

**A variety of attuned states; creating an integrative  
typology of states of heightened attention and awareness**

by

**Brodie Boland**

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Copyright  
Department of Organizational Behavior  
Weatherhead School of Management  
Case Western Reserve University  
Cleveland OH 44106-7235  
e-mail: [ler6@case.edu](mailto:ler6@case.edu)

## **A variety of attuned states; creating an integrative typology of states of heightened attention and awareness**

The definitions, descriptions, and empirical and conceptual relationships between three attuned states are examined with the aim of understanding the underlying mental phenomena that attuned states describe. Contradictory conceptualizations and empirical findings present in the literature highlight the differences and commonalities between various states. Features common to all attuned states, and dimensions by which attuned states differ are then proposed and explicated. These dimensions form a typology of attuned states that can help explain contradictory findings and clarify future conceptualizations of attuned states.

Attention and awareness are two of the central features of human consciousness (Brown and Ryan, 2007). Awareness is the faculty that continually scans the internal and external environment, and attention is the process by which the mind selects stimuli of interest and focuses consciousness upon them (Brown and Ryan, 2007). I am *aware* of the clock on the wall in my peripheral vision, and I *attend* to this clock when I want to know the time. That deficiencies in the quality of one's attention and awareness can have numerous negative consequences is long established (James, Burkhardt, Bowers, & Skrupskelis, 1981). There are also a number of strands of research that examine the consequences of states of particularly heightened or sustained attention and awareness. Here I will refer to these states as 'attuned states,' reflecting that in the state a person is more attuned to their self or environment, either through the intentional focus of heightened attention or through the wakefulness of heightened awareness.

As moments that are often most high performing (Privette, 1983), fulfilling (Csikszentmihalyi & LeFevre, 1989), identity defining (Maslow, 1976), developmental (Brown & Ryan, 2003), and perspective forming (Maslow, 1976), attuned states can provide insight into how the mind functions at its best. The study of attuned states is as old as the experiences themselves. Vedic scholars created sophisticated formulations of their antecedents, varieties, and consequences millennia ago (Flood, 1996). More recently, scholars such as William James (1890) and Abraham Maslow (1976) introduced such states to Western science. In the past decades, there has been a proliferation of research into states such as mindfulness (e.g., Bishop et al., 2004; Brown & Ryan, 2003; Kabat-Zinn, 1993; E.J. Langer, 1989; Weick & Putnam, 2006), absorption (Roche & McConkey, 1990; Tellegen & Atkinson, 1974), and flow (Csikszentmihalyi, 1990). While there has been a prior attempt at integrating research into these states (Privette, 1983), Privette's work was prior to the mindfulness literature, and did not attempt to reduce these states to their component parts. Thus, there is a need for an updated integrative review of attuned states.

The lack of an integrative typology of attuned states creates a number of problems both for scholars seeking to more fully understand the states as well as for practitioners seeking to apply them. First, there are similarities between the states of flow, mindfulness, and absorption. Without integrating the study of these states it is unclear where they overlap and where they diverge. Second, some of these constructs are not actually one individual state, but a constellation of states. For

example, there are a broad variety of definitions of mindfulness, ranging from those that emphasize cognition (E. J. Langer, 1989) to those that emphasize its absence (Brown & Ryan, 2003), from those that are correlated positively to those that are correlated negatively with absorption (Brown & Ryan, 2003; Lau et al., 2006). As other authors have suggested (Weick & Putnam, 2006), expanding the definition of a construct can result in it becoming meaningless. Resolving these issues will require identifying those factors that are shared by all states, as well as those factors that give rise to the diversity of the states. My objective in this paper is to identify such commonalities and differences through reviewing the literature on flow, absorption, and mindfulness, and thus develop a typology of attuned states.

Creating a typology of attuned states will yield a number of benefits. First, understanding the various dimensions underlying each state can illuminate the otherwise perplexing empirically observed relationships between the states (e.g., what explains the contradictory correlations between various types of mindfulness and absorption?). Second, understanding the variety of attuned states will provide a more nuanced view of each state's particular practical relevance (e.g., when should a person be absorbed, and when should they be mindful?). Third, reducing the states to their component parts and linking these with basic mental faculties will reveal potential internal contradictions in the states' formulations (e.g., is a mindful person thinking or not?). Fourth, understanding the mental dimensions of which these states are composed may suggest novel gestalts of mental capacities to study, and perhaps expand our conceptions of the possible range of attuned states (e.g., have

we studied the state in which one is witnessing, thinking, and not goal oriented?). Finally, separating the various factors underlying attuned states will allow for modes of testing such states that are not dependent on self-report scales (e.g., will fMRI testing show a difference between a witnessing or absorbed mode?).

