly as *selfless insight-wisdom*" (Austin, 2009, p. 13). Such states allow a person to then begin to be-in-the-world from a more objective, rather than subjective, self-oriented approach. Austin (2009, p. 56) frames the experience of *kensho* (awakening) as the discontinuation of this egocentric, self-referential pattern. In this experience one is aware of objects existing in the world (outside of oneself) but is not conscious of a subjective viewer having sense contact with the object. Thus we do not relate to the object from a sense of self but from an allocentric (his term for other-centric) perspective. This ability to approach the world objectively and without a conscious viewer is crucial to the casting off of self because it enables the practitioner to detach harmful personal motivations (e.g., greed or hatred) from intention, thereby ceasing the generation of *karma*.

Within Austin's (1998) working model of the self/other (see figure 2), we can conclude that emotion is the response to a belief in the quality (as defined by the mental state, i.e. good/ bad) of an object in the external world as it relates to the self. As Guenther (1976) further

elucidates, it is this human tendency that keeps one in *saṃsāra*: "this tendency to react by emotions…is called 'the world', Samsara, as opposed to the tranquil equanimity of Nirvana which is attained by a radical change of attitude" (pp. 8-9). The term "react" here implies the possibility of a response to an emotion as it arises. This is precisely the value of mindfulness in the Buddhist path—it is that which enables one to objectively notice an emotion and react to it. Without this crucial step, the human is lost in the grips of any emotion, effectually embodying the emotion rather than experiencing it.

To function in daily life, one requires a role (e.g., acting as a parent, student, friend) by which to operate. Yet according to Buddhist thought, there is no self to support such a mode of being (apart from what has been described previously as the empirical self). With the absence of a lasting selfhood, those things associated with it—such as definite roles—are absent as well. Thus, "while the secular person must have a presupposed status in order to act, the Zen Buddhist is…a person of no status or nothingness-status" (Kasulis, 1981, p. 132). In accord with the understanding of not-self, then, is the stance of no-method: defined as the ability "to act spontaneously in [a] situation without first objectifying it in order to define one's role" (Kasulis, 1981, p. 132).

This approach can stand-in for the lack of grounding that one may suppose arises upon the eradication of selfhood. It is characterized by the movement away from a person-centered perspective (whereby the individual relates *to* their surroundings) and towards an environmental one (whereby the individual *is* the context itself and not separate from it). Here, Austin's (1998) model of the general stance we take in relation to the world is illustrative of the self-centered stance:

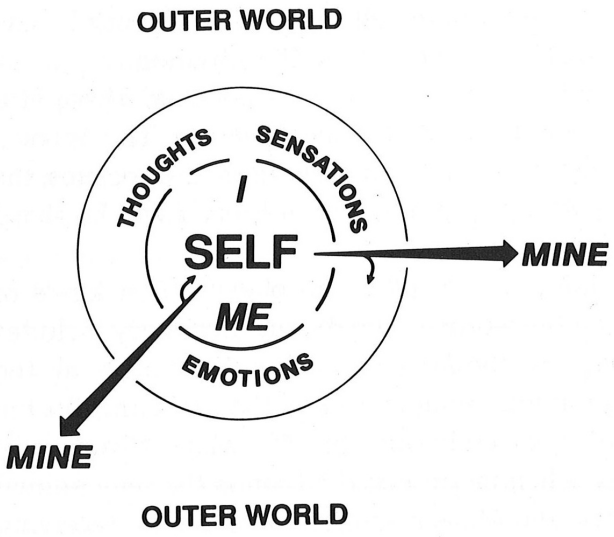


Figure 2. Austin's (1998, p. 41) visual model of the self/other dichotomy. This figure demonstrates the standard mode of attachment to *I-Me-Mine* that is eradicated upon *arhatship*. The center represents the sense of self surrounded by the permeable layer of thoughts sensations and emotions. From this central region, the sense of mine-ness attaches onto the outer world while is also directed back into a fallacious notion of selfhood—this reflexive process is represented by the small, curved arrows.

As a neurologist, Austin is interested in how this self-centered stance is based in physiology. He notes that it is the parietal lobe which allows us to spatially orient ourselves within the world, thus enabling us to make a distinction between self (delineated by the physical body) and other. Interestingly, however, an extraneous physical item can extend the imagined boundaries of the body. This process can be observed in experiments where caged monkeys, required to use a rake to acquire food beyond their reach, trigger an "elongation" of parietal nerve cells (Austin, 2006, p. 150). We can witness this extension in ourselves when driving a car: the proprioceptive expression of self extends to the limits of the vehicle body. Accordingly, we may feel violated if another car contacts ours. This phenomenon demonstrates that the self is dynamic and can change depending on its context, and further, that the plasticity of personal boundaries indicates the potential dissolution of the self/other dichotomy altogether.

To achieve this reorientation, Zen practitioners act with the understanding that "Through meditation and self-discipline, one learns to empty oneself—to eliminate all conscious striving and become truly spontaneous and responsive to the flow of events" (Kasulis, 1981, p. 37). Eventually, *nirvāṇa* simply occurs because *anātman* becomes applied to all phenomena. Thus, a meditation practice established according to a method—such as a scientifically based approach —would be considered misguided because, in striving to attain one's goal, the individual reinforces the self. Accordingly, Zen masters gave instructions that encouraged the destruction of such a stance, expressed by Bodhidharma in his teaching that "all things are empty, and there is nothing desirable or to be sought after" (Harvey, 1995, p. 60). That being said, for Dōgen, the underlying potentiality of all entities is awakening, or Buddha-nature (Kasulis, 1981, p. 82). Such Buddha-nature, however, does not stand outside of emptiness—it too is empty as a concept. Yet it serves as an unconditioned existent, and akin to *nirvāṇa*, it is that which is not dependent on anything else. *Nirvāṇa* is always, already present as a characteristic of human conditioning.

Since each individual is already awakened, the goal then is not to work towards realizing *something* but rather to clear away that which occludes one's awakened nature. Again, this is difficult because consciousness enables the human to reflect upon existence and seek something beyond instinctual desires. As a result, "existence is constantly agitated by aspirations and strivings that go beyond its immediate needs and impressions, and so…'it can find no peace'" (Guignon & Pereboom, 2001, p. xviii). The *satori* experience then, is distinguished by a spontaneous and immediate breakdown of unnecessary strivings. These strivings are intrinsically based in false dichotomies (such as Austin's self/other) which allow *someone* to achieve *something*. Thus the no-method of Buddhist meditation aims to free the practitioner of such

deep-seated conditioning and experience the nature of impermanence. As Dōgen taught: "impermanence is the Buddha-nature" (as cited in Kasulis, 1981, p. 82).

One particular Buddhist practice emphasized in the Rinzai Zen tradition which elucidates the no-method approach is the *kōan*. The objective of this practice is to abandon the thinking process—which constitutes a type of logical method—behind one's response to a puzzle. Hence, often an illogical question is asked or impossible demand is made, such as: "show me your original face before your parents were born," (Eugene, 2009, p. 301). This demand is made to interrupt the habituated patterns of thought that obstruct comprehension of *anātman*. A *kōan* attempts to uproot the tendency to act rationally, logically, and toward some end goal. This, however, does not imply a lack of control: "the non-intentional nature of no-thought is epitomized in Zen by the state of everydayness. When hungry, eat; when thirsty, drink. Any striving based on personal ambition, including seeking Buddhahood, is derided as demonically heretical" (Zhu 437). This attitude is congruent with archaic Buddhist thought (i.e., the Non-Personalists described earlier) which considered any doctrine or method validating the self foolish because there is no basis for it in reality (Harvey, 1995, p. 28).

Within the non-intentional framework of Buddhist practice, any practice that lacks the stance of no-method would be considered unsound. Notwithstanding, the scientific rhetoric of MBSR practice minimizes or omits Buddhist theoretical notions such as no-method (whether through direct or indirect instruction), replaced instead by research findings that cite the benefits of engaging in the practice. This alteration is predictable considering that any tradition taken out of its original context and placed into a new one naturally adapts and reshapes itself.

Whenever *nirvāṇa* is discussed as a concept, it functions as any other *dhárma* and is therefore also empty. However, when one moves from a conceptualized achievement (such as *nirvāṇa*) and into a moment-to-moment presence, one is finally freed from *saṃsāra*. This approach, taken by the *Mādhyamaka* school, manages to find a middle ground between essentialism (where objects have an inherent existence), and nihilism. A pivotal maneuver in the path because the practitioner has the tendency become attached to ideas. The *Mādhyamaka* school thus proposes that the end of theorizing is the final, perfect form of wisdom (Olson, 2009, p. 178). The *Sarvāstivādin-Vaibhāṣika* school avoided this problem also by conceptualizing *nirvāṇa* as the cessation of all motivation whatsoever (Guenther, 1976, p. 193). Approaches similar to these will be used as a proposal in Chapter Two for how secularized meditation programs can possibly avoid the problems that arise from goal-seeking behavior. To provide a foundation for how Buddhism has adapted in a new context, the emerging landscape of American Buddhism will be explored.

