

Rectifying Misconceptions: A Comprehensive Response to “Some Concerns About the Psychological Implications of Mindfulness: A Critical Analysis”

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Abstract The present article attempts to address misconceptions and mischaracterizations of mindfulness-based interventions found in the article “Some Concerns about the Psychological Implications of Mindfulness: A Critical Analysis,” written by Daniel David. The paper, we contended, suffers as a result of its reductive presentation of mindfulness, the relationship of mindfulness to Buddhist thought, the empirical support for mindfulness-based interventions, and the presumed mechanisms of change and clinical utility of those interventions. Such misconceptions and mischaracterizations can unfortunately have a powerful effect on both the literature base, and on those providing direct psychological services. As such, the purpose of this response article is to stimulate a clear and accurate discussion of the concepts and applications of mindfulness, so that practitioners have the information they need to make sound treatment decisions for their clientele.

Keywords Mindfulness · Buddhism · Emotion regulation · Misconceptions · Acceptance

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This article is a response to “Some Concerns about the Psychological Implications of Mindfulness: A Critical Analysis”, which posits a series of arguments regarding potentially deleterious effects of mindfulness-based treatments in clinical psychology. As the use of mindfulness meditation and related practices continues to expand, it is critical for sound psychological science to remain at the foundation of treatment development. Therefore, the present response examines certain inaccuracies in David’s critique of mindfulness-based interventions (MBIs), and questions the paper’s recommendations for continued reliance on “classical” theories of emotion and employment of traditional cognitive-behavioral therapies. The present response further reviews the historical relationship between mindfulness practice and both Buddhist thought and Western psychology, and attempts to clarify potential misconceptions identified in David’s analyses of the known effects and proposed mechanisms of change of MBIs.

As the professional use of MBIs in clinical settings and discussion in popular media continue to surge, challenges also have arisen relating to the functional definition and comprehensive understanding of mindfulness in specific cognitive-behavioral therapies, and the suitability of mindfulness practice as a response to behavioral difficulties. It is essential that psychological science remain the basis of informing future research and professional practice in any evidence-based health practice. In this regard, we must begin with a true open-minded and comprehensive understanding and discussion of new and emerging concepts such as mindfulness and related interventions. We contend that it is inconsistent with a robust understanding of psychological science and empirically informed psychological research to present one’s opinions regarding an entire class of treatments without addressing the theoretical ground for those treatments or the existing evidence base. While it is understandable that authors have greater and lesser affinities for particular treatments and associated points of view, there is significant risk in assuming that one’s personal beliefs and judgments constitute a privileged perspective on a given concept or treatment. Such a viewpoint is particularly problematic in situations where there is a lack of specific empirical evidence for or against the question under debate. Unfortunately, arguments presented from such a personal vantage point, while quite forceful, have a tendency to present quotations and studies in ways that suggest conclusive support for the author’s positions, even when such definitive support is lacking. Some indicators of such a perspective can include reliance on an authoritative tone while asserting or implying that much of what is necessary to know about an issue is already known and that novel approaches could have nothing to add.

We view the “target” article to which we are responding as an example of such a personal perspective and respectfully suggest that this approach leads, at various points, to a mischaracterization of mindfulness; a misrepresentation of the relationship between mindfulness and Buddhist thought; and a partial account of the empirical base for mindfulness-based psychological treatments, the presumed mechanisms of change for these treatments, and the treatments’ clinical utility. As such, the purpose of this response article is to stimulate a clear and accurate discussion of the concepts and applications of mindfulness. We propose to accomplish this by discussing the basic mental processes that need to be considered

and distinguished when discussing mindfulness, with an emphasis on the connection between these concepts and Buddhist writings. As the popularity of mindfulness is ever-growing, and many researchers and clinicians are developing and utilizing mindfulness-based treatment programs, it is essential to be precise in related scientific discussions, as confusions or mischaracterizations can have significant applied implications.

The first portion of this response paper engages in a thorough discussion of concepts and practical applications of mindfulness interventions, including its connection to Buddhist philosophy and its utilization in Western psychology. The second portion of this paper seeks to address misconceptions in the target paper with regard to Buddhist philosophy and its relationship to mindfulness interventions, problems in the paper's "logical" analysis of mindfulness-based approaches, assumptions in the paper regarding mechanisms of change of mindfulness interventions, and potentially overstated conclusions drawn from what appears to be a narrowly selected collection of empirical studies and reviews.

Concepts and Practical Applications of Mindfulness-Based Interventions

During the past two decades, the concept of mindfulness, used in the context of a psychological intervention, has increasingly been successfully utilized in the overlapping domains of clinical, health, and sport psychology in relation to treating stress/distress, targeting emotion dysregulation, and seeking to enhance human performance. Establishing a single operational definition of mindfulness can be challenging given the mixture of historical-cultural and more contemporary-scientific traditions involved in the discourse (Baer 2003; Gethin 2011). There are two primary models that have discussed developing mindfulness in the context of meditative practice—an ancient historical-cultural model (i.e., tradition) rooted in Buddhist philosophy and writings, and a more contemporary model greatly influenced by Jon Kabat-Zinn's mindfulness-based stress reduction (MBSR) program, which is essentially an adaptation of Buddhist meditative techniques for the purpose of reducing reactivity and promoting physical and psychological well-being (Kabat-Zinn 1990). The ancient traditional model for training the mind maintains similar foci and goals with the more contemporary Western scientific model. In essence, both models fundamentally strive to reduce suffering and improve quality of life. Yet because the contemporary mindfulness framework has progressively become an element of popular culture, the construct is occasionally mischaracterized by many idiosyncratic interpretations.

