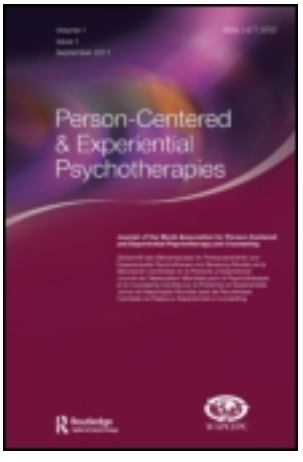

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Stillness and motion: An empirical investigation of mindfulness and self-actualization

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ARTICLES

Stillness and motion: An empirical investigation of mindfulness and self-actualization

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The primary aim of this study was to promote an empirically-based dialogue between Western psychology and Buddhism. To this end, we explored one type of Western psychology (Humanistic Psychology, based on Rogers and Maslow) and one type of Buddhist tradition (a Westernized interpretation of Theravada). Even more specifically, we explored the empirical relationship between mindfulness and self-actualization (SA), exemplars of each discipline. A cross-sectional design was employed to assess correlations among study variables. Participants were 204 students attending midsize Eastern (Fordham) or Western (Boise State) US universities. Participants completed general measures of mindfulness (Mindfulness Attention Awareness Scale (MAAS)) and SA (Short Index of Self-Actualization (SISA)). They also filled out multifaceted measures of each construct: the Kentucky Inventory of Mindfulness Skills (KIMS) and the Brief Index of Self-Actualization – Revised (BISA-R). A demographic form was also administered. While mindfulness and SA were not associated with the demographic variables of age, gender, or ethnicity/race, they were associated with one another in various ways. The findings indicate similarities and differences between the two constructs. This study provides evidence for empirical links between mindfulness and SA, suggesting points of contact between Buddhist and humanistic psychologies more generally. Specifically, these findings provide an empirical starting point for increased cross-fertilization between these two traditions.

Keywords: mindfulness; self-actualization; Buddhism; Humanistic Psychology

Stille und Befähigung: eine empirische untersuchung von achtsamkeit und selbst-aktualisierung

Das primäre Ziel dieser Studie war, für einen empirie-basierten Dialog zwischen westlicher Psychologie und Buddhismus zu werben. Zu diesem Zweck untersuchten wir eine Form von westlicher Psychologie (Humanistische Psychologie, basierend auf Rogers und Maslow) und eine Art von buddhistischer Tradition (eine westliche Interpretationen von Theraveda). Noch genauer gesagt untersuchten wir die empirische Beziehung zwischen Achtsamkeit und Selbst-Aktualisierung (SA), Beispiele für jede der Disziplinen. Ein cross-sectionales Design wurde verwendet, um Korrelationen zwischen Variablen zu bestimmen. Teilnehmende waren 204 Studierende von einer mittelgroßen östlichen (Fordham) sowie westlichen (Boise State) amerikanischen Universität. Die Teilnehmenden füllten Basis-Skalen zu Achtsamkeit aus: (Mindfulness Attention Awareness Scale (MAAS)) und den SA (Short Index of

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Self-Actualization (SISA)). Sie beantworteten auch facettenreiche Fragebögen zu jedem Konstrukt: das Kentucky Inventory of Mindfulness Skills (KIMS) und den Brief Index of Self-Actualization – Revised (BISA-R). Eine demographische Erhebung wurde ebenfalls verwendet. Resultate: Zwar waren Achtsamkeit und Selbst-Aktualisierung nicht mit demographischen Variablen wie Alter, Geschlecht oder Ethnie/Rasse gekoppelt, aber sie waren untereinander in verschiedenster Weise verbunden. Die Befunde deuten darauf hin, dass es Ähnlichkeiten und Unterschiede zwischen den zwei Konstrukten gibt. Diese Studie liefert Hinweise für empirische Verbindungen zwischen Achtsamkeit und Selbst-Aktualisierung und deutet ganz allgemein auf Berührungspunkte zwischen buddhistischer und Humanistischer Psychologie. Insbesondere liefern diese Befunde einen empirischen Ausgangspunkt für vermehrte gegenseitige Befruchtung dieser beiden Traditionen.

Quietud y movimiento: una investigación empírica de la conciencia plena (mindfulness) y la actualización del self

El objetivo principal de este estudio era promover un diálogo empírico entre la psicología occidental y el budismo. Con este fin, hemos explorado un tipo de psicología occidental (psicología humanista, basada en Rogers y Maslow) y un tipo de tradición budista (una interpretación occidentalizada de Theraveda). Más específicamente, exploramos la relación empírica entre Mindfulness y actualización del self, ejemplares de cada disciplina.Utilizamos un diseño transversal para evaluar las correlaciones entre las variables de estudio. Los participantes fueron 204 estudiantes de universidades orientales (Fordham) o universidades occidentales de Estados Unidos (Boise State). Los participantes completaron las medidas generales de conciencia plena (la escala de atención plena de Mindfulness (MAAS)) y SISA (breve índice de actualización del self). También cumplieron multifacéticas medidas de cada construcción: el inventario de Kentucky de habilidades de conciencia plena (KIMS) y el índice breve revisado de actualización del self (BISA-R). También se administró una forma demográfica. Este estudio proporciona evidencia empírica de links entre Mindfulness y SA, sugiriendo puntos de contacto entre la psicología budista y la psicología humanística. Específicamente, estos resultados proporcionan un punto de partida empírico para un mayor intercambio entre estas dos tradiciones.