2 The Adaptation of Buddhism

> At first, when you *seek* the truth, you have distanced yourself from its domain. Finally, when the truth is correctly transmitted to you, you are immediately the primordial person.
>
> Dōgen (as cited in Kasulis, 1981, p. 93)

Buddhism in Translation

Buddhist teachings have been shaped and reformulated as they have moved dynamically through cultural contexts and historical epochs over the past millennia. For example, as Buddhist thought spread from India and to other cultures, it immersed itself within different systems of thinking, adapting to fit within the respective establishments. Concurrently, the Buddha's teachings, monastic rules, and outward appearances were reformed. The Western world's exposure to Buddhism, however, has been considerable only in the past two centuries—initially, primarily due to the colonization of Buddhist countries. Before the nineteenth century, the Western scholarly understanding of Buddhist philosophy was relatively limited and, moreover, often misunderstood due to a lack of complete and accurate translations of primary sources (Olson, 2005b, p. 250). Relative to the whole span of Buddhist history, then, the intersection of Buddhism and Western styles of thought is in a nascent stage.

Some of the early intersections of Buddhism and Western thought from the mid to late nineteenth century stem from American authors and immigrants. For instance, some writings of the Transcendentalists (such as Emerson, Thoreau and Whitman) and the Theosophical Society (headed by Olcott and Besant) were influenced by Buddhist thought. During the 1840s Chinese

immigrants arrived on the West-coast, bringing with them a combination of eastern religions, including Buddhism. In the 1870s Japanese immigrants arriving on the American West-coast, brought with them Buddhist Jōdo Shinshū traditions (Seager, 1999, p. 53). From this early stage of Buddhist immigrant religion in America, developed the Buddhist Churches of America, formed during the Japanese internment during World War II. These churches provided an establishment for the practice of Buddhism in America. Furthermore, Buddhism gained attention and diverse interest at the 1893 Parliament of the World's Religions in Chicago, the first international conference developed in an attempt to spur a dialogue between the world's major religions. From this expansion of Buddhist teachings in the American landscape, the Beats (authors such as Ginsberg and Kerouac) began to incorporate Buddhist thought into their ways of looking at the world.

McMahan (2008) discusses the influence of the subjective turn in modernity and the Beat's adoption of Buddhist reflective practices (especially meditation). The tradition of Western thought that has shifted from an externally oriented perspective to an internal one has centered on a sense of becoming in touch with an "authentic" form of self (implying an ostensibly objective truth underlying experience). Insofar as Western thought is bound by the Abrahamic faith ethos which supposes a permanent soul, the doctrine of not-self is unable to make the leap across culture. Accordingly, Seager (1999) discusses one primary difference between Eastern and Western thought by citing the words of an active Jōdo Shinshū Buddhist:

> Referring to an idea central to traditional Christianity and implicit in many Americans' ideas about themselves, Kodani added that '[Buddhism] says that there is no such thing

as a soul….that is fairly, radically different, I think, and it affects how you look at everything. (p. 68)

The reformation which occurs at the intersection of Buddhist meditation and Western thought is summarized by McMahan (2008) who is also careful to note that the influence is reciprocal (p. 213). For example, the West's generally tolerant attitude of difference—particularly related to gender equality—makes it a likely place for the reinstatement of the *Theravāda* Order of nuns (Gombrich, 1988, p. 16). Furthermore, the melting pot metaphor ascribed to American culture has incorporated many different traditions of Buddhism. Thus American Buddhists may tend to be familiar with different approaches of Buddhist thought and incorporate more than one in their practice. In the absence of any one overarching tradition guiding the formation of American Buddhism, a debate concerning the "quality of American Buddhism in the long term is important" (Seager, 1999, p. 245).

Within the American *vipaśyanā* movement—a tradition that has formed within America as a distinct entity (McMahan, 2008, p. 186)—meditation communities and their teachings generally revolve around retreat centers rather than Buddhist monasteries. These retreat centers often operate on participant fees rather than solely on *dāna* (lay practitioner offerings). Like private education, whereby instruction is offered on the condition that operational expenditures are first met, the financial structure corresponds to American capitalistic ventures. While many of these centers are nonprofit, they nevertheless are only made possible by charging for their services. Thanissaro Bhikkhu, abbot of an American *Theravāda* Forest Monastery (Wat Mettā), has commented on this American reformulation of how Buddhist teachings are offered. He writes: "There is no way that the dharma can survive as a living principle unless it can be offered

and recieved as a gift" (as cited in Seager, 1999, p. 156). Accordingly, Wat Mettā, though operating within an American milieu, is still supported by an economy based on generosity.

The form of Buddhism that incorporates science, religious diversity, and other features of modernity has been termed "modern Buddhism" by various Buddhist scholars (McMahan, 2008, p. 8). While Buddhism is shaped by its encounter with the West, Buddhist practices have often been reconceived within the American context at the loss of traditional formalities. Consequently, some forms of Buddhism—such as Jōdo Shinshū—have sometimes been "dismissed as a form of lay devotional Buddhism" (Seager, 1999, p. 64) by American convert Buddhists who prefer to emphasize the practice of meditation. Accordingly, Buddhist meditation practices increasingly become removed from the wider context of Buddhist formal devotion. This is in contrast to the Asian Buddhist context where relatively few lay Buddhists practice meditation, who instead prefer to apply Buddhist teachings through formal ritual and ethics (McMahan, 2008, p. 183). Contemporary meditation teachings, however, "often [present] meditation as a mode of internal observation and analysis akin to empirical science and not bound by authority and tradition" (McMahan, 2008, p. 184). Commenting on this absence of framework for Buddhist meditation, Thanissaro Bhikkhu stated: "There are books that will tell you that the sign of successful spiritual practice is the ability to have meaningful relations—nothing about nirvana. But there will always be people who want more, and Buddhism should be there for them" (as cited in Seager, 1999, p. 247). Here, Thanissaro notes the limitations of secularized Buddhist practices. Additionally, Gombirch (1988) sums up the current issue: "To use meditation for secular purposes is to try to adapt Buddhist soteriology to life in the world" (p. 208).

Rethinking the Scientific Approach

It is no surprise that Buddhism has fit well into the Western scientific approach. Both science and Buddhism assert the existence of immutable laws that govern the world. For instance, similar to the positivist tradition of science, the law of *karma* is conceived as a series of causal connections. Additionally, the structure of the Eightfold Path is a systematic method, much like the scientific model. In science, theories are never proven, rather they simply function as a model until further evidence indicates something contrary. Likewise, the Buddha encouraged his followers to approach all theory with skepticism rather than blind acceptance. The soteriological possibilities of Buddhism are also logically arrived at (though they require the acceptance of some assumptions), for example:

1. If and only if X [nirvana] exists, Y [the Path leading to escape from samsara] exists.
2. Y exists,
3. Therefore X exists. (Collins, 2010, p. 51)

The phenomenon of stress reduction, mood and physical improvements documented in psychological literature today must be understood as still operating within the Buddhist *Abhidharma* literature. The same psychological processes elucidated in the canonical texts—such as the *Satipaṭṭhāna Sūtra*—are occurring within the practitioner regardless of whether they are atheistic or religiously devout. As Buddhist practices become increasingly focused on assisting the individual in the pursuit of greater well-being and tranquility in life, the doctrine of no-method is pushed to the wayside. This may happen because, within the American framework, mindfulness has become merely a self-serving method used to grasp an objective goal. In a Western context in which the notion of an enduring soul is ubiquitous, perhaps the doctrine of *anātman* and no-method is implausible.

As we have seen, one Buddhist approach to meditation is ultimately a non-approach: namely, no-method. The problem that science encounters in taking on the study of meditational practices, then, is that the practices are not operationally definable. It is impossible to use the scientific *method* to study no-*method*. Ultimately the premise of performing scientific tests investigating aspects of the self is flawed from the stance of Buddhism because fundamentally there is no self. Furthermore, in Buddhism, these practices are of value only in relation to a cosmos that involves concepts such as *saṃsāra* and *nirvāṇa*. These are obviously undefinable and unmeasurable—they are solely frameworks from which to provide the narrative structure to an otherwise formless infinity and cannot be understood otherwise.