Understanding mindfulness as a concept and as an intervention model requires a fundamental understanding of the distinction between the contents and the operations (sometimes referred to as "behaviors"; Mikulas 2011) of the mind. *Contents of the mind* refers to specific moment-to-moment perceptions, memories, cognitions, and emotions. In the historical mainstream of cognitive behavioral therapy, contents of the mind are the reality of one's immediate internal experience, and are a primary focus of clinical attention. On the other hand, *operations of the mind* refers to (metacognitive) processes that provide awareness of and responses to

the specific contents of the mind, and occur prior to, during, and following the triggering of contents of the mind. The three fundamental operations of the mind have been described as concentration, attachment, and awareness (Mikulas 2011).

To expand upon this further, the mind tends to attach, or as Hayes and others have suggested, “fuse-with” (Hayes et al. 2011) certain sensations, perceptions, beliefs, and self-images, adopting them as “reality.” In Buddhism, this conflation of thought with literal reality results in what has been termed *dukkha*, or suffering, as best described in the Four Noble Truths (Rahula 1974). Concentration, in turn, is a learned process of self-control of attentional focus. That is, it is a process that allows for the maintenance of narrowed or focused awareness on internal experiences (including perceptions and sensations of external objects). In cognitive psychology, concentration is generally viewed as an aspect of attention, often discussed by the use of terms such as focused attention, sustained attention, or vigilance. Finally, awareness, as an operation of the mind, is the process by which one develops a greater connection with (i.e., breadth and clarity) moment-to-moment experiences. Awareness, which is often the topic of greatest clinical and empirical attention when mindfulness is discussed, involves observing internal experiences (i.e., contents of the mind). It is simply the de-centered observation of what is being observed, in contrast to being attached to what is being observed. It is not judging or categorizing, but rather the simple awareness of contents of the mind. The essence of mindfulness training (often referred to in neurocognitive psychological research as “mental training”), is the process of noticing whatever emerges in one’s consciousness while also noting, and in turn minimizing, the occurrence of automatic drifting toward related thoughts, affective reactions, and extensions of those contents. It is important to note that it does *not* reflect emotional detachment, the supremacy of rationality over emotionality, or the goal of creating unemotional dispassionate human beings. If anything, the goal of such basic awareness is quite the contrary: it is that contents of the mind can be seen for what they are, which is a part of the human experience that inevitably comes and goes, and thus (a) does not always require a response (such as an automatic behavioral action tendency including avoidance/escape), and (b) does not require repetitive and perseverative cognitive processes (i.e., rumination). This may explain why the data to date suggest that MBIs work so well for psychological conditions that involve significant levels of rumination in one form or another, including eating disorders, borderline personality disorder, generalized anxiety disorder, substance related disorders, and chronic depression (Hofmann et al. 2010; Keng et al. 2011; Penberthy et al. 2013).

Traditionally, enhanced awareness is developed during a variety of sitting and/or activity-related meditation exercises, as suggested in the Buddhist Theravada Vipassana literature. Interestingly, and to the point, the word Vipassana essentially means “seeing clearly in new and varied ways.” Vipassana meditation has historically been referred to as “insight meditation” because Buddhist writings suggest that the regular practice of mindfulness will ultimately lead to an enhanced insight called *prajna*, an awakening, which from a Buddhist perspective is the ultimate purpose of meditation, and not a reduction in suffering (although that is seen as a natural by-product).

Human beings often get readily lost in the contents of mind, including thoughts, feelings, and sensations. We also tend to become overly attached to contents of the mind that are associated with the self, which directly relates to Hayes and others' efforts at developing "self-as-context" within acceptance and commitment therapy (ACT; see Hayes et al. 2011). The process of enhanced awareness necessarily includes a de-identification, often referred to in the professional literature as decentering with/from the contents of the mind (Sauer and Baer 2010). Through non-judging observation and concentration, one can more easily decenter from those contents, which in turn creates the opportunity for de-automating the action tendencies associated with internal contents such as thoughts and emotions. Decentering from the contents of the mind can lead one to become a more objective observer of the contents. In turn, decentering can facilitate a modified relationship with the contents of the mind, without the need to change the contents (Hayes et al. 2011). In other words, the contents exert less power over one's behavioral choices. Finally, in our discussion of contemporary conceptualizations of mindfulness, Kabat-Zinn's original purpose for using the term "mindfulness" should be noted, "...we used the word *mindfulness* intentionally as an umbrella term to describe our work... By 'umbrella term' I mean that it is used in certain contexts as a placeholder for the entire dharma, that it is meant to carry multiple meanings and traditions simultaneously" (Kabat-Zinn 2011, p. 290). In essence, Kabat-Zinn was suggesting that efforts to capture the purpose and process of mindfulness in a reductionistic manner, without full consideration of the features noted above, would run significant risk of mischaracterizing the use of the term in interventions such as MBSR.

The use of MBIs in Western psychology is intended to enhance well-being and improve our capacity to function effectively in the world around us, and while reduction of suffering is an added benefit, it is not the primary purpose of MBIs. The fact that mindfulness can reduce psychological suffering and lead to improvements in health are certainly nice consequences, much like reduction of a fever is a helpful add-on when treating an infection; however, they are not the primary purpose of mindfulness interventions, just as the reduction of fever is not the primary purpose when treating an infection. Similarly, the true purpose of traditional Buddhist practice is awakening/enlightenment. The Buddha (which actually means "the awakened one") taught that the path of awareness could lead to lessening of suffering and "defilement," yet cannot lead to their final elimination. Instead, he explained that the insight that follows from awareness leads to enlightenment.