## **FORMULATIONS OF ATTUNED STATES**

Three formulations of attuned states – flow, mindfulness, and absorption - are examined below. For each, I take five views on the state; the conceptual definition of the state, its phenomenological structure, associated situational factors, the effects of the state, and a brief overview of issues or challenges in the literature on the state. Doing so will provide a comprehensive view of each state, addressing it from the theoretical, subjective, objective, and empirical perspectives. This review will provide the raw material for the inductively derived typology of attuned states. Note that, as indicated above, these three attuned states are neither internally homogeneous nor mutually exclusive. Indeed, there are significant overlaps between the states and contradictions within them. The exploration below will surface these issues, and the final section will organize them into a more coherent typology.

### **Flow**

#### ***Conceptual Definition***

The term *flow* describes those situations in which individuals experience both heightened enjoyment and performance, through absorption or engrossment in a

particular activity (Nakamura & Csikszentmihalyi, 2009). Many people experience flow during activities such as reading, playing a sport or an instrument, and very often at work (Nakamura & Csikszentmihalyi, 2009). Athletes and musicians refer to it by phrases such as *'being in the zone'* (Csikszentmihalyi, 1990) or *'deep play'* (Nachmanovitch, 1991). Flow is practically important as a state during which individuals not only perform at their peak, but are also intrinsically satisfied (Csikszentmihalyi, 1990). It is understood as involving:

- "intense and focused concentration on the present moment;
- merging of action and awareness;
- loss of reflective self-consciousness (i.e., loss of awareness of oneself as a social actor);
- a sense that one can control one's actions; that is, a sense that one can in principle deal with the situation because one knows how to respond to whatever happens next;
- distortion of temporal experience (typically, a sense that time has passed faster than normal)
- experience of the activity as intrinsically rewarding, such that often the end goal is just an excuse for the process." (Nakamura & Csikszentmihalyi, 2009)

While flow is defined as state, not a trait, there is some evidence that suggests that certain personalities are more able to enter states of flow (Nakamura & Csikszentmihalyi, 2002). These 'autotelic' personalities possess certain metaskills, which "include a general curiosity and interest in life, persistence, and low self-

centeredness, which result in the ability to be motivated by intrinsic rewards.  
(Nakamura & Csikszentmihalyi, 2002)”

Flow is an autotelic activity, in that the state itself is seen as rewarding and immediate goals are inherent in the activity (Nakamura & Csikszentmihalyi, 2002). For example, a rock climber experiences flow not when she is thinking about reaching the top, but when each motion is an absorbing goal in itself. However, the proximate goals of perfecting each motion are structured by the distal goal of reaching the top of a climb. Flow is thus both autotelic in that the goal is the activity itself, as well as telic, in that there is often a larger unifying goal for the activity. It is, in any case, expressly a goal-directed state of mind.

### ***Phenomenological structure***

The characterizing feature of flow is a sense of absorption caused by an intense and focused concentration on the task (Nakamura & Csikszentmihalyi, 2002). In subjective reports of flow experiences, positive mood, use of skills, intense concentration, self-growth, and intrinsic motivation also feature (Csikszentmihalyi, 1992). At higher degrees of absorption, all forms of sensory and cognitive backgrounds fade from awareness. The subjective experience of time becomes distorted, creating a feeling ranging from simply wondering where the hours have gone to feeling outside the flow of time. Awareness of the self-construct or ego also fades as the subject’s attentional resources become wholly involved in the activity

(Nakamura & Csikszentmihalyi, 2002). Often, background stimuli, and even sensations within the subject's own body are forgotten (Csikszentmihalyi, 1990).

### ***Situational factors***

Despite the definition of flow as a state, it emerges through the interaction between person and environment (Nakamura & Csikszentmihalyi, 2002), and as such can be examined both from an objective, interactionist, as well as the subjective, phenomenological viewpoint. Indeed, of all the attuned states examined here, literature on flow places the greatest emphasis on the interaction between an individual and their environment. Specifically, flow occurs when there is a balance between the difficulty of a particular situation and an individual's abilities, such that the individual is challenged but not frustrated (Csikszentmihalyi, 1990). It is also important that there is immediate feedback, in order to generate the necessary proximal goals (Nakamura & Csikszentmihalyi, 2002). For example, gravity provides the immediate feedback necessary for the climber mentioned above. Should she not balance on the rock appropriately, she will fall.