In a Western context, further Buddhist cosmological beliefs—such as rebirth—may alienate people from the teachings of Buddhism as a whole. Still, these beliefs are a central tenet of Buddhist thought. One way of resolving this discrepancy is by conceiving of *nirvāṇa* not as "a transcendental exit from samsara [but rather] a this-worldly transformation of the way we perceive it" (Loy, 2000, p. 156). Accordingly, it is precisely this point at which psychotherapy overlaps well with Buddhism: by citing the potential for beneficial transformation through individual resolve. This translation of the Buddhist tradition to scientific models is problematic, however, because "the Western psychologizing of Buddhism may secularize it so much that it loses its soteriological thrust" (Loy, 2000, p. 156). Thus it may end up "promoting techniques aimed at nothing 'higher' than reducing day-to-day anxiety" (Loy, 2000, p. 156). In the process of secularization, valuable implications of Buddhist practice may be lost.

These losses can be demonstrated through noting some of the objectives of current psychological research on mindfulness. Between Buddhist practice and scientific research, the purpose of concentrative (*samadhi*) meditations can be interpreted in divergent ways. In the

Buddhist framework, practices that develop concentration are undertaken to reduce thought processes. Moreover, it is understood that by keeping the mind on a fixed point (*dhyāna*), one establishes the foundation upon which insight into the tendencies of mind and *saṃsāra* arise. Ultimately, the faculty of concentration is a means for achieving *nirvāṇa* (a skill that is considered significant enough to compose the second division of the Eightfold Path). Conversely, within a scientific approach, the skill of concentration is used not for spiritual progress but for improved "well-being." This perspective is exemplified in research conducted by Zeidan et al. (2010b**,** p. 604**)**. In their study, participant increases in concentration were valued as a benefit for improved cognition and increased memory—there is no mention of participant insights into the nature of *saṃsāra*. Clearly, the scientific application of mindfulness is centered on promoting abilities that benefit practitioner's lives outside of meditative practice (assuming that there is a distinction between meditative states and "other" states). This stands in contrast to Buddhist applications of mindfulness which are centered on the objective of achieving deeper states of realization. The research of Zeidan et al. (2010b) indicates a current trend in the Western adoption of meditative practices: they are used for the gaining some type of psychological benefit.

The American *vipaśyanā* movement, for example, reorients mindfulness practice as a means for achieving a sense of "letting go." The *vipaśyanā* movement, which is less focused on the teachings of any one Buddhist tradition, instead employs whatever means seem most appropriate for an individual (Fronsdal, 1998, p. 177). Absent of doctrine, "American *vipaśyanā* students are given pragmatic and experiential goals. In this light, the practice is offered as a form of therapy from which practitioners can benefit in their current lives" (Fronsdal , 1998, p. 172).

In contrast to the multifarious notion of benefit implicit in the American *vipaśyanā* movement, for "traditional" Buddhist practitioners "it can be said that their ultimate aim is not self-help but a radical reorientation toward the world—and in many articulations, a liberation from it" (Lopez, 2008, p. 207). The striving towards *nirvāṇa*, however, is mostly absent in Western teachings. This difference is exemplified by Fronsdal (1998) who compares Asian and Western approaches:

> When Asian teachers do talk about freedom, it is primarily in reference to what one is free from—that is, from greed, hate, delusion, grasping, attachment, wrong view, self, and most significantly rebirth. For the Asian teachers the religious path ends with final freedom or *nibanna*, which has no purpose beyond itself. (p. 172)

The tacit understanding of *anātman* and no-method implied in the approach of Asian teachers is absent in the American consciousness. For Asian instructors, the freedoms engendered by the Buddhist path are intrinsically valuable and have no functions beyond themselves. Accordingly, "the [Buddhist] goal is something far beyond anything easily measured on an fMRI" (Lopez, 2008, p. 209). Without the transfer of such principles across culture, meditation in the American context becomes akin to other treatment methods which justify their value through demonstrable results. The Western notion that mindfulness meditation engenders a sense of freedom is applied to the ongoing empirical project of mitigating psychological dysfunction and disorder. Conversely, in Asian traditions, that freedom is held as a resolution to the ontological—not psychological—problem of *saṃsāra*.

The methods adopted by American Buddhist practitioners are generally applied to those living a lay life as opposed to a monastic one. One of the potential problems involved in

secularizing such practices are that they were "developed by and for renunciates, [and therefore] cultivate feelings of detachment from the world" (Gombrich, 1988, p. 207). The problem then becomes whether Buddhist teachings adversely affect one in a non-renunciate life. It is thus important for secularized programs to omit qualities of meditation techniques that encourage complete detachment (for instance, of one's spouse) so as not to risk alienating its practitioners from the popular societal norms. For example, Gómez (2000) cites the anecdote of a leading *Theravāda* monk, who, at a conference asserted that "contemporary notions of sexuality as normal and sexual drive as healthy had to be wrong" (p. 378). This stance is problematic for a lay practitioner who has family commitments.

A popular secular adaptation that is informative for lay practitioners is in the realm psychotherapy (Seager, 1999, p. 39). Psychotherapist and author, Mark Epstein has explored ways to effectively incorporate Buddhist mediation practices into psychotherapy. Specifically, how the Buddhist notion of not-self can be applied in Western psychotherapeutic methods is of particular interest because problems stemming from the ego pervade both Freudian and Buddhist thought. For example, in a review of Epstein's work, Gunn (1996) notes that "Since Buddhism… starts with the emptiness of the self, it offers a kind of healing which opens into all of life beyond narcissistic wounding" (Gunn, 1996, p. 77).

Implied in this model is a service relationship—that of the healer and the afflicted. Interpreting meditation as a form of service may be problematic from the Buddhist stance of not-self, since, as Jones (1979) notes: "any self-service feeds self-centeredness and so, basic to any further training, is not appropriating people and objects according to our own interests" (p. 374). The impediment of expectation may simply be due to the consequences of the consumer model and thus is an organic outgrowth of the American context. Moreover, American retreat centers

establish a dynamic of consumerism between teacher and student. As a consumer, one naturally expects to receive some benefit for one's resources. In the helping professions (e.g., psychotherapist, social worker), this notion of consumerism is implied by the standardized title "consumer" that is designated for patients. This jargon suggests that the therapeutic relationship is one based in the exchange of a determinate service.

In Buddhism's movement from the East to the West, and specifically in its relationship to the scientific model, one of the focal aspects of the practice that has been neglected is the teaching that one should practice without intention. This is unsurprising considering the scientific model's emphasis on results. Granted, MBSR does not completely abandon the perspective that expectation or intentionality hinders one's aim in engaging in meditation. At the outset of the 8-week program, participants are instructed to let go of their expectations and goals in coming to receive treatment (Kabat-Zinn, 2003, p. 148). This is indeed an unconventional for a clinical treatment and indicates the beginnings of a bridge between secular and Buddhist practice. The nature of MBSR is geared to a secular population, thus to explicitly elaborate on Buddhist doctrinal theories would conflict with the method. And while making a religious practice accessible to a secular audience is valuable, it is also informative to be aware of how this change may influence the practice itself along with the general perception of mindfulness meditation as a Buddhist practice. We should be conscious of what is lost in the process in order to shape Buddhist practices in a way that are most efficacious.

MBSR is ultimately a treatment method for anxiety and thus never escapes the sphere of goal-seeking behavior. By its nature as an empirical method, *it is disparate in form from no-method*. This is a distinction between meditative approaches and therapeutic ones. To justify its

applicability, therapy is required to be established in research findings, while meditative traditions need not be justified through quantitative research. This enables them to operate without an empirically grounded method. In mindfulness meditation's conversion from a religious practice to a scientific technique, the quality of *anātman* and non-attachment to outcome is ultimately lost. This suggests that MBSR programs may not avoid the problems associated with expectation—namely, a clinging to the self which is ultimately the source of anxiety. A more efficacious, secular anxiety reduction method gleaned from Buddhist theory, then, may be one which aims instead for the dissolution of the self (or at least does not make the self salient). In the lessening of the ego, a reduction in aversive mood would naturally follow because negative mood is inherently predicated on an attachment to selfhood.

A technique of Buddhist meditation that may have the potential to counter the problem of expectation in a secular framework is the quality of equanimity (or *upekṣā* in Sanskrit). Equanimity is considered a characteristic of *nirvāṇa* along with the six others: that is, "sati, dhammavicaya, viriya, piti, passaddhi, [and] samadhi" (Swearer, 1973, p. 443). Equanimity also constitutes one of the four *brahmavihāras,* (also including *maitrī*: loving-kindness*, karuṇā*: compassion*, mudita*: empathetic joy), the four perfections which are cultivated by some *Theravāda* meditators (Harvey, 1995, pp. 80-89). *Upekṣā* arises when one rids the mind of defilements and enters into deeper stages of concentration (i.e., the latter two of the four stages of the *dhyānas*). Theoretically, it occurs in conjunction with letting go of attachments to sense objects. Here, the mind is no longer drawn to them and instead abides in a tranquil and concentrated state. Additionally, "[upekṣā] is characterized as immeasurable, nothingness, emptiness, and signless" (Swearer, 1973, p. 445).