Immobilité et mouvement: une etude empirique de la pleine conscience et de l'actualisation du self

L'objectif premier de cette étude est de promouvoir un dialogue empirique entre la psychologie occidentale et le Bouddhisme. A cette fin, nous explorons une approche issue de la psychologie occidentale (la Psychologie Humaniste, basée sur Rogers et Maslow) et une approche de la tradition Bouddhiste (une interprétation occidentalisée de Theraveda). Plus spécifiquement encore, nous explorons la relation empirique entre la pleine conscience et l'actualisation du self (AS), chacune exemplaire de leur discipline. Une conception transversale fut utilisée pour évaluer les corrélations dans les variables de l'étude. 204 étudiants d'universités de taille moyenne de l'Amérique de l'Est (Fordham) ou de l'Ouest (l'Etat de Boise) ont participé à la recherche. Les participants ont complété des mesures générales de la pleine conscience (Mindfulness Attention Awareness Scale, MAAS, L'Echelle de Conscience de l'Attention à la Pleine Conscience) et SA (Short Index of Self-Actualization, SISA, Index Court d'Actualisation du Self). Ils ont également rempli des mesures à facette multiple de chaque concept: le Kentucky Inventory of Mindfulness Skills (KIMS) (L'inventoire de Kentucky des Capacités de Pleine Conscience) et le Brief Index of Self-Actualization – Revised (BISA-R) (L'Index Bref d'Actualisation du Self – Révisé). Un formulaire démographique a également été donné. Alors que la pleine conscience et l'actualisation du self n'étaient pas associées avec des variables d'âge, de genre ou d'ethnicité/race,

elles ont été associé entre elles de manières diverses. Les résultats indiquent des similarités et des différences entre les deux concepts. Cette étude fournit des preuves de liens empiriques entre la pleine conscience et l'actualisation du self, ce qui suggère des points de contact entre les psychologies Bouddhistes et humanistes de manière plus générale. Plus précisément, ces résultats fournissent un point de départ empirique pour une fertilisation croisée entre ces deux traditions.

Introduction

Presently, there is considerable interest in the connections between Western psychology and Buddhism. Both approaches have the potential to advance our understanding of the human condition and to ameliorate human suffering. Understanding the similarities and differences of each approach brings with it the opportunity to move both approaches forward. Therefore, we seek to promote an empirically informed dialogue between Western psychology and Buddhism. This goal is best served by appreciating that there are many schools of Western psychology and many forms of Buddhism. This multiplicity helps to explain why proponents of vastly different schools of psychology – psychoanalysis and cognitive-behavioral therapy for example – have been able to find corresponding features in "Buddhism." In this paper, we focus on core constructs from one form of Buddhism (a Westernized reading of the Theravada tradition) and one form of Western psychology (Humanistic Psychology, particularly informed by Maslow and Rogers). Within these traditions, we focus on the more narrow constructs of mindfulness and self-actualization (SA), as they hold particular promise to inform one another and to reduce suffering both singly and jointly. Despite the possibilities, the relationship between these constructs has not been studied in great detail. Before we begin to explore points of connection, some introduction is required as mindfulness and SA are remarkably complicated and multifaceted constructs.

A brief introduction to Buddhist theory and practice[1]

Buddhism, and its variants, developed from the teachings of Siddhartha Gautama, who lived in the Northeastern portion of the Indian subcontinent 2500 years ago. Originally passed through oral tradition, the Buddhist cannon was first written in Pali and then revised and elaborated in other languages and cultures. Depending upon one's way of parsing, there are at least four major traditions within Buddhism: Theravada (sometimes referred to as Hinayana, though this is a debatable synonym with a potentially negative connotation), Mahayana, Chan/Seon/Zen, and Vajrayana, with the latter two being variants of Mahayanan Buddhism. As Buddhism traveled, culturally diverse practitioners transformed and adapted it. Theravada took root in Southeast Asia while Mahayana moved North along the Silk Road. The Mayahana Buddhism of China, Korea, and Japan became known as Chan, Seon, and Zen, respectively. Later, Tibet developed a more esoteric form of Mahayana called Vajrayana. The foundational Theravadan texts (known as the Tipitaka or Pali Cannon), function "as a kind of 'Old Testament' to the 'New Testament' of the Mahayana Sutras" Segall (2003, p. 3). While they share core constructs from pre-sectarian, or early Indian Buddhism, there are some important differences between Theravada and Mahayana Buddhism. The Theravadan tradition is arguably more focused on the examination of direct sensory experience and has fewer metaphysical requirements than the Mahayaha tradition, which is somewhat broader in scope and, perhaps, more focused on others.