### ***Developmental Effects***

Due to the inherently enjoyable nature of the flow experience and the fact that the experience is due to a person's engagement with a challenging situation, flow is almost necessarily developmental. A person who experiences flow is likely to attempt to replicate the experience, but will have to engage with progressively more

challenging situations in order to facilitate the optimal balance of challenge and skill necessary for flow (Csikszentmihalyi, 1992). The rock climber, upon mastering a certain difficulty of climb, must attempt harder climbs in order to continue to experience flow.

### ***Issues***

*Are there forms of flow that are not goal-oriented?*

The presence of proximal goals that structure an activity is often described as a necessary feature of flow. However, the concept of flow has been used to describe activities that are not goal-oriented, such as meditation, viewing theatre, or listening to music (Csikszentmihalyi, 1990). This raises the question of whether goals are an inherent component of flow, or can one experience flow in activities that do not involve goals? Is the phenomenology of a state without goals the same as one with goals?

### **Mindfulness**

#### ***Conceptual overview***

The concept of mindfulness originated in very early Buddhist thought (Gunaratana, 2002) and has been adopted by Western scholars for a variety of purposes ranging from the clinical to the organizational (Kabat-Zinn, 1993; Weick, Sutcliffe, & Obstfeld, 1999). As the study of mindfulness in the West is relatively young, there are a wide range of definitions that varyingly include factors such as an open,

receptive attention and awareness (Brown et al., 2007), non-cognitive or pre-cognitive awareness (Brown et al., 2007), curiosity (Lau et al., 2006), the ability to describe one's internal states (Baer, Smith, & Allen, 2004), flexibility of awareness and attention (Feldman et al., 2007), a focus on the present (Walach et al., 2006), an attunement to novel internal or external stimuli (E. J. Langer & Moldoveanu, 2000), and a non-judgmental acceptance of reality (Walach et al., 2006). Common to all of the mindfulness definitions and their accompanying scales is an emphasis on heightened awareness of and attention to present reality.

Six mindfulness scales were reviewed in constructing the dimensions presented in the typology below; the Mindful Attention Awareness Scale (Brown & Ryan, 2003), Kentucky Inventory of Mindfulness Skills (Baer, Smith, & Allen, 2004), Langer Mindfulness Questionnaire (E. Langer, 2004), Toronto Mindfulness Scale (Lau et al., 2006), Freiburg Mindfulness Inventory (Walach, Buchheld, Buttenmüller, Kleinknecht, & Schmidt, 2006), and Cognitive Affective Mindfulness Scale (Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007). The factors identified in each of these scales are included in Table 1.

While most of the mindfulness scales measure mindfulness as a trait that predisposes an individual to experiencing the state of mindfulness (Brown & Ryan, 2003), others actually attempt to measure the experience of the mindful state itself (Lau et al., 2006). Even those researchers that evaluate the disposition to mindfulness, however, argue that “mindfulness is inherently a state of

TABLE 1; CONCEPTUAL ELEMENTS OF PEAK STATES

Flow	Absorption	MF - MAAS	MF - KIMS	MF - LMQ	MF - TMS	MF - Freiburg	MF - CAMS
Intense and focused concentration on present moment	Responsiveness to engaging stimuli	Clarity of awareness	Observe	Novelty seeking	Curiosity	Mindful presence	Ability to regulate attention
Merging of action and awareness	Synesthesia	Nonconceptual, nondiscriminatory awareness	Describe	Engagement	Decentering	Non-judgmental acceptance	An orientation to present or immediate experience
Loss of reflective self-consciousness	Enhanced cognition	Flexibility of awareness and attention	Act with awareness	Novelty producing		Openness to experiences	Awareness of experience
A sense that one can control one's actions, deal with whatever arises in the situation	Oblivious/dissociative involvement	Empirical stance toward reality	Accept without judgement	Flexibility		Insight	Attitude of acceptance or non-judgement towards experience
Distortion of temporal experience	Vivid reminiscence	Present-oriented consciousness					
Experience of the activity as intrinsically rewarding	Enhanced awareness	Stability or continuity of attention and awareness					

consciousness. (Brown & Ryan, 2003)” While a particular experience of the mindful state can have beneficial effects independent of a person’s trait-measured predisposition, the higher measures of the trait of mindfulness are related to the frequency and depth with which people experience mindful states and their beneficial effects (Brown & Ryan, 2003).