The four *brahmavihāras* are considered effective counters to aversive mental states (such as anxiety) and they are traditionally employed as such. Accordingly, a person in the state of equanimity is described as unaffected by the vicissitudes of life (Harvey, 1995, p. 89). The quality of equanimity thus has the potential to undermine the detrimental aspects of holding expectation, since the essence of equanimity is acceptance. Therefore, while one may act in the interest of the empirical self (e.g., caring for the body and for others) in the state of equanimity, the outcome of those specific projects is of no concern. Accordingly, techniques to develop equanimity, when used in conjunction with secularized mindfulness meditation, could further increase the benefits of MBSR practices that otherwise create expectations.

Part II

The Effects of Expectation on Anxiety Reduction in Mindfulness Meditation

Abstract

The effect of expectation on anxiety reduction, mood disturbance, and level of mindfulness in a secular mindfulness meditation practice was investigated. Fifty-four undergraduate students participated in three 20-minute mindfulness meditation sessions over the course of a week. In one condition, 28 participants were read a primer which instilled an expectation that each participant would achieve anxiety reduction as a result of the mindfulness meditations. In a second condition, 26 participants were read a primer which did not create expectations for anxiety reducing benefits. A two-way mixed ANOVA was carried out to test the hypothesis that participants who have expectations for anxiety reducing effects would show a lesser reduction in anxiety. Although the mindfulness meditation sessions did significantly reduce anxiety and mood disturbance, and increase mindfulness level, there were no significant differences in change between the conditions. Results are discussed with regard to the practical implications of the research, the methodological limitations, and the directions for future research into the effects of expectation on mindfulness meditation.

Introduction

The application of mindfulness meditation for reducing anxiety is a growing field in psychological research (Didonna 2009). Numerous studies have suggested that such an intervention does significantly reduce stress in participants (Grossman et al., 2004; Brown & Ryan 2003, p. 839; Carlson et al., 2003; Davidson et al., 2003; Gold et al., 2010). Despite that the theological origins of mindfulness meditation stem from a Buddhist tradition that emphasizes meditation without intention, empirical research interested in mindfulness largely has not accounted for the influence of participant expectations on the efficacy of meditation. The current study, therefore, was designed to examine whether participant expectations about mindfulness meditation affect the level of anxiety reduction. Specifically, the author proposed that those assigned to a "no-expectation" condition would experience a greater reduction in anxiety than those assigned to an "expectation" condition. To support this main research hypothesis, this introduction presents a working definition and brief history of the term "mindfulness" and explains the Buddhist method (or no-method) of non-intentional meditation. Furthermore, by drawing on previous research in the field, the question of how expectation interacts with mindfulness meditation in a secular context is explored. Finally, a profile of the different measures of anxiety and mindfulness is presented to elucidate why the specific measures were employed in this study.

Put simply, mindfulness is an awareness of and attention to what is occurring in the present moment. This study used Kabat-Zinn's (2003) working operational definition of mindfulness: "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (p. 145). This way of relating to the world is a ubiquitous one. Indeed, every human has this capacity and can

observe it operating in commonplace activities such as washing the dishes. This ability was first systematically used for spiritual and mental development over two millennia ago when the Buddha, upon his inquiry into the nature of suffering, recognized its potential. As documented in the *Ānāpānasati* and the *Satipaṭṭhāna Sūtra*, mindfulness provides the foundation from which the different schools of Buddhist thought have emerged (Kabat-Zinn, 2003, p. 146).

The detriment of expectation was acknowledged long ago within the Buddhist perspective—striving for a definite goal in meditation was considered a hindrance to the pursuit of the ultimate goal of *nirvāṇa*. Although seeking *nirvāṇa* is indeed a goal in and of itself, Olson (2005a) describes how having it as a goal is not possible within a Buddhist framework:

> It is useful to note that a seeker of enlightenment does not bring himself or herself into contact with [enlightenment], because there is, strictly speaking, no permanent self with which to accomplish this. It is more accurate to understand the seeker as attaining [enlightenment] by realizing and validating the fact that there is no self. (p. 55)

This view of not-self—described in depth in part one—implies an impermanent and thus non-existent entity behind all phenomena, including the concept of *nirvāṇa* itself. Therefore, to achieve what is conventionally referred to as *nirvāṇa*, the practitioner needs to recognize that she or he must first let go of the conceptual notion that there is something (i.e., awakening) to achieve in the first place, and moreover, someone (i.e., the self) to achieve it.

Accordingly, practitioners are often instructed to meditate without intention because the act of dropping the goal breaks a sense of the self. In Zen Buddhism, this approach is referred to as "no-method" (Eugene, 2009, p. 304). This non-strategy has indeed been recognized within the field of psychology by Brown & Ryan (2003, p. 844) in the understanding that a pursuit of achieving some desired state inhibits the cultivation of mindfulness itself. Nevertheless,

contrasted with this abstract non-objective is the capitalization of mindfulness methods for addressing concrete psychological and physiological issues. Currently, the techniques that have been exercised for millennia by meditators operating in a Buddhist context are being adapted for both secular and religious American populations.

One program on the forefront of such a reapplication is the eminent Mindfulness Based Stress Reduction (MBSR) course. Various studies have investigated the effectiveness of this program at reducing stress, and such research consistently suggests that a higher level of mindfulness is correlated with a lower level of stress after partaking in an eight week MBSR program (Grossman et al., 2004; Brown & Ryan 2003, p. 839; Carlson et al., 2003; Davidson et al., 2003; Gold et al., 2010). Additionally, through the measurement of physiological alterations in the brain—such as increases in left-sided activity, associated with anxiety reduction—MBSR has been shown to significantly reduce stress level **(**Davidson et al., 2003). Even though MBSR programs span 8 weeks and include multiple hours of mindfulness practice daily, a four-time mindfulness session of 20 minutes has been shown to significantly reduce anxiety (Zeidan et al., 2010b, p. 604). Therefore, although the present study required participants to engage in only three 20-minute sessions of mindfulness training, it may have been sufficient to reduce stress level. In this way, the present study expanded the body of research on the efficacy of shorter-term mindfulness meditation interventions.

Not only can mindfulness practice significantly reduce anxiety, Falkenström (2010) found that higher levels of mindfulness were correlated with higher levels of overall well-being. This finding corresponds to Baer's (2003) research that also shows a correlation between the two. Falkenström's (2010) results were established through a correlational analysis of scores on questionnaires (including the Kentucky Inventory of Mindfulness Skills, Five Facet Mindfulness

Questionnaire, and the Clinical Outcomes in Routine Evaluation-General Population) designed to measure mindfulness and well-being. These questionnaires were given to participants before and after an intensive meditation retreat and to a control group that did not practice mindfulness as intensively. One limitation of this research that Falkenström's (2010) mentions in his study is that a significant increase of well-being may be confounded by the break in routine that a retreat affords, rather than a consequence of an increase in mindfulness itself. This confound may have been a limitation of the present study because similarly, the meditation sessions served as a relaxing break from an otherwise busy schedule. However, findings from Zeidan et al. (2010b) research show that the mindfulness meditation task did significantly reduce anxiety more than a control group engaged in a comparably relaxing break from routine. Moreover, although an increase in well-being is different in nature from a decrease in anxiety, they are nevertheless related because it is unlikely for those with a high level of anxiety to report coinciding feelings of well-being.

Approaching one's experiences with the qualities of acceptance and non-judgment are characteristics that distinguish mindfulness from other forms of awareness, such as irritation. Furthermore, they allow mindfulness to have anxiety reducing effects (Baer, 2003, p. 125; Warren & Ryan, 2004, p. 242). Bishop et al. (2004, p. 236) argue that because of this non-preferential stance of mindfulness there is no longer a goal to achieve or a solution to be had (instead one readily accepts things as they are), enabling one to let go of stressful thinking. This aspect of mindfulness would be compromised by a participant's goal-seeking because an expectation for a result inherently involves the preference of a specific type of experience. Accordingly, in the anticipation of some future experience, one would necessarily contrast their present moment with an imagined future state in the hope that the two will correspond (this is

termed in Chapter One as a "possible self"). By continually returning the mind to the present moment through mindfulness practice, however, the practitioner's focus is reoriented from the future to the present moment alone—thereby preventing the anxiety that results from anticipation (Bishop et al., 2004, p. 236; Nolen-Hoeksema, 1991, p. 569).