The Four Noble Truths, the Eightfold Path, and a foundational text on mindfulness, which are described in the Pali Cannon, are common across the major schools of Buddhism, though their interpretation and instantiation differs somewhat within each tradition. The Four Noble Truths reflect the Buddha's observations about the nature of reality, though he taught his followers to question received wisdom and to verify any so-called truths for themselves. He noted, first, that life brings suffering. This means that having a body, being conscious, perceiving, feeling pleasure and pain, and making choices can lead to the creation of problematic mental states, such as greed, hatred, and ignorance. In this context, ignorance implies a lack of understanding of the nature of reality, in other words, mistakenly attributing permanence to transitory phenomena. The second truth reveals that these mental states can lead to craving and dread, which in turn, can cause even more suffering. Third, the Buddha observed that suffering subsides when craving, dread, and ignorance subside. Finally, the Buddha prescribed a path that leads to the cessation of suffering. This Eightfold Path involves (1) gaining mental discipline through effort, concentration, and mindfulness, (2) living in accordance with one's ethical principles in speech, action, and livelihood, and (3) gaining wisdom by fostering healthy intentions and by seeing things as they are rather than as one wishes them to be. Mindfulness is one step on this path; yet in the Buddhist traditions, it is interwoven with the other steps. In this paper, however, we address mindfulness in isolation from its network or related constructs.

Mindfulness

Of the various Buddhist constructs, mindfulness, specifically the Theravadan form of mindfulness, has received the most attention from Western psychologists (Childs, 2011; Kang & Wittingham, 2010). John Kabat Zinn (1990) popularized a conception of mindfulness that most closely resembles, but does not correspond completely with, the Theravadan tradition and its focus on immediate sensory experience and individual practice. This conception of mindfulness has garnered the attention of Western psychologists, partly because it was spelled out clearly in the Pali Cannon and partly because it has relatively few metaphysical requirements, a very appealing feature for Western psychologists who tend to eschew religious beliefs. Mindfulness, in the Western psychological context, has been described as "a kind of nonelaborative, nonjudgmental, present-centered awareness in which each thought, feeling, or sensation that arises in the attentional field is acknowledged and accepted as it is … thoughts and feelings are observed as events in the mind, without over-identifying with them and without reacting to them" (Bishop et al., 2004 p. 232). It involves the self-regulation of attention, a focus on the present moment, and openness to experience (Bishop et al., 2004). The mindful observer is open to direct observation of experiences, to describe them without elaboration, to accept them without judgment, and to act with awareness (Baer, Smith, & Allen, 2004). Mindfulness has been described as a cognitive ability, as a personality trait, and as a cognitive style (Sternberg, 2002). Interestingly, this Westernized Theravadan definition of mindfulness can be a bit more individually focused, investigative, and ascetic than mindfulness in other Buddhist traditions. Chan/Zen concepts of mindfulness, for example, tend to be broader and mindfulness can be seen as a vehicle for more fully engaging others and the world in general. The metaphysical components and aims, embodied in the Vajrayana tradition, are completely absent from this definition of mindfulness as well.

Mindfulness, in its Western incarnation, has been related to the major schools of psychotherapy including psychoanalysis (Epstein, 1995; Safran, 1995; Segall, 2003), cognitive-behavioral therapy (Hayes, Strosahl, & Wilson, 1999; Linehan, 1993; Segal, Williams, & Teasdale, 2002), and humanistic approaches (Bazzano, 2011; Geller, 2003; Ryback, 2006; Tophoff, 2006). Empirical studies have demonstrated negative associations between mindfulness and psychopathology, such as anxiety and depression (Brown & Ryan, 2003; Cash & Whittingham, 2010), and positive associations with healthy personality constructs, such as positive affect, mood awareness, psychological mindedness, and empathy (Beitel, Ferrer, & Cecero, 2005; Brown & Ryan, 2003). It follows, then, that mindfulness would be related to SA, which is a healthy psychological construct. To our knowledge, however, the field is lacking multidimensional studies of mindfulness and SA.

Mindfulness and SA

Rogers (1951) and Maslow (1943, 1954) identified SA as a path toward, and a manifestation of, psychological health. Maslow (1943) wrote, SA "refers to the person's desire for self-fulfillment, namely, to the tendency for him to become actualized in what he is potentially" (pp. 382–383). Rogers (1961) described SA in the following way:

> "Whether one calls it a growth tendency, a drive toward self-actualization, or a forward-moving directional tendency, it is the mainspring of life, and is, in the last analysis, the tendency upon which all psychotherapy depends. It is the urge which is evident in all organic and human life – to expand, extend, become autonomous, develop, mature – the tendency to express and activate all the capacities of the organism, to the extent that such activation enhances the organism or the self" (Rogers, 1961, p. 35).

This is similar to the Buddhist analogy: "Farmers (literally, makers of irrigation canals) channel the water … the wise tame themselves[2]" (Tipikata Dammapada verse 80). The high self-actualizing person engages in an ongoing process of channeling maximum effort toward the development potential. In summarizing Rogers, it was highlighted by Leclerc, Lefrancois, Dube, Hebert, and Gaulin (1998) that the process features of SA in describing it as "a process through which one's potential is developed in congruence with one's self-perception and one's experience" (p. 79). Therefore, the degree of congruence between the organism's total phenomenal field and its subsystem of self-representations is an index of health. This line of thinking has much in common with the cultivation of wisdom in the Pali texts: Right view involves seeing things as they are rather than as one wishes/fears/imagines them to be. One way to do this is through the practice of mindfulness, where one focuses on the flowing data of sensory experience.