### ***Phenomenological Structure***

Given the above differences in definitions of mindfulness, it should come as no surprise that the descriptions of the subjective experience of the state differ. However, there are a number of common threads. First is a heightened and open, receptive attention and awareness of present reality. Like flow, mindfulness is said to reduce identification with the ego (Brown et al., 2007), however it does this less through self-forgetting, as in the absorption of flow, and more through self-witnessing, referred to as pre-cognitive awareness (Brown et al., 2007) or decentering (Lau et al., 2006). This is an important difference in understanding these attuned states, and will be explored further below. An altered experience of time is also a feature of mindfulness, although the emphasis is more on being present within the flow of time, in a given moment, than on forgetting time or being outside of time (Brown & Ryan, 2003; Feldman et al., 2007; Gunaratana, 2002; E. J. Langer & Moldoveanu, 2000; Walach et al., 2006). One could postulate that in a mindful state a person would be less apt to underestimate how much time has passed than in an absorbed state (Jean & MacLeod, 1983), although this has yet to be empirically tested. Similar to flow and other attuned states, the mindful state is

positively related to positive affect and is seen as intrinsically valuable, although the object of one's mindfulness may be pain or negative emotions (Brown et al., 2007).

### ***Situational Factors***

Unlike flow, the experience of the state of mindfulness is not dependent on features of a given situation. An individual could presumably be mindful both sitting on their couch waiting for a friend or on an aircraft deck in the Persian Gulf, although the latter situation may place greater demands on the individual's concentration.

### ***Developmental Effects***

A plethora of beneficial effects of mindfulness have been noted. Although studies of changes in indicators of an individual's physical or psychological health resulting from changes in mindfulness are limited, they do exist and suggest both that increasing levels of mindfulness can be developed and that the effects of mindfulness increases along with it (Brown & Ryan, 2003). The effects fall into three main categories; improved mental health and psychological well-being (e.g., positive affect, neuroticism, negative affect, and depression), improved physical health (e.g., pain and cancer treatment outcomes), and improved behavioral regulation (e.g., overconfidence in gamblers, academic outcomes, and smoking cessation rates) (Brown et al., 2007). Note that the above effects have been measured with the Mindful Attention Awareness Scale (Brown et al., 2007) and are thus not necessarily generalizable to other forms of mindfulness.

### ***Issues***

*Can mindfulness be goal-oriented?*

Unlike flow, the teleological character of mindfulness is unclear. Some scholars emphasize its non-judgmental character, indicating that having any goals is antithetical to the mindful state (Walach et al., 2006). Others affirm the non-discriminatory nature of the state but indicate that mindfulness, through greater self-awareness, engenders greater consonance between one's pursued goals and one's preferences and improves self-regulation (Brown et al., 2007). For improved self-regulation, one must have some criteria as to which behaviors are more or less desirable, contradicting a strict interpretation of mindfulness' non-discriminatory nature. Finally, other authors have described the role of mindfulness within highly goal-directed environments, such as aircraft carriers and nuclear power plants (Weick et al., 1999), treating mindfulness as a telic state. As such, the extent to which mindfulness can be goal-oriented or impartial is a matter of debate.

*Is mindfulness a type of thinking or the absence of thinking?*

While mindfulness as conceived by Ellen Langer (1989) describes characteristics of a cognitive process, other theorists emphasize the non-cognitive nature of mindfulness (Brown & Ryan, 2003). Indeed, some describe cognition as being directly contrary to the mindful state (Gunaratana, 2002). These are obviously two very different perspectives on what mindfulness is, that go to the very core of alternate definitions. Is mindfulness a state free of thoughts, or is mindfulness a characteristic of thinking?

## **Absorption**

### ***Definition***

Absorption is “interpreted as a disposition for having episodes of 'total' attention that fully engage one's representational (i.e., perceptual, enactive, imaginative, and ideational) resources. (Tellegen & Atkinson, 1974)” It thus shares the feature of heightened attention and awareness with other attuned states.

Similar to both mindfulness and flow, absorption can be understood both as a dispositional trait and a state (Roche & McConkey, 1990). The original Tellegen absorption scale measures disposition to enter an absorbed state (Tellegen & Atkinson, 1974).

### ***Phenomenological Structure***

The experience of absorption is very similar to that of flow, in that its primary characteristic is of an intense concentration on the object of attention such that one's entire attention and awareness is absorbed in the object (Tellegen & Atkinson, 1974). Like both flow and mindfulness it can be accompanied by either positive or negative affect, although is often described as a positive experience and is positively related to positive affect (Pekala, Wenger, & Levine, 1985). Producing an “altered sense of reality in general and of the self in particular” (Tellegen & Atkinson, 1974), absorption is accompanied by the decreased self-awareness present in flow (Pekala et al., 1985). In certain forms of absorption, the object of attention can be so intimately identified with that it becomes a part of the phenomenological self,

creating a dissociative or unitive experience (Tellegen & Atkinson, 1974). As in flow, time is often distorted, with subjects typically underestimating the time that has passed during a period of absorption (Jean & MacLeod, 1983).