Contemporary psychology has developed secularized methods of mindfulness practice, geared toward enhancing awareness and functional responding to internal events, that in turn contribute to psychological difficulties (Bishop et al. 2004; Carmody 2009; Kabat-Zinn 1990). In the clinical psychology literature, mindfulness is frequently defined as an attentional process that is purposeful, and that remains non-reactive, non-judgmental, and grounded in the present moment (Baer 2003; Bishop et al. 2004; Carmody 2009; Kabat-Zinn 1990). This common conceptualization of the mindfulness construct has been integrated into numerous empirically-informed MBIs, such as (a) mindfulness-based cognitive therapy (MBCT; Segal et al. 2002), which is primarily geared toward the prevention of depression relapse;

(b) mindfulness-based relapse prevention (MBRP; Bowen et al. 2009), which aims to prevent substance use relapse; (c) acceptance and commitment therapy (ACT; Hayes et al. 2006), which is successfully used with a wide variety of psychological concerns; (d) dialectical behavior therapy (DBT; Linehan 1993), which has demonstrated success in the treatment of borderline personality disorder; (e) contextual anger regulation therapy (CART; Gardner and Moore 2008, 2014) for the reduction of clinical anger and violent behavior; and (f) the mindfulness-acceptance-commitment (MAC) approach for performance enhancement (Gardner and Moore 2004, 2007). The successes of MBIs have been measured by decreasing clinical symptoms and overall improvement in mental health and well-being. These interventions are essentially based on a general framework of manualized time-limited programs of meditation training (Carmody and Baer 2009). This Western model of mindfulness training is intended for use during many typical day-to-day activities, such as walking, stretching, and eating (Baer 2003; Kabat-Zinn 1982). Improvements in measures of clinical symptoms and executive function have been reported in brief MBIs, including programs as short as three 20-min sessions (Zeidan et al. 2010). Further, changes in white-matter efficiency have been reported in just 11 h of meditative training (Tang et al. 2010).

A recent comprehensive meta-analysis examined 209 studies, including a total of 12,145 participants representing diverse ages, genders, and clinical concerns (Khoury et al. 2013). Results indicated that MBIs demonstrate moderate-to-strong pre-post effect sizes, and small-to-moderate effect sizes when compared to another active treatment modality, such as cognitive behavioral therapy, behavior therapy, supportive therapy, psychoeducation, imagery, relaxation, and art-therapy. The data are such that it cannot be definitively concluded that MBIs are more *or less* effective than traditional CBT (or any other modality) in direct comparisons. However, when looking at the outcome data more closely, MBIs show large and clinically significant effects in the treatment of depression and anxiety, and these gains are maintained at follow-up. Importantly, the findings of this recent meta-analysis were nearly identical to the results of a previously completed comprehensive meta-analysis (Hofmann et al. 2010). In addition, while outcome measurements suggested that MBIs and traditional CBT interventions showed no significant differences overall, the average attrition among mindfulness participants in the included studies (16.25 %) was significantly smaller than the attrition rate most typically found in cognitive and behavioral clinical trials (22.5 %; Westbrook and Kirk 2005). These results demonstrate a high acceptability of MBIs among participants.

Over the last decade, as empirical studies with regard to MBIs have exponentially increased, researchers have also reported promising results using MBIs for a wide range of disorders often seen as difficult to treat, such as ADHD (Zylowska et al. 2008), bipolar disorder (Miklowitz et al. 2009); panic disorder (Kim et al. 2010), generalized anxiety disorder (Evans et al. 2008; Roemer et al. 2008), eating pathologies (Baer et al. 2005), psychotic disorders (Chadwick et al. 2005), substance/alcohol use concerns (Bowen et al. 2006), and chronic depression. Specifically regarding chronic depression, MBCT has been shown to be effective for reducing depressive relapses among clients exhibiting a history of three or more depressive episodes (e.g., Ma and Teasdale 2004; Teasdale et al. 2000).

While these results are positive, a reasonable scientific caution should be made against the *arbitrary* use of mindfulness as a general-purpose intervention, which is true for any intervention. Instead, we should remain committed to the continued development of an evidence-based approach to the use of MBIs for treating specific psychological disorders (Kocovski et al. 2009; Teasdale et al. 2003), just as we should for any and all other CBT interventions. In order to further this goal, it is appropriate to consider proposed mechanisms of change of MBIs.

A variety of mechanisms of change have been proposed for MBIs (Forman et al. 2012; Hölzel et al. 2011; Vago and Silbersweig 2012). The most comprehensive and inclusive discussion regarding the mechanisms of change of MBIs came from a recent paper by Vago and Silbersweig (2012), in which six specific mechanisms of change relating to the practice and cultivation of mindfulness were described. The mechanisms defined in the Vago and Silbersweig paper included a description of the neurobiological substrates of each proposed mechanism, with empirical support provided from the extant scientific literature. The proposed mechanisms include: (a) intention and motivation, (b) attention regulation, (c) emotion regulation, (d) memory extinction and reconsolidation, (e) prosociality, and (f) non-attachment/decentering.