Despite some obvious similarities, there are some points on which SA seems quite antithetical to the Theravadan concept of mindfulness (Hirst, 2003). This is especially true if one reads the canonical mindfulness instructions (The Four Foundations of Mindfulness) in a strict, narrow, literal manner. It is less so, if one examines Buddhist practices as they are implemented by lay practitioners: Mindful meditative practice is certainly not the only mode in which humans live. Thus, it is important to look at some of the apparent differences between mindfulness and SA. First, SA is predicated on getting one's needs met, which, in the strict, canonical sense runs counter to the mindful notion of observation without craving or dread. In its practical application within Theravada and other schools, mindfulness practiced by laypersons is intended to help one become more open to self, others, and the world when one is not engaged in mindfulness meditation practice. Second, in a strict sense, there is no Buddhist self to actualize. Relatedly,

funneling effort toward potential is inherently egoistic and can be in opposition to the Buddhist notion of selflessness. While it is true that some practice ascetic forms of Buddhism to renounce themselves and the world, the vast majority of practitioners are attempting to live in the world, selves intact. Finally, SA requires investment in attachments and relationships, which can lead to suffering. However, mindfulness can also be an antidote to the suffering encountered within the course of normal human relationships. The Pali scholar Andrew Olendski (2003) explained, "The Buddhists are not saying that we should cut off our sensitivity to the full range of experience and live ordinary life in some sort of eternal present." He continued, "in order to get free of some of the distortions and confusions to which we are subject, we need to train ourselves to attend very carefully and very deliberately to the process by which we construct past and future experience in the present moment" (p. 25). It is possible, then, that the individual becomes freer to self-actualize when distortion and confusion are reduced.

There are, in fact, several reasons to predict that mindfulness and SA would be positively related. The first two reasons are theoretical: At the higher levels of SA, experience becomes more selfless and transcendent.[3] Maslow (1969) added self-transcendence to his theory of motivation to reflect actualizing tendencies that "transcended the geographical limitations of the self" (p. 3). This view might be read as more similar to Rogers's view of actualization generally, organismically and not just with special reference to the self. Maslow (1971) observed that high SA individuals are able to attend to objects intensely; perceive richly and with interest, accept things as they are, and have a spiritual orientation to life. Ryback (2006) viewed mindfulness as overlapping with two core concepts in humanistic psychology – self-determination and empathy. Self-determination, according to both perspectives, may be understood as a freedom from attachment to material gains and benefits that might otherwise distract one from the pursuit of higher goals. This kind of detachment is likely to enhance empathy with others, as one becomes liberated from self-preoccupation.

Second, both mindfulness and SA involve openness to experience. More recently, Bazzano (2012) highlighted the process aspects of Rogers's view of self, which suggests increased compatibility with Eastern conceptualizations. For Rogers, the actualizing self is experienced as "a fluid process, not a fixed and static entity; a flowing river of change, not a block of solid material; a continually changing constellation of qualities, not a fixed quantity of traits" (Rogers, 1961, p. 122). Even more broadly, Rogers wrote: "Life, at its best, is a flowing, changing process in which nothing is fixed" (Rogers, 1961, p. 26). This conceptualization is closer to the Buddhist notion of impermanence, an experiential understanding of which is a central goal in the practice of mindfulness.

The third reason to predict positive associations between mindfulness and SA is empirical: Brown and Ryan (2003) found a positive correlation between a general measure of mindfulness and a general measure of SA: The Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) correlated with the Measure of Actualization of Potential (Lefrancois, Leclerc, Dube, Hebert, & Gaulin, 1997) at .43 in a sample of 327 university students.

The fourth reason is experiential: The subjective experience of a mindful moment and a self-actualizing moment may be similar in some respects. Maslow's strategies for fostering SA overlap with mindfulness: For example, he advised, "Experience things fully, vividly, selflessly. Throw yourself into the experience of something; concentrate on it fully; let it absorb you." He also indicated that one should "refreshen consciousness so that we are continually aware of the beauty and wonder of life (Maslow, 1971, p. 183). Furthermore, the practice of mindfulness meditation for an extended period of time brings with it experiences ranging from terror to delight: Some of these moments will fit

Maslow's description of peak experience. Quieting the mind to watch the data of one's senses flow could also be a way of appreciating Rogers's (1961) view of self as an ever changing process.

In this paper, we focus on the canonical concept of mindfulness that has been embraced by Western psychologists and the form of self-actualization (SA) that is more closely associated with Maslow, though there are certainly connections with Rogers. To examine the relationship between mindfulness and SA, we collected data on different facets of each construct. In this way, the present study is an extension of Brown and Ryan's (2003) work, which focused on the associations between global measures of mindfulness and SA. We predicted positive associations in general because of the theoretical, empirical, and experiential similarities between constructs. However, it was too early in this nascent line of research to make *a priori* hypotheses at the facet level. In this regard, our work is exploratory.