### ***Situational Factors***

Increasing external demands on attention have been shown to negatively affect high-absorption subjects' performance on tasks relative to low-absorption subjects (Roche & McConkey, 1990). This may be because it prevents these individuals from adopting their preferred 'experiential set,' or orientation towards the quality of experience instead of the extrinsic results of the activity (Roche & McConkey, 1990). Absorption has been described in situations ranging from public and active pursuits such as theatre to private and internal situations such as daydreaming (Roche & McConkey, 1990), and thus appears to be relatively context independent. Recent writings on flow have questioned whether flow can be achieved without an external goal-oriented activity in an activity such as, for example, daydreaming (Nakamura & Csikszentmihalyi, 2009), and absorption appears to address such states.

### ***Developmental Effects***

There has been little research on the developmental effects of absorption. Although correlated with factors such as positive affect and hypnotizability (Tellegen & Atkinson, 1974), the lack of studies limits conclusions as to the effects of absorption experiences.

## **DIMENSIONS OF ATTUNED STATES**

### **Contradictions in current conceptions and measures of attuned states**

As summarized in Table 1, there are a wide variety of factors of the three attuned states explored above. Even a given construct, such as mindfulness, includes constructs that specify a variety of different factors. This diverging treatment may explain the contradictory relationships that have been observed between the attuned states and other constructs.

To understand these different results, and form a fuller picture of the varieties of attuned states, we must understand the underlying mental capacities of which these states are heightened manifestations. While there are some characteristics that are true of all attuned states, there are other dimensions along which attuned states differ. In surveying the literature on these three attuned states, I have induced elements that are common between all three states (and between various formulations of a given state), as well as three dimensions along which peak states vary. These are described below.

### **Characteristics common for all attuned states**

There are three fundamental, common elements of all three attuned states; heightened attention and awareness, self-transcendence, and the perception that the state is intrinsically valuable.

### ***Heightened awareness and attention***

William James highlighted the central role of attention in stating “My experience is what I agree to attend to. (James, Burkhardt, Bowers, & Skrupskelis, 1981)” In addition to the role of attention and awareness in highlighting certain types of phenomenal content, such as in the value of focusing on positive aspects of one’s experience (Fredrickson, 2001), the quality of attention and awareness is also important. Whether one’s attention is distracted or sustained, heightened or dulled, influences the quality of experience.

Attuned states are primarily characterized by this sustained, heightened awareness and attention. Whether it is the deep concentration of flow or absorption, or the open, receptive, clear awareness of mindfulness, an attuned state inherently involves heightened awareness and attention. Just as attuned states may be more or less intense, the level of attention may also be more or less intense. Individuals may experience an attuned state anywhere on the spectrum from a slightly heightened awareness of one’s surroundings on a walk, to the exceptional abilities attributed to advanced meditators or martial artists. In any case, heightened awareness and attention is a necessary condition for the experience of an attuned state.

### ***Self-transcending***

In all attuned states, there is the experience of disidentification with the typical self-model. Flow scholars describe this as the fading of Mead’s ‘me’ self and replacement with pure absorption in the creative process that is the manifested force of the ‘I’

self (Nakamura & Csikszentmihalyi, 2002). In other words, consciousness of the ego self fades as one becomes absorbed in the experiencing self. In absorption there is a decreased awareness of the self and increased identification with the object in which one's attention is absorbed, which may be anything from a part of one's body to a character in a play or a piece of music (Tellegen & Atkinson, 1974). In certain forms of mindfulness, the transcendence of self is due less to forgetting the self through absorption in an object of attention, and more to the mind observing thoughts and sensations as if from a distance (Gunaratana, 2002). In the former, one disidentifies with the ego through forgetting oneself, while in the latter, one disidentifies with the ego through observing it. This distinction and how it relates to various different conceptualizations of mindfulness will be explored further in the section on absorption vs. witnessing. There is a nuance here, in that despite the fact that a mindful person is often more aware of the self, they still disidentify from it (Brown et al., 2007). In mindfulness, one's experience is more akin to the "I have a body but I am not my body. I have a mind, but I am not my mind. (Myss & Wilber, 2008)"

Releasing attachment to an ego-self is considered psychologically healthy (Brown et al., 2007). Recent progress in neuroscience, cognitive science, and philosophy of mind is also suggesting that perceiving the self as fluid and impermanent is simply a more accurate view (Metzinger, 2009). Indeed, since early Hindu and Buddhist scholarship, one of the central objectives for cultivating attuned states was the

insight and compassion that stems from an experience of *anatta* or non-self (Collins, 1990).