Intention and motivation essentially refer to the empirical findings suggesting that developing the capacity to engage (i.e., approach) with experience, without excessive attachment or aversion (i.e., avoidance), increases an individual's capacity to self-regulate (Vago and Silbersweig 2012). *Attention regulation* refers to empirical findings indicating that the capacity to shift awareness between stimuli that are objects of attention is essential for effectively managing impulses and responses (Vago and Silbersweig 2012). Thus, the management of attention inherent in mindfulness practice can explicitly control when, and to what, one's focus of attention shifts. Additionally, concentration-based meditative practices have been found to increase attentional system efficiency. *Emotion regulation* refers to the growing evidence that mindfulness training improves awareness, clarity, acceptance, modulation, and expression of emotion, as measured by a wide range of physiological, self-report, and neuroimaging methods (Baer et al. 2009; Carmody 2009; Vago and Silbersweig 2012). One mechanism that may underlie alterations in overall health, brain structure, and behavioral functioning may relate to the strengthening of specific neural systems deemed important for the emotion regulation process, specifically those structures that are involved in the evaluation, expression, and subjective experience of emotion. Emotion regulation is likewise directly related to the capacity for self-regulation, which necessarily includes the ability to shift attention as needed, along with tolerating and modulating ongoing emotional activity, when necessary, for the purpose of goal directed behavior (Carver and Scheier 2011; Gross 1998; Koole 2009).

The proposed mechanism of *memory extinction and reconsolidation* refers to changing the relationship between contextual cues and their meaning to an individual. This involves the development of new associations between specific contextual stimuli and behavioral responses (Nader et al. 2000; Quirk and Mueller 2008; Vago and Silbersweig 2012). In addition, reduction in rumination about the self, noted as a consistent consequence of mindfulness training (Ramel et al. 2004),

appears to be mediated by the same functional extinction process. The proposed mechanism of *prosociality* concerns findings suggesting that mindfulness practice appears to aid in the development of self and other compassion, enhanced empathic behavior, and positive emotion for the pain and suffering of others, and appears to involve an identifiable and specific neural network (Vago and Silbersweig 2012). Finally, *attachment/decentering* refers to the process that allows the individual to disengage or take an observer perspective of one's immediate experience, for understanding and analysis of habitual patterns of cognition, emotion, and behavior. Decentering can be readily compared to other clinical constructs such as defusion (noted earlier) and psychological distancing (Ayduk and Kross 2010; Fletcher and Hayes 2005; Vago and Silbersweig 2012). Research has also demonstrated that it naturally results in a de-automatization, or an interruption of the previously automatic processes that control perception/interpretation and behavioral responses (Ayduk and Kross 2010). This de-automatization can be understood as the enhanced ability to shift attention when needed, and inhibit the elaborative processing of cognitions/feelings (i.e., rumination). For instance, automatic repetitive thinking such as, "I should do better," is replaced with the non-judging awareness that, "I am having the thought that I should do better." The fusion of the self and one's negative thoughts, along with ruminative processes, have been shown to play a key role in increasing both negative affect and a cognitive vulnerability to psychopathological concerns (Smith and Alloy 2009). Importantly, then, the awareness (i.e., insight) thought to be reached through mindfulness-based practice provides a perspective that one's internal experiences are both transient and subjective in nature (Safran and Segal 1990), thereby fostering non-attachment (without the need to change the content of thoughts) and consequently improving one's overall life satisfaction, personal well-being, and interpersonal functioning (Sahdra et al. 2010).

Critical Analysis of Target Paper

With this overview as a context, we now embark upon a critical analysis of the target paper by Daniel David, with an emphasis on how it mischaracterizes the nature and practice of MBIs. This analysis is organized into three broad categories: (a) potential mischaracterization of the Buddhist traditions associated with mindfulness; (b) concerns regarding the understanding of what mindfulness is and is not; and (c) concerns relating to the selection and interpretation of the professional literature with regard to the efficacy of MBIs.

Mischaracterization of Buddhist Traditions Associated with Mindfulness

The opening two paragraphs of the target paper present a synopsis of the Buddhist foundation of mindfulness. However, several significant statements are made that begin the process (seen throughout the article) of constructing a straw man argument with regard to mindfulness. The first of these concerns the use of the concept of "attachment" in Buddhist traditions. As stated in the target paper, "According to the Second Noble (sic) Truth of Buddhism, suffering (e.g., psychological/emotional

distress) ensues from our worldly *attachments* (e.g., needs/desires/wishes/aims/goals).” As we discussed earlier in this response paper, attachment refers to the clinging or over-engagement with internal perceptions/interpretations as realities. The Second Noble Truth of Buddhism, as described in the target paper, is misconstrued by adding the examples, which are not found in the Noble Truths themselves. In fact, being “attached” to what is being observed is the core “problem” for which mindfulness practice is utilized. It is essentially the fusion of our internal experiences with perceptions/interpretations of reality that is noticed as a result mindfulness practice, and this newfound awareness provides a broader perspective on our experience. There is nothing stated or implied in Buddhist philosophy suggesting that the intent is to modify our goals, aims, values, etc.

It is important to point out that it has been proposed that the decentering process inherent in mindfulness practice is also a central mechanism of change of the traditional cognitive interventions found in most forms of cognitive-behavioral therapy (Herbert and Forman 2011; Rector 2013; Zettle et al. 2011). Unlike what is suggested in the presentation of the target paper, reducing attachments is not engaged in with the purpose of removing desires, goals, and personal values. Rather, it is with the intent of being more connected with moment-to-moment experiences, and promoting greater choice in attention and action.