Method

Participants

Undergraduate students at midsize Eastern (Fordham) and Western (Boise State) US universities were invited to participate in this study for credit as part of their introductory psychology research requirement. The data were aggregated since the study variables did not vary by university. The total sample comprised 204 participants, 135 women and 69 men. The median age was 21 years and the modal age was 20 years. In terms of ethnicity, 13 participants identified as Asian, 14 as Black, 19 as Latino, and 158 as White.

Measures

Demographic questionnaire

A self-report questionnaire was provided to collect basic demographic information such as age, ethnicity, level of education, and gender.

The brief index of self-actualization-revised

The BISA-R, developed by Sumerlin and Bundrick (1998), consists of a 32-item, self-report measure. It is based on an extensive review of Maslow's writings and a revision of Sumerlin and Bundrick's (1996) 40-item Brief Index of Self-Actualization. BISA-R items are rated on a 6-point Likert Scale with answers ranging from "strongly agree" to "strongly disagree." Four core factors, Autonomy, Core Self-actualization, Comfort with Solitude, and Openness to Experience have been identified through factor analytic procedures (Sumerlin & Bundrick, 1998). These factors have shown moderate, positive intercorrelations (Sumerlin & Bundrick, 1996). An example from each subscale, respectively, follows: "I fear success (reverse-coded)," "I enjoy my achievements," "I like my own company," and "I am a person with lots of curiosity."

Sumerlin and Bundrick (1996) report strong psychometric performance: The BISA has high internal consistency ($\alpha = .87$) and a two-week test-retest reliability of .89. It has correlated highly ($r = .71$) with the Short Index of Self-Actualization (Jones & Crandall, 1986). Positive correlations have been established with measures of psychological adjustment such as hopefulness and subjective health (Sumerlin, 1997). Negative correlations have been found with measures of depression and loneliness (Sumerlin & Bundrick, 1996).

Short index of self-actualization

The SISA contains a 15-item self-report measure developed by Jones and Crandall (1986) derived from Shostrom's (1964) Personal Orientation Inventory. Items appear on a 4-point Likert Scale with answers ranging from "agree" to "disagree." Sample items include: "I believe that people are essentially good and can be trusted," and "I am loved because I give love."

Coefficient alpha was reported as .65 and the two-week test-retest reliability was .69 (Jones & Crandall, 1986). The SISA was highly correlated with its parent instrument, the POI ($r = .67$). It has been positively correlated with extraversion, internal locus of control, self-esteem, and rational thinking (Jones & Crandall, 1986). The SISA was negatively associated with neuroticism (Jones & Crandall, 1986).

Kentucky inventory of mindfulness skills (KIMS; Baer et al., 2004)

The KIMS is a 39-item, self-report measure of four mindfulness skills, derived from theory and confirmed by factor analytic procedures: observing, describing, acting with awareness, and accepting without judgment. An example of an item, drawn from each domain, respectively, follows: "I notice changes in my body, such as whether my breathing slows down or speeds up," "I'm good at findings the words to describe my feelings," When I do things, my mind wanders off and I'm easily distracted (reverse-coded)," and "I criticize myself for having irrational or inappropriate emotions." The items are rated on a 5-point Likert scale ranging from 1 (never or very rarely true) to 5 (almost always or always true). High scores reflect more mindfulness.

Internal consistency was measured with three samples: Student sample 1 ($N = 205$), student sample 2 ($N = 215$), and a third sample ($N = 26$) of adults diagnosed with borderline personality disorder. Alpha coefficients for the four mindfulness skills were .91, .84, .76, and .87, respectively, showing adequate internal consistency. Temporal stability was assessed with a sample of 49 students from student sample 2 who completed the KIMS at two separate times, two weeks apart. Test-retest correlations for the four mindfulness skills were .65, .81, .86, and .83 respectively, showing adequate to good test-retest reliability.

The four subscales have been shown to be moderately and positively correlated, with the exception of Observe and Accept without Judgment, which have been shown to have an inverse relationship in prior research (Baer et al., 2004). Evidence for the construct validity of KIMS was determined when 130 members of student sample 1 completed measures of many other constructs and the results of these measures were compared. In general, KIMS scores were negatively correlated with maladaptive constructs such as neuroticism (NEO-FFI; Costa & McCrae, 1992), and positively correlated with adaptive constructs such as emotional awareness (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) and mental health (BSI; Derogatis, 1992). In addition, it was found that the KIMS Act With Awareness scale was strongly related to the Mindful Attention Awareness Scale, which measures mindfulness ($r = .57$, $p < .0001$) (MAAS; Brown & Ryan, 2003).

Mindful attention awareness scale (MAAS; Brown & Ryan, 2003)

The MAAS is a 15-item, self-report measure of mindfulness. The items are presented on a 6-point Likert scale ranging from 1 (*almost always*) to 6 (almost never). Highs scores indicate more mindfulness. To reduce social desirability, respondents are asked to rate the

items in terms of what "really reflects" their experience rather than what they think their experience ought to be. Temporal stability has been assessed with a sample of 60 undergraduates over a four-week period (ICC = .81, $p < .001$) (Brown & Ryan, 2003). Coefficient alpha has ranged from .82 in an undergraduate sample (N = 327) to .87 in a general adult sample (N = 239) (Brown & Ryan, 2003).