### ***Intrinsically valuable***

Although the content of attuned states is not exclusively emotionally positive, subjective reports of these states almost universally describe them as being valuable for their own sake (Brown et al., 2007; Maslow, 1976; Nakamura & Csikszentmihalyi, 2009). The autotelic nature of flow, the peace of mindfulness, and the exhilaration of absorption all indicate that these states are subjectively valuable, regardless of what benefits might result. Indeed, Csikszentmihalyi (1988) argued that the increasing emphasis on the potential instrumental value of flow might be self-defeating by undercutting the autotelic attitude that produces the experience. Whether at the level of enjoyment, peace, or ecstasy, attuned states are valuable in and of themselves.

### **Dimensions according to which attuned states vary**

In addition to the above three features that characterize all attuned states, variations in the following three dimensions create the variety of attuned states. These three dimensions were generated in two ways. First, they emerged through the contradictions observed between various formulations of a given construct. These contradictions were surfaced in the 'issues' section of the above review. Second, they emerged through observing the differences between the three

constructs. They explain much of the contradictory conceptualizations and conflicting empirical correlations between attuned states.

### ***Thinking vs. non-thinking***

While literature on flow explicitly specifies that a person in flow can be thinking (reading) or non-thinking (music), the mindfulness literature is far more mixed in its interpretation of the relationship between mindfulness and thought. Along the cognitive dimension, there are two positions. First, some emphasize the cognitive aspects of mindfulness, and treat mindfulness as a cognitive skill (E. J. Langer & Moldoveanu, 2000). Second, some conceptions of mindfulness emphasize its nondiscriminatory or non-cognitive nature, stressing quieting the mind and suspending thought (Walach et al., 2006, Kabat-Zinn, J., 1994). In addition, some scholars take a more subtle approach in which mindfulness is a pre- or para-conceptual state in which thoughts may occur, but are not identified with, and are observed without judgment (Brown et al., 2007). This latter, pre or para-cognitive state is equivalent to the ‘witnessing’ mode described below and is addressed there.

Each of these states has its own advantages and disadvantages. The cognitive approach to mindfulness can enhance the subtlety of mental distinctions, and a practice of mindfully labeling emotions or physical sensations may be more effective than non-cognitive awareness (Baer et al., 2004). States in which cognition is entirely suspended more easily allow a non-judgmental and “empirical approach to

reality” are psychically and physically energizing and ostensibly reduce ego-identification (Brown et al., 2007).

Thus, each state has its role. Akin to the limitations of an exclusively rational or an exclusively empirical epistemology, advocating cognition or non-cognition to the exclusion of one another denies very real and useful capacities of the human mind. Just as addiction to thinking can create the suffering stemming from not being able to relax, addiction to not thinking can become anti-rational and prevent engagement with ideas and use of the critical faculties that are necessary in order to properly function in society. Attuned states can be characterized by thinking or not thinking.

### ***Telic vs. non-telic***

Descriptions of the flow state emphasize goal-directed action. The clear goals and feedback within the activity create the sense of enjoyment, and these proximal goals are structured by the distal goal that is the aim of the activity itself. Thus, as described above, the rock climber is focused on the goal of successfully completing each motion, and these individual goals are structured by the overall goal of reaching the top of the climb. In contrast to the work on flow, mindfulness scholars have a range of opinions as to whether one can be both goal-directed and mindful. While some state that mindfulness must be inherently non-judgmental or one risks being closed down to present reality (Walach et al., 2006), others contend that mindfulness can be employed in goal-directed action (Brown et al., 2007). Judgment both of outside reality and one’s own options for behavior is necessary in a goal-

directed state, as an individual attempts to evaluate which conditions and behaviors are more or less conducive to the realization of their goal. Thus, this dimension can be understood as the extent to which an individual is partial towards one or another outcome in a given situation.

There is thus a range of the teleological nature of attuned states from extreme impartiality to extreme partiality. Towards the extreme impartiality end of the spectrum are states that are primarily non-telic. A state in which one is simply non-judgmentally observing reality without attempting in any way to alter or change it is non-telic. At the other end of the spectrum, states of extreme partiality, such as rock climbing without ropes, are highly telic.