Secondly, the paper provides a mischaracterization of the Buddhist concept of Nirvana. In Buddhist teachings, Nirvana is not usefully construed as a “goal,” nor is Nirvana always defined as a “higher state of consciousness.” In fact, placing one state of consciousness as higher, and another as lower, would be inconsistent with the pursuit of a fuller, more inclusive awareness (i.e., insight), which is central to Buddhist teachings. Buddhist teachers would quickly point out that making Nirvana a “goal” would be another form of striving—and perhaps the surest way to avoid attaining it. In keeping with an ancient Buddhist apothegm, the noted Buddhist teacher, Chogyam Trungpa, was fond of reminding mindfulness practitioners to “abandon any hope of fruition” (Trungpa 2005, p. 94). When rhetoric regarding “higher” and “lower” levels of consciousness is used in Buddhist discussions, the framework of “higher” and “lower” is revealed as primarily metaphorical, referring to increases in awareness rather than privileged states or transformations in personality or emotional experience in the manner that the target paper suggests. In fact, Buddhist teachers often point out that mindfulness practice is not an effort to transcend or neutralize feelings in the service of attaining “comfort.” As Chodron (2002) notes, “wanting to find a place where everything’s ok is just what keeps us miserable” (p. 184). In this way, the target paper’s selective use of quotations provides a less than comprehensive understanding of Buddhist traditions and may, more importantly, promote a misconception of mindfulness that makes scientific and intellectual dialogue much more difficult. The lack of appreciation for the subtlety of mindfulness-based practices, whether they are part of Buddhist spiritual teachings or deployed in psychotherapy, certainly reinforces concerns that scholars (Kwee 2010; Mikulas 2011) have identified regarding the removal of mindfulness practice from the larger context of Buddhist practice and doctrine. Scholars of Buddhist thought suggest that mindfulness, including its relationship to attention,

insight, and the nature of the self, is best understood when embedded in the fullness of Buddhist philosophy (Kwee 2010).

Understanding What Mindfulness Is and Is Not

The target paper uses a great deal of terminology that is antithetical to mindfulness practices in general, and MBIs in particular. For example, the term “dysfunctional feeling” is used several times in the article. If by “feelings” the author means “emotions,” then mindfulness, by definition, would suggest that no feeling (or other aspect of inner experience) could be usefully judged as “dysfunctional.” There may be more or less functional (i.e., effective) *responses* to a feeling, but not dysfunctional *feelings*. Further, the paper regularly refers to “detachment” as a product or goal of mindfulness. The use of “detachment” in this way is a problematic word choice, and not one that most mindfulness practitioners would use or accept as a description of what they are doing in practice. For example, words derived from “detach” (including “detachment”) appear only four times in *Full Catastrophe Living* (1990), Jon Kabat-Zinn’s guide to mindfulness practice and exposition of the principles used in MBSR. Therein, one of those four occurrences is a reference to detached retinas. The other three instances specifically use variations on the word “detach” as a means of advocating for *increased* rather than decreased engagement with bodily sensations and feelings. The idea that Kabat-Zinn is attempting to convey is that by cultivating non-judgmental awareness, and disconnecting from automatic (and predominantly avoidant) habits of thinking, one could develop an increased awareness of what is occurring in the body and the emotions at a given moment. The point is that when the concept of detachment is used in descriptions of mindfulness practice—and it is not used frequently—it serves as a descriptor of a strategy for managing mental judgments so that one can suspend long-standing habits of controlling or deactivating experience in favor of seeking greater contact with that experience. One of Kabat-Zinn’s three uses of detachment in this context advocates for an experiment that the reader can perform when he or she inadvertently stubs a toe. The instructions for this experiment suggest adopting a witnessing perspective that attends to all of the sensations associated with the surging pain and note that this perspective *may* possibly lead to a feeling of detachment from those sensations. Detachment, in itself, however, is *not* seen as the goal of the exercise. In another instance, Kabat-Zinn uses the term specifically in reference to observing one’s thinking in order to notice the ways that the mind’s judgments can pull the attention away from experience and lead to missed opportunities for choice—a metacognitive approach for which almost any psychotherapy of any stripe would advocate. The final instance of the use of the word “detach” comes in instructions for the body scan meditation exercise. Although this use may be closest to what the target paper attributes to Grossman et al. (2004), it should be noted that the instruction adopts the use of a “detached witnessing” as a means of engaging in greater awareness of and less effort to exert control over bodily sensations and emotions in the midst of the practice. In this particular instance, use of the word “detached” could be considered paradoxical, given that as the instructions continue to state, the participant is invited to stay with

experience and “feel what is there,” as opposed to making snap judgments followed by efforts to change inner experience. Detaching, in this way, is intended to facilitate deeper engagement.