Evidence for the MAAS's convergent and discriminant validity was presented in Brown and Ryan (2003). The MAAS correlated positively with a variety of self-report instruments that measure self-awareness. For example, the Trait Meta-Mood Scale (TMMS; Salovey et al., 1995) measures attention to feelings, clarity of emotional experience, and repairing unpleasant mood states. The MAAS correlated with overall emotional awareness on the TMMS, Attention, Clarity, and Repair. The MAAS has been associated positively with a variety of well-being measures, such as Positive Affect on the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). In contrast, it was inversely related to Negative Affect.

Procedure

This study was conducted over a 1-year period. Institutional Review Board approval was obtained. Prospective participants were furnished with informed consent documents indicating that participation was completely voluntary and could be terminated at any time without penalty.

Data analysis

Potential demographic differences were assessed with strategies appropriate for continuous and categorical data (ANOVA, *t*-test, Product-Moment correlation, chi-square). Ethnicity was dichotomized between majority and minority status because the number of ethnic minorities was low. Consequently, a t-test was employed to assess mean differences on study variables. Pearson product-moment correlation and canonical correlation analyses were employed to characterize relations among study variables. Statistical significance was set to $p < .05$. Bonferroni corrections were employed, where appropriate, to maintain a familywise error rate of .05 for multiple comparisons. Statistical analyses were performed with SPSS Version 17.0 for Windows (SPSS for Windows Version 17, 2009).

An *a priori* power analysis was run to determine the number of participants required to detect a medium-size effect with seven predictors. The power analysis for this study was conducted with GPOWER (Erdfelder, Faul, & Buchner, 1996). With power set to .80, and alpha set to .05, 103 participants would be the minimum number required to detect a medium-size effect (Cohen, 1992). The total number of participants recruited for this study was 204.

Results

Analyses (Pearson product-moment correlation and t-test) failed to reveal statistically significant relations among study and demographic variables (age, sex, and ethnicity). Scale descriptive statistics are presented in Table 1. Internal consistency estimates (coefficient alpha) for all study measures ranged from .63 to .89. The coefficient alpha for the SISA was somewhat low (.63) but the other alphas were above .70, the commonly recommended cut-off for research instruments (Nunnally, 1978). The BISA-R subscales showed patterns of

Table 1. Scale descriptive statistics.

Variable	*M*	*SD*	α
General Mindfulness (MAAS)	56.66	13.63	.89
Observe (KIMS)	3.20	.63	.86
Describe (KIMS)	3.42	.72	.88
Act with Awareness (KIMS)	2.85	.50	.88
Accept without Judgment (KIMS)	3.21	.72	.69
Core SA (BISA-R)	4.20	.80	.87
Autonomy (BISA-R)	4.13	.88	.84
Openness (BISA-R)	4.64	.95	.73
Solitude (BISA-R)	3.79	.99	.74
General Self-Actualization (SISA)	2.84	.34	.63

Note. MAAS, Mindful Attention Awareness Scale, KIMS, Kentucky Inventory of Mindfulness Skills, BISA-R, Brief Index of Self-Actualization – Revised, SISA, Short Index of Self-Actualization.

interrelations that were consistent with prior research (Sumerlin, 1996), with the exception of Autonomy and Solitude, which were uncorrelated in this sample, and which were positively and significantly correlated in a previous sample. The KIMS subscales also related to one another as they had in other samples (Baer et al., 2004). This suggests that the scales functioned in this sample as they were intended to function.

Table 2 presents intercorrelations among study variables. The correlations were generally positive and significant. The most general measure of mindfulness (MAAS) and the most general measure of SA were correlated at .38. This means that self-reported mindfulness increased as SA increased, to a statistically significant degree. The Observe (KIMS) subscale was an exception: It showed a significant negative correlation with Openness (BISA-R). This means that the self-reported capacity to observe went down when openness increased. Another exception was Comfort with Solitude (BISA-R), which was uncorrelated with 50% of the study variables. A lack of correlation suggests that two constructs lack a linear relationship. It is possible that they relate to one another in a more complex manner; however, visual inspection of the scatterplots yielded no obvious pattern.

Table 2. Intercorrelations among facets of mindfulness and self-actualization.

Variable	1	2	3	4	5	6	7	8	9	10
1. General Mindfulness (MAAS)	–									
2. Observe (KIMS)	.09	–								
3. Describe (KIMS)	.43**	.42**	–							
4. Act with Awareness (KIMS)	.54**	.09	.21**	–						
5. Accept w/o Judgment (KIMS)	.43**	−.23**	.20**	.26**	–					
6. Core SA (BISA-R)	.16*	.29**	.32**	.23**	.13	–				
7. Autonomy (BISA-R)	.54**	−.09	.32**	.42**	.48**	.34**	–			
8. Openness (BISA-R)	.15*	−.25**	.23**	−.04	.07	.59**	.10	–		
9. Solitude (BISA-R)	−.04	.19*	.02	.07	−.23**	.40**	−.05	.20**	–	
10. General SA (SISA)	.38**	.09	.38**	.29**	.41**	.52**	.65**	.35**	.08	–

Note. MAAS, Mindful Attention Awareness Scale, KIMS, Kentucky Inventory of Mindfulness Skills, BISA-R, Brief Index of Self-Actualization – Revised, SISA, Short Index of Self-Actualization; *$p < .05$. **$p < .01$.