There are important roles for both telic and non-telic attuned states. In active or creative pursuits – perhaps the most common experience of certain attuned states (Csikszentmihalyi, 1992; Lau et al., 2006; Maslow, 1976) – the presence of a goal serves to produce the heightened awareness and self-forgetting necessary to produce the attuned state. However consistent telic behavior to the exclusion of non-telic behavior can eliminate the space for self-understanding that ensures that pursued goals are indeed valuable and valued (Brown et al., 2007).

### ***Absorbed vs. witnessing***

One of the apparently contradictory empirical findings mentioned above is the observation of different relationships between various mindfulness scales and the

Tellegen Absorption Scale (Tellegen & Atkinson, 1974). Given the very close conceptual relationship between absorption and flow, this is a telling finding and one that points to an important dimension along which attuned states differ. This dimension is perhaps the most important determinant of many aspects of the phenomenology of alternate attuned states, such as the diverging experiences of self and time. Table 2 shows that absorption is significantly and negatively related to the Mindful Attention Awareness Scale (Brown & Ryan, 2003), significantly and positively related to the 'observe' factors of the Kentucky Inventory of Mindfulness Skills (Baer et al., 2004), significantly and positively related to both the 'curiosity' and 'decentering' factors of the Toronto Mindfulness Scale (Lau et al., 2006), and significantly and negatively related to the Freiburg Mindfulness Scale (Walach et al., 2006). These are interesting and contradictory results, and another dimension along which attuned states differ.

The differentiation between 'concentrated' and 'mindful' states has been long established in Buddhist scholarship, since the early sutras (Shankman, 2008), and is useful in understanding this dimension. Indeed, one of the main differences between the two sects in Zen Buddhism is their emphasis on concentration (koan) vs. mindfulness (shikantaza) forms of meditation (Kapleau & Kapleau, 1980). Although there remains some controversy as to exactly how concentration and mindfulness meditation are related (Shankman, 2008), recent studies of the brain have affirmed that there is not only a phenomenological, but also a neurological difference between the concentrated and mindful modes (Austin, 2009; Dunn,

TABLE 2: INTERCORRELATIONS BETWEEN PEAK STATE CONSTRUCTS

	MAAS		KIMS		TMS		Freiburg Single-factor	CAMS (12-Item) Single-factor	
	Single-factor	Observe	Describe	Act with awareness	Accept without judgement	Curiosity			Decentering
Absorption	-0.15*	0.39**	0.02	-0.17	-0.16	0.31***	0.22**	-0.31*	0.51***
MAAS		0.02	0.24*	0.57***	0.30***				0.66***
Freiburg Mindfulness Inventory						0.09	0.23**		
NEO-PI Openness to Experience						0.41***	0.15		
Private self-consciousness						0.31***	-0.13		
Public self-consciousness						0.06	-0.19		
Reflection									

Hartigan, & Mikulas, 1999). This difference is rooted in two different attentional systems in the brain, known as 'bottom-up' and 'top-down,' that play, respectively, receptive and selective functions (Austin, 2009). The important difference between these two attentional systems is that in the top-down system, objects are consciously selected and then focused upon, whereas in the bottom-up system, stimuli from the environment are involuntarily registered and brought into awareness (Austin, 2009).

The culmination of these two processes of top-down and bottom-up attention/awareness are, respectively, absorption and witnessing. In gestalt terms, in top-down attention, figure is so exclusively focused on that ground disappears from awareness. In bottom-up awareness, an open receptivity to even unexpected stimuli is cultivated, such that one can witness the broader ground. When figure is focused on to the exclusion of ground, awareness of other phenomena fades. One's attentional resources become so exclusively devoted to the object of attention, such that awareness of the self-model, background environmental stimuli, and even time itself decreases in cases of weak absorption (Tellegen & Atkinson, 1974) and in cases of very strong absorption can disappear entirely (Shankman, 2008). This is very different than an open, receptive mode of attention, in which awareness of one's body and mind, as well as stimuli from the environment as a whole is maintained. Although both result in a disidentification with the self-model, absorption does this through self-forgetting while mindfulness does this through self-witnessing.

This differentiation is very useful in understanding the varying phenomenological structures of different attuned states. In flow and absorption, the salient feature is the forgetting of self and time through deep absorption in an object of awareness. Concentration is intense, the subject “forgets time and place and who you are (Nachmanovitch, 1991)” and individuals have been known to be completely ignorant even of people speaking to them while in such an absorbed state. Absorption is indeed correlated with decreased self-awareness (Pekala et al., 1985).