These detrimental effects of expectation are similar in nature to the false-hope syndrome, a phenomenon in which an individual's goal is hindered due to exaggerated expectations. In their research on this condition, Trottier et al. (2009) suggest that because inflated expectations typically do not correspond to experience, feelings of discouragement arise. This, in turn, hinders one's pursuit of the goal because one is prone to abandon their efforts. Accordingly, the research participants that did not meet their own expectations—those in the study's "exercise" and "meditation" conditions—reported less overall success than control participants (Trottier et al., 2009). Participants in the present study's expectation condition similarly may have had inflated expectations for results because of the primer. Participants assigned to the expectation condition, then, would have felt less successful (that is, felt that they had achieved less stress reduction) than those assigned to the no-expectation condition. This variance was indicated through each participant's self-reported level of stress following the meditation sessions. Because a self-reported, subjective measure of stress is not necessarily representative of an objective stress level, this experiment operated from a cognitive approach whereby participant appraisal of stress level was the definitive measure.

One critical difference between the research of Trottier et al. (2009) and the current study, however, was the time allotted to meditation. Trottier et al. (2009) studied the effects of the false-hope syndrome on self-change by measuring expectation and experience over the course of two weeks. In contrast, the present study used half of this timeframe: just one week. Moreover, the

participants in the present study engaged in three 20-minute sessions over a week, as opposed to the participants of research conducted by Trottier et al. (2009) that engaged in four, 30-minute sessions, each week for two weeks. This is a total difference of 3 hours, or 4 times more practice. Such unequal participant commitments thus modified the type of self-change that was measured in the present study, i.e., immediate impressions. Whereas immediate and obvious changes are salient in the first week, they may dissipate by the second week because participants have more time to reflectively gauge self-change.

The research of Seligman et al. (2009), similar to Trottier et al. (2009), investigates the effects of conflicting expectations and experiences. Seligman et al. (2009), however, were interested in the role that this dissonance has on the efficacy of cognitive behavioral psychotherapy. Seligman et al. (2009) suggest that perceptions of psychotherapy, engendered by popular media, may form specific expectations about what the experience of psychotherapy should be like. Predictably, such perceptions are usually not verified by the therapeutic experience itself. This incongruity between perception and reality is relevant to the present study because participants may have held popular perceptions about what meditation practice might be like (e.g., relaxing, boring, transcendent). Thus, participants may have found that their anticipations were inaccurate.

While the effectiveness of psychotherapy did not vary as a function of expectation in the research of Seligman et al. (2009), there were significant variations in affective reactions to the treatment (i.e., perceptions of its helpfulness or enjoyableness) due to the manipulation of expectation. Seligman et al. (2009) suggest that a reduction in affective reaction may, in turn, reduce motivation to engage in the practice itself. For participants assigned to the expectation

condition in the current study, experience and expectation may similarly have proved to be inconsistent, and thus may have reduced affective reactions to the meditation sessions. Accordingly, motivation to stay engaged in the practice may have waned as well. And because maintaining mindfulness requires ample effort, a reduction in affective reaction may have reduced level of mindfulness. Since greater mindfulness is correlated with a reduction of stress, participant expectation could have inhibited anxiety reduction (Brown & Ryan, 2003, p. 839). Research demonstrating expectation's influence on subjective experience informs the present study by suggesting that the outcome of the meditation sessions was influenced by participant expectations of it.

Johnson (1973) furthers the notion that expectation shapes experience and hence the results of a treatment. In his research, he demonstrated that the subjective intensity of a painful physical sensation can be influenced by what one expects to feel prior to experiencing that painful sensation. Johnson (1973) manipulated expectation in his study via two different descriptions of the anticipated level of pain. Participants assigned to the "relevant-information" condition were informed of the precise characteristics of the sensation they should expect (e.g., sharp pain) from a medical procedure, while those in the "irrelevant-information" condition were only informed of the kind of procedure that would take place. Their results indicated that participants who were provided irrelevant-information reported significantly higher distress ratings than participants given relevant-information, but only when experience (that of the sensation) and expectation (provided by the relevant-information) were congruent. Therefore, a lack of expectation may have caused a greater perceived effect of the intervention (in this case physical pain). Accordingly, in the present study, participants in the no-expectation condition

may have perceived the stress reducing affects to be more drastic than those expecting them. Johnson's (1973) method of manipulating the independent variable is also pertinent to the current study because a variation of it was employed: the primer read in the expectation condition referenced specific positive feelings associated with meditation practice, while the participants of the no-expectation condition were read a primer containing only historically relevant information, omitting any reference to benefits.

To determine the effects that expectation had on mindfulness meditation's ability to reduce anxiety, it is necessary to operationally define it. Indeed, the term could refer to an underlying state of distress, a specific fear of the future, or the fight or flight response to a stimulus. To avoid this ambiguity, the tension sub-scale included in the Profile of Mood States-Brief Form (POMS-B) questionnaire determined participant levels of anxiety. The POMS-B is a 30-item questionnaire that is has been used in previous research to measure level of anxiety specifically (Young & Baime, 2010). Furthermore, the POMS-B has been used in many other studies interested in mood (Leith, 1994; Berger & Motl, 2000). This is useful for the present study because it aimed to measure the momentary anxiety (i.e., state anxiety) of a participant rather than their baseline anxiety level (i.e., trait anxiety). In the present study, then, each participant's level of anxiety was determined by their corresponding score on the POMS-B tension sub-scale. The POMS-B also included a measurement of other mood states besides tension (including depression, anger, vigor, fatigue, and confusion), thereby providing a total mood disturbance score. Such a comprehensive assessment of mood allowed the present study to assess expectation's effects on general well-being that Falkenström (2010) was interested in.

Thus, in the present study, participant well-being was measured by their corresponding POMS-B total mood disturbance score.

Additionally, it is necessary to specify how mindfulness was measured in the present study. Several empirical measures of mindfulness have been developed, including the Five Facet Mindfulness Questionnaire (FFMQ), the Kentucky Inventory of Mindfulness Skills (KIMS) and the Freiburg Mindfulness Inventory (FMI). Walach et al. (2006, p. 1543) developed the FMI to enable researchers to measure other facets of mindfulness such as its non-judgmental and accepting nature. Also, the FMI accounts for the participant attitude of having no specific goals. Thus, as these features were strengthened, mindfulness scores would theoretically rise. This capability of the FMI makes it a particularly valuable measure for the present study since it is concerned with participant goal-seeking as well. Further, Brown & Ryan (2003) used this test in their study of anxiety reduction over four 20-minute meditation sessions as a manipulation check for participant engagement in the meditation. Finally, the FMI has been shown to have excellent internal consistency as demonstrated by a Cronbach alpha of .93 (Walach et al., 2006; Baer et al., 2007). The present study used participant scoring on the FMI to determine level of mindfulness.

Based on both Buddhist theory and psychological literature that discuss the role of expectation and the various approaches to mindfulness meditation, it is likely that expectation may influence the efficacy of a short-term mindfulness meditation intervention. The present study examined whether strong participant expectations about mindfulness meditation alters the degree of anxiety reduction. The author defined *expectation* as a participant's anticipation of the benefits of mindfulness meditation. Expectation was manipulated by a priming description that

swayed the participant to either expect benefits (i.e., less stress) from the mindfulness training or to not have expectations for benefits.

After being read the primer, participants engaged in a mindfulness meditation, a technique used to develop *mindfulness*—defined as "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (Kabat-Zinn, 2003, p. 145). In total, there were three 20-minute meditation sessions over the course of one week, each with different primers. Finally, participants filled out a pre and post questionnaire (specifically, before the first session and immediately following the third session) to measure levels of *anxiety*—defined as an unpleasant emotional state that is the result of ruminations about the future self. In addition, participants filled out the FMI with the POMS-B to measure level of mindfulness before and after the meditation. First, it was hypothesized that level of anxiety and total mood disturbance would be reduced, while level of mindfulness would increase for all participants regardless of condition. Second, it was hypothesized that those assigned to the no-expectation condition would report a greater reduction in anxiety and total mood disturbance, and a smaller increase in mindfulness than those assigned to the expectation condition.

Method

Design

A two-way mixed-design ANOVA was used to investigate whether expectation affected anxiety. *Expectation* was operationally defined as the experimenter's references to the potential benefits of meditation. *Anxiety* and *Mindfulness* were operationally defined as the score on the POMS-B and FMI, respectively. The POMS-B score also served as the measurement of the

dependent variables. Additionally, the FMI score provided a manipulation check to determine that each participant was effectively engaged in the mindfulness practice. The independent, between subjects variable was the condition (i.e., expectation or no-expectation), while the dependent, within-subjects variable for mood and mindfulness was the difference in score documented pre and post meditation sessions. Across these conditions, the level of expectation was manipulated by a description (read aloud by the researcher) which was designed to either create expectations for stress reducing effects or avoid creating expectations by only citing historical information irrelevant to mood state. All statistical tests used a .05 significance level.