Table 3. Facets of mindfulness and self-actualization in CCA.

	First canonical variate		Second canonical variate	
Variable	Correlation	Coefficient	Correlation	Coefficient
Mindfulness				
Observe (KIMS)	−.12	−.21	.98	.87
Describe (KIMS)	.54	.42	.60	.25
Act with Awareness (KIMS)	.67	.45	.09	−.03
Accept without Judgment (KIMS)	.80	.55	−.17	−.01
Self-Actualization				
Core SA (BISA-R)	.40	.26	.90	.82
Autonomy (BISA-R)	.97	.89	−.05	−.35
Openness (BISA-R)	.11	.10	.76	.28
Solitude (BISA-R)	−.20	−.24	.47	.07
Canonical Correlation	.63		.35	

Notes: KIMS, Kentucky Inventory of Mindfulness Skills, BISA-R, Brief Index of Self-Actualization – Revised.

A canonical correlation analysis (CCA) was run using facets of mindfulness and SA to further unpack the relationship (see Table 3). There are variables, canonical variates, and variate pairs in CCA. The variables are the measured study variables. Canonical variates are linear combinations of variables, which includes one combination of independent variables (e.g., KIMS subscales) and one combination of dependent variables (BISA-R subscales). One group of independent and dependent variates is referred to as a canonical variate pair. Several reliable variate pairs might exist for a given dataset. Note that the terms "independent" and "dependent" do not imply causality because this research design was correlational. The first canonical variate set reflected mindfulness and included KIMS subscales; whereas the second set reflected SA was included BISA-R subscales. High numbers reflect more of the measured construct in each case and low numbers reflect less of the measured construct.

The first canonical correlation was .63, which explained 40% of the variance in the first pair of canonical variates (i.e. mindfulness and SA). Wilk's lambda was significant ($\lambda = .48$, $p < .001$). The second canonical correlation was .35, which explained 12% of the variance in the second pair of canonical variates (i.e. mindfulness and SA). Wilk's lambda was significant ($\lambda = .80$, $p < .001$). A third canonical variate pair was statistically significant but was so small it was not interpreted: Its Eigenvalue was less than 1.0 and its canonical correlation explained less than 10 percent of the variance. Therefore, two mathematically viable and statistically significant models were derived.

The canonical correlations suggest high and positive associations between mindfulness and SA. Within the first canonical variate pair, the variables in the mindfulness set were highly and positively correlated with the mindfulness variate with the exception of Observe (KIMS), which did not meet the conventional .3 cut-off. Two variables in the SA set were highly and positively correlated with the SA variate (Core SA (BISA-R) and Autonomy (BISA-R)). Taken together, this canonical variate pair suggests that high descriptiveness, awareness, and non-judgment go with high autonomy and core SA.

The second canonical variate pair was smaller in association but still interpretable. Two of the mindfulness variables were significantly and positively related to the variate: Observe (KIMS) and Describe (KIMS). On the SA side, Core SA (BISA-R), Openness (BISA-R), and Comfort with Solitude (BISA-R) were significantly and positively related

to the SA variate. This variate pair suggests that observing and describing go with core SA, openness, and comfort with solitude.

Discussion

The primary aim of this research project was to explore the relationship between mindfulness and SA in an empirical context. To this end, we focused on the Theravadan view of mindfulness that has been embraced by Western psychologists and the type of self-actualization (SA) that is more closely associated with Maslow, though there are certainly points of contact with Rogers's actualizing tendency. We hypothesized that the theoretical, empirical, and experiential similarities between these particular forms of mindfulness and SA would outweigh the impact any philosophical differences between larger systems to which each construct belongs. Therefore, we hypothesized that there should be some association between constructs.

The primary outcome of this study was that mindfulness and SA were positively related overall. Several types of evidence for this relationship were generated. First, the most global measures of each construct (i.e. MAAS and SISA) were significantly and positively correlated. Second, the KIMS and BISA-R variables were significantly and positively related in two mathematically viable CCA solutions.

This study represents an extension of Brown and Ryan's (2003) findings, in that facets of mindfulness and facets of SA were examined. More variability in associations was revealed at the facet level than the global level. The CCA findings provide a comprehensive picture of variable relations. The first canonical variate pair showed that descriptive ability, action with awareness, and non-judgmental acceptance related to core SA and to autonomy. Neither observation skills, openness to experience, nor comfort with solitude were significant factors in this variate pair. The driving forces in this variate pair were acceptance, on the mindfulness side; and autonomy, on the SA side. The strong relationship between acceptance and autonomy suggests that the highly non-judgmental, non-self-critical individual is also quite independent and self-confident in ways that supports SA. It is also important to note that not every facet of mindfulness related to every facet of SA.