Another problematic section of the target paper arises in discussion of the term “motivational relevance.” As stated in the paper, “Mindfulness practice can also focus directly on thoughts and feelings, thus attenuating their motivational relevance by approaching them from a dispassionate and non-evaluative perspective.” In fact, this is not the purpose of the cultivation of awareness of thoughts and feelings through mindfulness practice. Rather, it is to provide greater opportunity for choice, to give/provide the mind of the perceiver an opportunity to notice that other perspectives and options may be available in addition to those that the mind finds most salient (i.e., attachments) in a given moment. It is a matter of increasing opportunity to assess the motivational relevance of a given situation or experience rather than an attempt to reduce the motivational relevance of particular thoughts, feelings, or sensations. The target paper states: “In psychological terms, detachment activated by mindfulness meditation can be conceptualized as a reduction in motivational relevance (Grossman et al. 2004).” We are personally struck with the choice of the Grossman et al. article as a reference for this point. Grossman et al.’s paper is a meta-analysis primarily concerned with documenting treatment efficacy rather than explicating the concept of mindfulness in the MBI protocols used. Why rely on this meta-analysis to describe the foundations of the interventions in question rather than turn to materials provided by Jon Kabat-Zinn or Segal et al. (2012) who have written extensively on the interventions they developed? It seems possible that this represents selective reading of the literature to lend “support” to a particular viewpoint regarding the concept and practice of mindfulness. Grossman and associates may have been attempting to describe a hypothesized mechanism of change for MBIs in their discussion of detachment, but they were not, in the context of a meta-analytic review, attempting to describe in detail how mindfulness was depicted and described in each of the interventions their study considered.

The target paper further states that, “The outcome of a general reduction in the intensity of affect, hypothetically produced by detachment, regardless of its positive or negative valence, may not be a universally desired clinical outcome. Indeed, in our Western culture, the healthy alternative to dysfunctional feelings related to an event is not necessarily flat or minimal affect (low arousal), but functional feelings.” We cannot think of a mindfulness-based intervention provider who would disagree that “flat or minimal affect” is not a desired treatment outcome. In fact, contrary to the suggestion of the target paper, making functional choices in response to one’s emotional experience is an essential purpose of mindfulness practice. Improvement in functioning through increased awareness of experience—that is, the opportunity to show up for more of one’s life, leading to deeper life engagement, is what MBIs are all about. There is no reason to believe that mindfulness, if taught in a manner consistent with the developers of the established MBIs (MBSR, MBCT, ACT, CART, DBT, MAC), would be used in the service of achieving “flat or minimal affect.” This assumption in the target paper is either an unfortunate misunderstanding or a misrepresentation of the purpose and effects of mindfulness practice. If advocacy for low arousal were ever to occur (and of course, it certainly may occur

in the work of poorly informed therapists or teachers), then that advocacy is purely at odds with the fundamental principles of MBIs.

In fact, recent studies (Geschwind et al. 2011; Pepping et al. 2014) suggest that mindfulness is associated with increased awareness and acceptance of affective states and that this increased awareness contributes to well-being. For example, Geschwind and colleagues found that individuals with histories of major depression who participated in a mindfulness-based cognitive therapy (MBCT) program reported not dampened affect but rather *increased* experience of positive emotions and enhanced engagement in pleasant life activities, as measured using ecologically valid momentary experience sampling methods (ESM). Taking another recent example, Pepping and colleagues examined the relationship between mindfulness and psychological distress, and found that those low in mindfulness struggle with greater clinical distress, and that this is largely due to a lack of emotional acceptance. The nonjudgmental acceptance of negative emotion, rather than efforts to judge, change, suppress, or dampen that experience, is associated with a reduction in psychological distress. Similar findings regarding the utility of nonjudgmental acceptance have been reported in the literature concerning emotion suppression (Campbell-Sills et al. 2006).

Given that MBIs do consistently demonstrate effects involving reductions in negative affective states (e.g., anxiety, depression), the question, which the target paper raises, concerning how these changes take place does need to be asked. Proponents of MBIs have proposed that the reduction occurs through increased flexibility. If one is able to experience negative affect without having to engage in efforts to control or avoid it, then it is possible to make functional choices in response to situations in which that affect is experienced. The benefits of this are two-fold: (a) one maximizes the possibility for engagement with life in potentially rewarding ways by devoting resources to functional choices rather than affect management, and (b) one avoids the problem of engaging in what might be an impossible task of controlling or suppressing inner experience for extended periods (Wegner 1989).

This process of disentangling oneself from emotional control and avoidance strategies could be mediated by a variety of cognitive strategies. “Acceptance” has been advanced as a label for this process, and this approach has been usefully differentiated from reappraisal and problem-solving, which also have been identified as adaptive strategies for responding in stressful situations (Aldao et al. 2010). Which of these strategies are implicated, and to what extent in various forms of psychological treatment, remains an empirical question worthy of continued investigation. Nevertheless, component analysis studies comparing behavioral activation interventions for depression to conventional cognitive therapy including cognitive restructuring (Dobson et al. 2008; Jacobson et al. 1996; Zettle and Hayes 1987) and studies of prolonged exposure treatment for PTSD with and without cognitive restructuring (Foa and Rauch 2004; Moser et al. 2010) have suggested that affect change (e.g., improved mood) need not precede behavior change and that interventions addressing cognitive change are not required to achieve treatment effects. In fairness, it should be noted that critics of the theoretical foundations of mindfulness- and acceptance-based approaches (David and Hofmann 2013;

Hofmann 2008) have argued that cognitive reappraisal may mediate treatment outcomes even when cognitive change is not an identified focus of treatment. The challenges of resolving the “chicken-and-egg” question regarding whether cognitive or affective change precedes or follows behavior change, or exactly what types of cognitive change (e.g., metacognition, flexibility, reappraisal) could potentially contribute to changes in functioning or well-being, remain open for investigation and could have fruitful implications for psychology as a field. Definition of the relationships between cognition and emotion also remains an important area of scientific research (Lindquist and Barrett 2012; Moors et al. 2013; Oatley and Johnson-Laird 2014). In any event, intervention studies, including those involving MBIs, certainly suggest that directly targeting affective or cognitive change is by no means the only path to effective outcomes.