Participants

Recruiting was conducted during the Fall 2011 semester at Allegheny College. Participants were selected by means of convenient sampling and were recruited from nine psychology classes at Allegheny College. Altogether there were 54 participants: 28 in the expectation condition and 26 in the no-expectation condition. The age range of participants in the expectation condition was 18-24 (M = 19.50). The age range of participants in the no-expectation condition was 18-21 (M = 18.91). The expectation condition consisted of 7 male, 17 female students, and 4 who did not indicate their sex. The no-expectation condition consisted of 12 male, 11 female students, and 3 who did not indicate their sex. To assign participants to a condition, a nonequivalent comparison group design was used. Because teacher demographics and curriculum were similar across the classes, the nonequivalent comparison method likely had few confounding variables. For their involvement, participants either received extra credit according to the professor's policy or did not receive compensation.

In total, 132 participants were recruited for the study. Of those volunteers, 76 completed participation. Only 54 participants were used, however, because there was an unexpected influx of participants in the no-expectation condition and a shortage of POMS-B questionnaires. Therefore the no-expectation condition had a higher average of participants per session. Participants were assigned to a condition corresponding to the class that they were recruited from (due to scheduling conflicts, however, some participants were assigned to the alternative condition). In the expectation condition, one participant began but did not complete participation for unknown reasons. In the no-expectation condition, six participants began but did not complete participation for unknown reasons.

Materials

Anxiety was measured using the POMS-B (McNair & Heuchert, 2005), a 30-item self-report inventory. The POMS-B uses a five point Likert scale response format ranging from (0) not at all to (5) extremely, for each sub-scale of mood including tension, depression, anger, vigor, fatigue, and concentration. The POMS-B total mood disturbance score (the sum of the five mood sub-scale scores after vigor is subtracted) ranges from 0 to 100. Anxiety was measured by isolating participant scores on the tension sub-scale. The total score on this sub-scale ranges from 0 to 20, where higher scores indicate higher levels of anxiety. For this study, participants were asked to consider "how you have been feeling in the past seven days" as a reference for selecting answers pre-meditation sessions and "how you have been feeling since session 1" for selecting answers post-meditation sessions. Mindfulness was measured using the FMI, a 14-item inventory that measures individual level of mindfulness. For each item, scores range from (1) rarely to (4) always, on a Likert scale. A participant's total score thus ranges from 14 to 56, where higher

scores indicate a greater level of mindfulness. In addition, the FMI functions as a manipulation check to assess whether participants were truly engaged in mindfulness practice (Zeidan et al. 2010a). Participants were asked to use the last seven days as the timeframe to consider each item in the pre-meditation sessions and to use the days since session 1 to consider each item in the post-meditation sessions questionnaire.

All primers were composed by the researcher and are included Appendix A. Expectations were formed by citing previous research findings that suggest the various benefits of meditation in the expectation condition. For the no-expectation condition, expectations were avoided by citing irrelevant information such as the history of Buddhist meditation. The follow-up questionnaire used to assess longer-term effects of the manipulation and the presence of confounding variables was written by the researcher and is included in Appendix B.

A 20-minute guided mindfulness meditation recording was played using an i-pod and computer speakers. Chairs were provided for participants to sit comfortably upright during the meditation sessions. The mindfulness meditation recordings were obtained from dharmaseed.org. Specifically, the "2008-09-22, Three Month Retreat Instructions - Day 1" was used for the first session; the "2008-09-23, Three Month Retreat Instructions - Day 2" was used for the second session (these were accessed at: http://dharmaseed.org/retreats/?search=IMS20080920q4d &sort=talks_teacher. name); and the "2002-07-27 Guided Meditation" was used in the third session (this was accessed at: http://dharmaseed.org/teacher/96/?search= guided+meditation). All recordings were edited down to 20-minutes by removing all references to Buddhist theory and by reducing the gaps between vocal instructions. The first guided meditation session instructed participants to be maintain an awareness of the breath by paying attention to whether one is

breathing in or out. Following this, participants were instructed to note whether the breath was relatively long or short. The second guided meditation instructed participants to notice sounds and be aware of the entire "breath body" (either the sensations of the body moving, or an awareness of the whole span of respiration) during the inhalation and exhalation. Participants were then instructed to gently repeat the word "calming" upon each inhalation and exhalation. The third guided meditation session instructed participants to connect to the various sensations of the breath and note differences in quality of sensation and emotions (i.e. pleasantness, unpleasantness, restlessness).

Procedure

The study's procedures were authorized by the Allegheny College Institutional Review Board. Participants were selected from psychology classes at Allegheny College on a voluntary basis. Participants were randomly assigned to a condition according to the class they were recruited from. Participants signed up for three sequential sessions over the course of a week (see figure 3 for the session time-slot options). In the first meditation session, after obtaining informed consent, participants were asked to complete the POMS-B and FMI inventories to assess their levels of anxiety and mindfulness prior to the meditation sessions. Participants then took a seat in chairs that were arranged in rows facing one side of the room. When all participants were seated, they were read aloud the first primer. Participants were then instructed to find an upright yet relaxed seated posture that they could maintain throughout the session (see Appendix A for the script used for all primers and instructions).

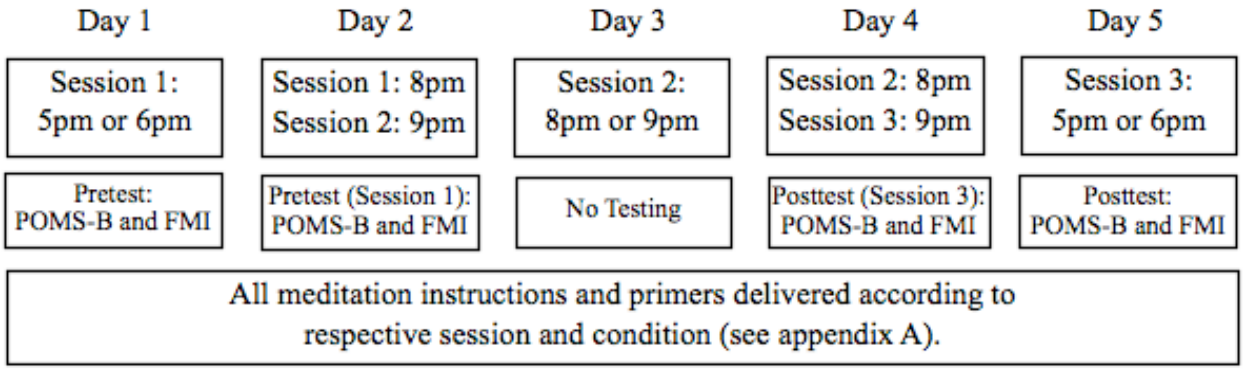


Figure 3. An outline of the session times available for participants and the corresponding testing procedures.

Following this, participants were guided through a 20-minute mindfulness meditation session by the first recording, played from the front of the room with an i-pod and computer speakers. The room contained no further items apart from common classroom materials. Upon reading the script, the researcher then exited the room and closed the door, leaving the participants to meditate alone. The second and third sessions repeated the same process (with variation in corresponding primers and meditation instruction); however the second session did not involve questionnaires, while in the third session participants completed the POMS-B and FMI immediately following the session to assess levels of anxiety and mindfulness following the meditation sessions. Two weeks later, participants completed a follow-up questionnaire through email or campus mail (see Appendix B). This was designed to gauge other possible differences between the two conditions and to test for pre-experimental expectations. Upon submission of the follow-up questionnaire, participants were sent a debriefing form to their email address.

Results

The effect of expectation on anxiety reduction, mood disturbance, and mindfulness level during a mindfulness meditation intervention was investigated. The independent, between subjects variable was the condition that participants were assigned to. Depending on the

condition, the primer read before each session was designed to create expectations for results or avoid creating such expectations. The dependent, within-subjects variable was the difference in score between pre and post meditation sessions. These scores were measured by participant responses on the POMS-B tension scale (a 5-item sub-scale with a scoring range between 0 and 20), total mood disturbance (a 30-item measure with a scoring range between 0 and 100), and by performance on the FMI (a 14-item measure with a scoring range between 14 and 56). It was hypothesized that the meditation sessions would effectively reduce stress and increase mindfulness for participants in both conditions. It was also hypothesized that participants who were primed with expectations immediately preceding the meditation sessions (in the expectation condition) would show a significantly less reduction in anxiety than participants who were not primed with expectations (in the no-expectation condition).