The second canonical variate pair revealed another way in which mindfulness and SA variables related. In this case, observations and description skills were the primary indicators of mindfulness with relations to all SA variables except autonomy. The action- and acceptance-oriented mindfulness skills did not play significant roles in this solution. These skills might require a higher degree of autonomy, which is lacking from the other side of the equation.

There were some unexpected findings as well. For example, there was a significant negative correlation between Observe (KIMS) and Openness (BISA-R). This suggests that mindful observers, who report paying attention to the data of their experience are decreasingly open to experience. In contrast, Baer et al. (2004) found a strong relationship ($r = .50$) between Observe (KIMS) and Openness to Experience (NEO-FFI; Costa & McCrae, 1992). One possibility, that will need to be tested, is that self-actualizing openness is different than openness to experience in general. The second unexpected finding was the negative correlation between Accept without Judgment (KIMS) and Comfort with Solitude (BISA-R): As non-judgmental acceptance increases, comfort with solitude decreases. The basis for this association is currently unclear and merits further research attention.

Finally, there were some null findings of interest. Several mindfulness and SA facets were unrelated to one another: Neither descriptive ability nor the ability to act with awareness was linearly related to comfort with solitude. While mindfulness is often a solitary practice, it is

intended to lead to a sense of connectedness rather than solitude. This might be a place in which the deeper philosophical differences between constructs show through. Non-judgmental acceptance was related neither to core SA nor to openness to experience. Funneling effort toward potential requires a considerable amount of judgment. Again philosophically, mindful practice is antithetical to self-oriented goal-seeking where much judging is required.

Limitations

There are several limitations to this study that must be addressed. First, the data were collected by self-report, which provides access to participants' subjective experience but does not offer corroborating external evidence for the findings. Second, the reliability of the SISA was lower than expected. We did not correct for attenuation because the SISA showed a wide range of correlations with other variables: It is worth noting that these might be underestimates of construct relations. Third, there were some unpredicted findings (negative and null) that will require follow-up investigation in another sample. Fourth, we did not attempt to study mindfulness-in-action or as a way-of-being in this particular paper. These broader approaches are more associated with the Mahayana Buddhism of China, Korea, and Japan. In contrast, the instruments employed in this project are more consistent with mindfulness as a skill and the narrower, canonical, Theravadan-style version of mindfulness as a solitary practice. Of course, both broad and narrow versions of mindfulness are important.

Future research

Future research on mindfulness and SA could take many forms as this line of research is in its infancy. First of all, this study should be replicated in clinical and non-clinical samples to determine the extent to which the observed relationships herein hold up across settings. Future studies should utilize multiple methods of assessment to increase validity. Studies of mindfulness as an activity (e.g. meditation), a way of being, and a personality trait would be very helpful in this regard. Mindfulness from different perspectives (Theravada, Mahayana, Vajrayana) merits empirical investigation. Research projects that investigate mindfulness and SA in therapists would also be valuable as well.

Implications for humanistic theory and practice

Since Rogers elaborated his conditions for personality change, humanistic therapists have been attempting to cultivate unconditional positive regard for the client. Rogers defined unconditional positive regard as follows: "To the extent that the therapist finds himself experiencing a warm *acceptance* of each aspect of the client's experience as being a part of that client, he is experiencing unconditional positive regard" (Rogers, 1957, italics added). Unconditional positive regard means "caring for the client as a separate person, with permission to have his own feelings, his own experiences" (Rogers, 1957). In other words, it requires an appreciation of the client's *autonomy*. In this definition, we find the two driving forces of the first CCA solution: acceptance, from the mindfulness side, and autonomy, from the SA side. There are deep, historical linkages here. Mindfulness theory and practice can amplify these linkages and provide new ways of promoting acceptance in therapists and in patients. Mindful acceptance appears to be an important ingredient in psychotherapy and there is already evidence for its therapeutic effects. For example, a recent study demonstrated that therapists' mindful acceptance predicted aspects of

psychotherapy process and outcome, such as therapist-rated alliance and increased patient interpersonal functioning (Ryan, Safran, Doran, & Muran, 2012).

Mindfulness also provides an explanatory framework for the importance of acceptance as well as a new vocabulary and network of associated constructs through which acceptance might be viewed. Mindfulness is just one of a set of constructs central to Buddhist theory and practice. These other constructs involve the deployment of effort and concentration; the practice of ethical speech, action, and livelihood; as well as the cultivation of appropriate perception and intention. Moving beyond mindfulness alone to explore all eight facets will be an important step. Viewing mindfulness more broadly, as a way of being rather than as a set of skills would likely open up possibilities for greater integration of mindfulness within humanistic psychotherapy. For now, however, mindfulness, as we have studied it, is an excellent starting point to invigorate and challenge humanistic psychology.

Notes

1. This introduction is drawn from the following sources: de Bary (1972); Hanh (1998); Mitchell (2008), and Rahula (1974).
2. The meaning of the reference to "selves" in this verse had been debated.
3. The interested reader is referred to Koltko-Rivera (2006) for a review of Maslow's theory of self-transcendence.

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