The target paper, however, appears to blame MBIs for contributing to an understanding of mindfulness that is almost entirely inconsistent with the aims and techniques for which these therapies advocate. In the end, this portrait of mindfulness as detached observation leading to minimal or flat affect serves as a straw man; attributing this view to proponents of MBIs serves to discredit them by blaming them for an approach for which they did not advocate in the first place. To provide a comparison, the argument could be seen as equivalent to observing that happy people are more compliant and less focused on the consequences of their actions (cf., Milberg and Clark 1988), then noting that a stated goal of REBT is to increase happiness (Ellis 1999), and subsequently concluding that REBT is a dangerous treatment because it is specifically focused on making people more compliant and oblivious to the consequences of their decisions. Clearly, this would be a fallacious and illogical argument. To further illustrate on a humorous note, one can only imagine the devilish (and spurious) accusations that could be made using Ellis’ (1976) famous paper contending that REBT “abolishes most of the human ego.”

In addition to the abovementioned methods, the target paper makes the following statement as though it represents a differentiation from the intent of MBIs: “Thus, the primary objective of many psychological interventions is to not to diminish affect or produce detachment on a global basis, but rather to transform dysfunctional negative feelings (e.g., depressed mood) into functional negative feelings (e.g., sadness), in order to increase the use of problem solving strategies and functional feelings, reduce suffering, and improve social functioning and the overall quality of life.” Advocates of MBIs, particularly proponents of MBCT, would not disagree at all with the goal of achieving more functionally effective responses to cognitions and emotions, and in fact this statement is completely consistent with the intent of MBIs. The purpose of mindfulness use in MBCT is to allow for increased perspective-taking (greater awareness of possibilities), so that one can make effective choices in response to emotional experience. It is *not* meant to neutralize the emotional experience, but to recognize patterns of the mind that contribute to withdrawal, inaction, ineffective decision-making, etc., in the service of avoiding emotional experience.

While one can all too readily draw the simplistic conclusion that traditional approaches to CBT and MBIs are essentially the same (i.e., an “old wine in new

bottles” argument), in fact, drawing this conclusion would be a significant error. The target paper, for example, cites “demandingness” as a problem to be rectified, and suggests that this requires a change in the content of the mind in order to produce that outcome. Mindfulness-based practitioners would not disagree that “demandingness” can be problematic, and might consider exploring the possibility of feeling/experiencing “demandingness” (yet with no effort to change or otherwise control that thought) and in turn discovering if other possible ways of responding are present or arise in the process. In essence, no effort is made to “restructure” thoughts in MBIs, but rather, opportunities to develop a different way of relating to experience are explored, which allows for greater awareness of thoughts, and in turn, a reduced tendency to rapidly and automatically act in the service of “demandingness.”

Further, the target paper misrepresents the basic propositions of MBIs in the following statement suggesting that mindfulness practice leads to rational disengagement: “If mindfulness meditation is used unwisely or with little regard for the specific problem being treated (e.g., problems in emotion regulation), practitioners may become Vulcans (sic). Vulcans, as many readers know, are a fictional species that appeared in the television series *Star Trek* that use mental control (i.e., meditation and strict adherence to logic) to be devoid of feelings to live an idealized “logical” existence. Spock was the most famous Vulcan character in the series, serving under the human and at times all-too-emotional captain Kirk.” Unfortunately, this comment not only misses an important point about mindfulness, it also misses a central point about *Star Trek*. In actuality, the message of *Star Trek* is exactly the same as that of mindfulness. Spock is all logic (his character is based on the same Stoic philosophy that informed the work of Beck and Ellis); Bones, the starship doctor, is all reactivity and emotion; and Kirk’s challenge (the drama of the show) is to achieve “wise mind,” the effective, emotionally informed use of logic for the good of self and others. Indeed, that is what mindfulness practitioners generally advocate, and the neglect of this balanced understanding as a central tenet of mindfulness is a problem found throughout the target paper.

Finally, the following quote, taken from the target paper, demonstrates the misconstrual of, and in turn a lack of logical analysis and understanding of MBIs: “We argue that mindfulness practices be employed when classical cognitive-behavior therapy or other evidence-based psychotherapy do not succeed in transforming dysfunctional feelings into functional feelings in relation to a target event.” The emphasis that this statement places on controlling “feelings” as opposed to behavior is notable. Do one’s feelings have to be controlled? Why must they be devalued to that point? Perhaps “functional behavior” rather than functional feelings could be a target of treatment? There are challenges, to be sure, in how to measure “functioning” in a field that has traditionally focused on measurements of distress, but researchers using MBIs have made gains in developing and employing outcome measures focused on well-being (Geschwind et al. 2011), quality of life (Nyklíček and Kuijpers 2008), and valued living (Wilson et al. 2010).

The goal of MBIs would be to facilitate greater engagement with and understanding of both the target event and the cognitive and physiological responses that arise. That enhanced awareness could potentially lead to more effective

transformation than simply reacting with efforts to change one's thinking the moment aversive emotion arises (more choices do not always necessitate greater effort at control). Put simply, the author seems to assume that affective change must precede behavior change, which is not an assumption that informs the MBIs.