To test whether the mindfulness meditation sessions reduced anxiety and total mood disturbance while increasing mindfulness, a two-way mixed ANOVA was used. All effects were statistically significant at the .05 significance level. The hypothesis that the mindfulness meditation sessions would reduce anxiety and total mood disturbance, and increase level of mindfulness was confirmed. The main effect of tension scores yielded an F ratio of $F\,(1, 52) = 41.80$, $p < .05$, $\eta^2 = .45$, indicating that the mean level of tension was significantly lower between pre and post meditation sessions. This effect is presented in table 2. The main effect of total mood disturbance yielded an F ratio of $F\,(1, 52) = 71.75$, $p < .05$, $\eta^2 = .58$, indicating that the mean total mood disturbance score was significantly lower between pre and post meditation sessions. The main effect of level of mindfulness yielded an F ratio of

F (1, 52) = 37.61, $p < .05$, $\eta^2 = .26$, indicating that the mean level of mindfulness score was significantly higher between pre and post meditation sessions.

To test whether expectation affected degree of anxiety reduction and total mood disturbance, and the level of mindfulness across conditions, a two-way mixed ANOVA was used. All effects were statistically non-significant at the .05 significance level. Thus the main research hypothesis that the amount of change in anxiety, total mood disturbance, and mindfulness levels would vary depending on condition was not confirmed. The main effect of condition on tension yielded an F ratio of F (1, 52) = 0.21, $p > .05$, indicating that the mean change score was not significantly higher in the no-expectation condition than in the expectation condition. This result is presented in table 2. The main effect of condition on total mood disturbance yielded an F ratio of F (1, 52) = 0.22, $p > .05$, indicating that the mean change score was not significantly higher in the no-expectation condition than in the expectation condition. The main effect of condition on level of mindfulness yielded an F ratio of F (1, 52) = 0.02, $p > .05$, indicating that the mean change score was not significantly lower in the no-expectation condition than in the expectation condition. A bar graph of the means is presented below in figure 4. Additionally, all means, standard deviations, and participant numbers are included below in table 1. The implications of these findings are explored in the subsequent section.

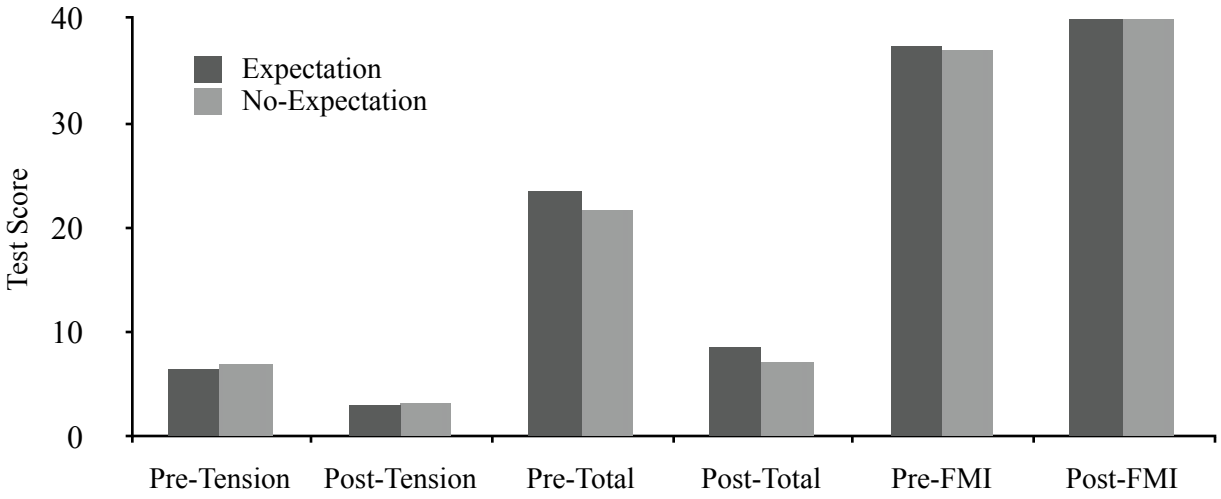


Figure 4. Effects of expectation on mindfulness meditation across condition. Means of participant scoring (including both conditions, pre-meditation sessions and post-meditation sessions) on the tension sub-scale of the POMS-B, the Total Mood Disturbance score of the POMS-B, and the FMI are presented.

Table 1

Descriptive Statistics for Pre and Post Scores Across Condition

Measure	Condition	*M*	*SD*	*N*
Pre-Tension	Expectation	6.46	3.74	28
	No-Expectation	6.96	4.33	26
	Total	6.70	4.00	54
Post-Tension	Expectation	3.04	3.19	28
	No-Expectation	3.27	2.93	26
	Total	3.15	3.04	54
Pre-Total	Expectation	23.46	16.67	28
	No-Expectation	21.69	13.77	26
	Total	22.61	15.22	54
Post-Total	Expectation	8.57	13.56	28
	No-Expectation	7.15	11.97	26
	Total	7.89	12.72	54
Pre-FMI	Expectation	37.32	6.48	28
	No-Expectation	36.92	5.80	26
	Total	37.13	6.11	54
Post-FMI	Expectation	39.89	6.04	28
	No-Expectation	39.88	5.62	26
	Total	39.89	5.79	54

Table 2

Summary of ANOVA for Condition and Tension

Source	*SS*	*df*	*MS*	*F*	
Between Subjects					
Condition (A)	3.60	1	3.60	0.21	0.09
Error e: Between	910.80	52	17.51		
Within Subjects					
Tension	341.80	1	341.80	41.80*	
AB	0.46	1	0.46	0.05	
Error e: Within	425.19	52	8.17		
Total	1681.85	107			

Note. *p < .05

Discussion

The results of this study found a statistically significant relation between pre and post mindfulness meditation sessions. This finding indicates that the experiment's three 20-minute meditation sessions did effectively reduce anxiety. Accordingly, the findings support the methodology employed in the current study. The meditation instructions given to participants, and the environment in which they were delivered was effective at reducing anxiety. The results, however, failed to find a statistically significant relationship between expectation and anxiety reduction. Moreover, there were no statistically significant differences across conditions for total mood disturbance or level of mindfulness. Thus there was no support of the hypothesis that expectation inhibits anxiety reduction in mindfulness meditation.

Though the results did not confirm the main research hypothesis, they can be used to inform mindfulness meditation program designs. The significant reductions in stress, total mood disturbance and the increases in mindfulness between pre and post meditation sessions indicate that a practice of at least three 20-minute mindfulness meditation sessions over the course of a week can improve mood. Furthermore, practitioners do not require a teacher to guide the

meditation session—a recording can be effective as well. This supports the notion that meditation practice need not be a specialized practice reserved for people dedicating a great amount of time and energy to practice. Rather, mindfulness meditation is an accessible method to reduce stress.

Previous research on the anxiety reducing effects of mindfulness meditation has largely focused on long-term meditators (Zeidan, et al., 2010a). It has been documented repeatedly that mindfulness meditation interventions of varying intensity and duration do significantly reduce stress (Grossman et al., 2004; Brown & Ryan 2003, p. 839; Carlson et al., 2003; Davidson et al., 2003; Gold et al., 2010). The present study, however, has specifically demonstrated that a relatively short-term intervention can significantly reduce participant anxiety as well. This is a timespan of mindfulness practice that currently has not been studied in depth. Additionally, this finding gives credence to the results of Zeidan, et al. (2010a) which have demonstrated the effectiveness of a similarly short-term mindfulness intervention.

In contrast to the research of Zeidan, et al. (2010a) where participants filled out the anxiety measure (SAI) before and after each session, participants in the present study filled out the anxiety measure (POMS-B) before the first session and immediately following the third session (see figure 3). It is thus difficult to tease out what difference an even smaller number of sessions may have had on mood because the same stress reduction may have occurred after just one meditation session. Additionally, while participants were instructed to use the days since the first session as a reference for their mood in the post-questionnaires, a state of relaxation that immediately follows the meditation session could lead to hindsight bias. Thus, a better approach may be to take measurements after a number of days following the sessions.

The author speculates that the research results are contrary to the main hypothesis because immediate changes tend to be salient. Whereas, participants who engage in longer-term mindfulness practice generally meet more difficulties over time and thus may have a better ability to gauge their success, participants engaged in a short-term intervention may feel that they were successful regardless of their expectations. For example, short-term meditators encounter relatively few difficulties and quickly achieve discernible changes to their mood. In contrast, long-term meditators that already have a low baseline of stress may find that expectation hinders further progression beyond more subtle types of anxiety. Consequently, future research into role of expectation in longer-term interventions may show statistically significant differences between conditions.

Primer Effectiveness

While it is possible that expectation indeed has no influence on meditation, it is difficult to conclude this considering the limitations of the present study. First, the primer was developed specifically for this study and thus has not been shown to be effective at instilling expectation or avoiding expectation previously. Hence, there is no evidence that the primer indeed sufficiently established expectation in the participants. For example, in the follow-up questionnaires numerous participants in the no-expectation condition responded to question number four ("Did you expect to achieve any specific benefits from engaging in the mindfulness meditations?") with responses such as "I was hoping to have three guaranteed relaxing nights" or "Yes, I expected to become more relaxed." One even indicated that they had taken a course on meditation before and was expecting to lower their stress through participation. Interestingly, many of those who responded "no" to the fourth question indicated in their response to question

three ("In your opinion, what is mindfulness meditation most useful for?") that they felt mindfulness meditation was most useful for relaxation or "clearing the mind." This was similar across conditions. Therefore, although many of the participants did not expect to have any specific benefits, the majority did indicate that they thought mindfulness meditation was most useful for relieving stress.

Interestingly, there appeared to be a difference between the conditions on responses to question four. Most participants in the expectation condition (as opposed to just a few in the no-expectation condition) indicated that they expected to feel less stressed. One participant's response which suggests that the primer may have been effective at instilling expectations is implied here: "I was not really sure because I did not know a lot about mindfulness meditations but after learning a little bit more about it I did expect to be more relaxed." Thus, while the qualitative methods of the present research suggest that the primer was somewhat effective, it may have been too weak to produce any statistically significant differences between the conditions. For future research, the development of a primer should be established through rigorous quantitative and qualitative research methods before being used in research.

It is also possible that expectations generally do not matter as much as the type of expectation involved. The research question may have been flawed by not operationally defining "expectation" more carefully. Collins (2010) made the distinction between the desire that connotes craving and the desire which connotes an aspiration. The aspiration to achieve a lower level of stress might have been akin to the Buddhist notion of Right Resolve. A more effective primer may be one which emphasizes the Buddhist notion of attachment or craving. This subtle difference may determine how to design a primer that hinders stress reduction.

Anxiety Measures

Another potential confounding variable was the measurements used in the research. The POMS-B is designed to measure various mood states and primarily provide an assessment of overall mood disturbance—not solely level of anxiety. The tension sub-scale of the POMS-B measure thus may have provided an assessment of anxiety in a more superficial way, as opposed to a more extensive measurement that is specifically designed to measure anxiety and precise differences of mood. One such measure is the State Anxiety Inventory (SAI). This measurement has been used previously in the research of Zeidan, et al. (2010a) to measure participant anxiety before and after mindfulness meditation sessions. The present study deliberately refrained from using the SAI due to ethical concerns surrounding the usage of the term "anxiety." Instead, the present study used the term "stress" in the primers and opted to use the POMS-B (which contained no references to anxiety) instead of the SAI.

The decision to use the POMS-B was also made to avoid revealing the aim of the research to participants. While all participants may have inferred that the study was interested in mood, only the expectation condition would have reason to surmise that the researcher was specifically interested in stress reduction (due to repeated references in the primers). This can be problematic for the internal validity of the experiment because it raises the possibility of demand characteristics. Those in the expectation condition may have been biased according to the good-subject effect and therefore indicated in their POMS-B questionnaires that the meditations were effective at reducing stress—as the researcher had described in the primers (Rosnow, 2002). This effect undermines the internal validity of the study. It is difficult to prevent this confound using the present research methods because creating expectations necessarily involves telling

participants what they should get out of the intervention. For this reason, it is also proposed that future research use a physiological, objective measure of stress such as level of norepinephrine and epinephrine in the plasma or urine (Cohen, 2000).

The Popularity of Mindfulness Meditation

The influx of participants in the no-expectation is testament to the popularity of meditation. Although only one more class was recruited for the no-expectation condition (due to initial low volunteerism), there were 26 more participants that began the study compared to the expectation condition. Because of this unexpected turnout, 22 did not complete the POMS-B (due to a lack of materials) but were still allowed to participate in the study. This influx is suggestive of the relatively high interest in mindfulness meditation in the population being studied. It alludes to the fact that many participants may been interested in participating because they expected that they might gain something personally from participation beyond extra credit. This corresponds to McMahan's (2008) statement that "Popular literature widely attests to [meditation's] bid to be an ancient antidote to the frenetic pace of modern life" (p. 187). Furthermore, informal mindfulness meditation groups have consistently posted notices that assert the stress reducing effects around the Allegheny College campus. These may have influenced participation expectation as well.

An additional confound in the research is the issue of sampling. The sampling procedure used in the present research—convenience sampling from introductory psychology classes—is the standard method for undergraduate thesis research. Yet, because it is not random, those who volunteered for the research may have been those who are familiar with the technique. Thus the recruitment process may have attracted participants already informed about mindfulness

meditation and its effects. A comprehensive screening process involving expectation would have prevented confounding variables of expectation.

Conclusion

This study provides a foundation for further research into the question of what effect expectation has on mindfulness meditation. It has created new questions concerning the reification of abstract Buddhist theory into concrete psychological applications—specifically, those related to what is lost in translation (whether intentionally or inadvertently). These questions are likely to be addressed as the burgeoning field of mindfulness research progresses. In an attempt to answer such questions, future research should improve the present study first by developing an efficacious method of instilling expectations for a longer-term meditation intervention. Finally, future research would benefit from utilizing measurements that produce a more extensive and objective assessment of participant anxiety.

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Appendix A

Expectation Condition Primers

Session one:

The empirical literature on the effects of mindfulness training suggests that mindfulness meditation may lead to reductions in stress. Consequently, mindfulness meditation has been, and is currently being utilized in a wide variety of settings to achieve greater relaxation. If you are new to mindfulness meditation practice, you might notice changes following this first session. Some likely effects include a release of physical tension, less reactivity toward stress, and a calmer mood.

Session two:

Mindfulness is an attribute of consciousness long believed to promote well-being. Increasingly, reports suggest that mindfulness meditation participation is associated with enhanced quality of life. For example, improvements in symptoms of stress and quality of sleep have been observed.

Session three:

It is common to notice a greater resilience to stress after just one or two mindfulness meditation sessions, as some of you may have experienced. Indeed, in research interested in mindfulness meditation, participants commonly reported changes which included a "new outlook on life" and improved ability to control, understand, and cope with stress.

No-Expectation Condition Primers

Session one:

Mindfulness is the fundamental stance underlying all streams of Buddhist meditative practice, including the Theravāda tradition of the countries of Southeast Asia (Thailand, Burma, Cambodia, and Vietnam); the Mahayana schools of Vietnam, China, Japan, and Korea; and the Vajrayana tradition of Tibetan Buddhism found in Tibet itself, Mongolia, Nepal, Bhutan, Ladakh, and now large parts of India in the Tibetan community in exile. It should be noted that these traditions all have various schools, subtraditions, and particular texts that they revere more than others, so the actual practices and emphases regarding mindfulness can vary considerably, even within one tradition, such as Theravāda or Sōtō Zen.

Session two:

Mindfulness (as elucidated by the Buddha in two discourses: the Anapanasati Sutra and the Satipathana Sutra) constitutes the foundation upon which all of the various forms and traditions of Buddhism rest. In these traditions the actual practice of mindfulness is, however, always nested within a larger conceptual and practice-based ethical framework oriented towards non-harming (an orientation it shares with the Hippocratic tradition of Western medicine).

Session three:

Historically, mindfulness has been called “the heart” of Buddhist meditation. It resides at the core of the Buddha’s teachings, traditionally described by the Sanskrit word *dharma. Dharma* which carries the meaning *of lawfulness* as in “the laws of physics” or simply “the way things are.” One might think of the historical Buddha as, among other things, a born scientist and physician who had nothing in the way of instrumentation other than his own mind and body and experience, yet managed to use these resources to delve into the nature of the human condition.

Instructions

Read before each primer:

Please take a minute to silence your cell phones. This mindfulness meditation session will last twenty minutes and will be guided by a recording playing from these speakers. I will leave the room at the beginning and return at the conclusion of the session which is marked by the bell on the recording. It will sound like this (play track). Are there any questions?

Read following each primer:

Find a comfortable posture to maintain throughout the session that is upright yet relaxed. Also, try to keep both feet firmly planted on the floor. During the session, in order to minimize distraction, I suggest that you close your eyes. But this is not required. Please remain silent during the meditation and please do your best to follow along with the instructions on the recording.

Appendix B

Follow-Up Questionnaire

1. Did you use the mindfulness meditation that was taught to you in the experiment independently? For example, following the experimental sessions, did you meditate on your own or utilize the mindfulness techniques in your daily life?

   Yes **No**

   If yes, how did you do so?

2. Did you notice an observable effect either immediately following any of the mindfulness meditation sessions or at any point thereafter?

   Yes **No**

   If yes, what effect? Please specify at what point you observed an effect.

3. In your opinion, what is mindfulness meditation most useful for?

4. Did you expect to achieve any specific benefits from engaging in the mindfulness meditations? If yes, please specify.