Selection and Interpretation of the Professional Literature on the Efficacy of MBIs

In a discussion of treatment outcomes, the target paper includes the following statement: "Mindfulness appears to have secondary psychological consequences that exert a positive impact on mental health and which have become primary goals of mindfulness practice in secular society and clinical practice in particular. Indeed, in psychotherapy, mindfulness practices are often used as emotion regulation strategies (see Brown et al. 2013), particularly for regulating dysfunctional feelings (i.e., distress, emotional problems, and emotional disorders)." We personally stand perplexed as to the meaning of this comment. There are a variety of ways of viewing treatment outcomes and effectiveness. "Positive impact" could mean symptom reduction to some, and that does seem to be the emphasis being made in the target paper. It is not, however, the primary emphasis of mindfulness-based therapies. As noted above, what constitutes a "dysfunctional feeling" remains unclear. If by "feelings," in this case, the author means "emotions," then mindfulness, by definition, would suggest that no feeling (or other aspect of inner experience) should be judged as "dysfunctional." There may be more or less functional (i.e., effective) responses to a feeling, but not "dysfunctional feelings." This mischaracterization is endemic to the target paper.

Results of the most recent comprehensive meta-analysis of MBIs were presented earlier in this response paper, and they are in stark contrast to the conclusions drawn in the target paper. For example, the target paper states: "Yet mindfulness has more recently come to be viewed as a first line intervention, be it independent and/or part of multimodal treatments, for many psychological disorders and conditions, rather than circumscribed to some clinical context as described above. From the perspective discussed here, this development is questionable. One might liken it, somewhat facetiously, to the widespread prescription of anxiolytic medications for breakfast to remain always calm and relaxed, rather than for their use only in the presence of diagnosed clinical conditions (e.g., anxiety disorders) where research supports both their efficacy and cultural value/appropriateness." Aside from the inappropriate overgeneralization by example, there exist a number of empirical findings in direct contrast to this statement. Several of these mindfulness-based or mindfulness-informed treatments have demonstrated effectiveness as first line treatments (e.g., DBT for non-suicidal injury and borderline personality disorder). Would it be professionally responsible to refer a patient with self-injurious behavior, or a borderline personality diagnosed client to CT or REBT simply because those therapies are not MBIs and do not involve mindfulness practice? Do the data supporting the use of traditional approaches for such patients *exceed* the data for use of DBT? In addition, it should be pointed out once again that for the most part, no differences in efficacy were found between traditional CBT and MBIs in the

aforementioned meta-analysis. This certainly does not suggest that one or the other is the default “first-line” treatment and the other is, by definition, to be used only after failure from the first. For example, while we know that MBCT works best for third episode and beyond cases of major depression, the data do *not* suggest that it works less well than traditional approaches for first or second episodes of MDD, simply that it works no better.

The target paper also seems to suggest that MBIs are most appropriate for disorders of emotion regulation. If so, and there is in fact ample evidence in support of this contention, then the case is actually being made for MBIs to take a more prominent role in psychological treatments, given empirical evidence suggesting that disorders such as generalized anxiety disorder, PTSD, depression, eating disorders, substance abuse, and borderline personality disorder are essentially disorders of emotion regulation (Aldao et al. 2010; Kim and Cicchetti 2010).

The target paper further states: “Importantly, mindfulness can be considered part of the increasingly large family of cognitive-behavioral methodologies (CBT). For example, David and Hofmann (2013) argued that mindfulness/acceptance techniques are a form of cognitive restructuring, as they modify primary appraisal (e.g., motivational relevance; see Brown et al. 2013). Relatedly, cognitive defusion, or detachment from thoughts or feelings as “true” indicators of the self (i.e., a “thought is just a thought”), which mindfulness likely promotes can also be conceptualized as cognitive restructuring.” We cannot state any more clearly that mindfulness is not an effort to, nor does it propose to, engage in cognitive restructuring. Restructuring, changing, controlling, or reducing contents of the mind is antithetical to MBIs and mindfulness traditions. If we change the definition of restructuring to simply mean awareness and loosening of the connection between thought and action, then we would agree that mindfulness would fit that definition. But the reality is that there are 20 years of work to suggest that in fact, the opposite may be true—that cognitive restructuring, when it works, does so by the process of enhancing mindful awareness and defusing the automatic connection between thought and action (Segal et al. 2002; Troy et al. 2013). The question would then be, which is a more efficient means of promoting and maintaining that outcome? Ultimately, as suggested by the target paper, “the most convincing test...will be empirical studies.” Unfortunately, while the target paper suggests that, “the available data that we have reviewed herein provide only indirect and/or preliminary support for the heuristic sequential model we have proposed,” we would have to suggest in response to that assertion that the target paper does not accurately describe mindfulness or MBIs, and does not adequately address either the theory informing MBIs or the empirical research supporting their use.

Conclusion

Because it is not uncommon for practitioners and researchers to misunderstand mindfulness and MBIs, we are pleased that we could respond to the target paper in an effort to help clarify some of the questions it raises. The target paper concludes by suggesting: “... we say that if we were a Vulcan species (sic), yes, flat affect

would be a valued and primary target and mindfulness meditation would, accordingly, be a viable and primary strategy to accomplish this goal. However, we are Homo Sapiens.” It is fitting that this conclusion is stated so succinctly, as it represents in one brief sentence an essential problem with the target paper. While it appears to be meant as a final criticism of MBIs, the final sentence in that quote simply reinforces what the target paper has missed. As a statement of correction, we are in fact *homo sapiens sapiens* (not simply *homo sapiens*), which is translated to mean “the man-like being that knows that it knows.” In other words, the metacognition for which mindfulness-based treatments advocate may well be a key part of the human condition.

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