Such absorption is obviously antithetical to some descriptions of mindfulness, such as those that emphasize an “open, receptive awareness to present reality (Brown et al., 2007)” and indeed absorption relates significantly and negatively with scales based on such an emphasis. Brown and Ryan rightly distinguish between mindfulness, as they define it, and concentration, although state that mindfulness can play a ‘zooming’ function, being mindful of either a wide or narrow object of attention (Brown et al., 2007). However, the MAAS does not reflect this zooming function, but instead largely measures automaticity as the opposite of the mindful state (Brown & Ryan, 2003). Given that automaticity is a form of awareness characterized by not noticing novel stimuli (Bargh & Chartrand, 1999), it is no surprise that the MAAS is inversely correlated with absorption, the culmination of a top-down, selective attentional mode (Brown & Ryan, 2003). Other mindfulness scales that have a significant positive relationship with absorption suggest highly attuned involvement with particular aspects of experience. Specifically, items such

as those in the *Observe* factor of the Kentucky Inventory of Mindfulness Skills and in both the *Curiosity* and *Decentering* factors of the Toronto Mindfulness Scale measure the degree of awareness and attention a person has towards both internal states and external stimuli (Baer et al., 2004; Lau et al., 2006). This is the pre- or para-cognitive state mentioned in the section on thinking vs. non-thinking above. Pre-cognitive states such as ‘decentering’ allow an individual to observe cognitive processes as they would observe sensory stimuli, both releasing identification with these processes but also gaining insight into one’s habitual thought patterns, the relationship between emotion, sensation and thought, and the fickle nature of thought itself (Lau et al., 2006). Although the TMS contends that the *Decentering* factor measures “distance and disidentification rather than being carried away by one’s thoughts and feelings (Lau et al., 2006),” a closer examination of the scale items shows that the emphasis is almost entirely on attunement to and involvement with phenomena rather than disidentified witnessing. Indeed, of the eight items in the *Decentering* factor of the TMS, only the last three imply a disidentification with immediate experience.

Both absorbed and witnessing modes of attention play important roles, and are intimately interrelated. Witnessing attention can allow a person to choose which objects to concentrate on, and can create the self-awareness necessary to deal with potential distractions effectively. Training one’s concentration can heighten an individual’s capacity for attention in general. In traditional Buddhist scholarship, mindfulness meditation is often called *vipassana*, or *insight* meditation (Gunaratana,

2002). This form of meditation is used to generate insight about oneself and reality in general (Shankman, 2008). Concentration meditation, often called *samatha* or *tranquility* meditation is used to create calm, release attachment to the self, and is considered necessary by many for the ultimate attuned state of enlightenment (Shankman, 2008). Insight gained through mindfulness separate from concentration meditation is considered 'dry' as it is not informed by the dissolution of self in absorption (Shankman, 2008). Conversely, insight gained through absorption without mindfulness is considered abstract and useless, as it is not integrated with one's self-awareness and into day to day living (Shankman, 2008). Again, different attuned states have different roles in full human functioning.

### **A PROPOSED TYPOLOGY OF ATTUNED STATES**

Using the above three dimensions, I have created a typology of attuned states, to begin to form a more nuanced view of the different state possibilities both within such constructs as mindfulness and flow, as well as between states. Table 3 is an initial attempt at classifying the conceptual elements of flow, absorption, and various mindfulness constructs into the above typology. Aside from 'synesthesia' in absorption and 'a sense that one can control one's actions' in flow, all conceptual elements of the attuned states fit into either the common or variable dimensions of attuned states suggested above. This classification is certainly not definitive, as many of the conceptual elements of the attuned states cover more than one dimension, or are ambiguous as to where in a particular dimension they should be



situated. For example, as suggested above, the 'decentering' element of the Toronto Mindfulness Scale conceptually describes a witnessing state but the scale items are much more focused on attunement to and involvement in present reality. Also, the conceptual components of mindfulness as suggested in Brown, Ryan, and Creswell (2007) are not all reflected in the items in the Mindful Attention Awareness Scale (Brown & Ryan, 2003). The MAAS focuses on measuring the open or receptive awareness and attention suggestion in the 2003 article, through asking questions mostly about a person's inclination to automaticity, and considering this the opposite of mindfulness.

Table 4 is the typology itself. The three common elements are present in all attuned states, and the three dimensions by which attuned states differ generates their diversity. Table 4 also provides examples of activities that might be suited to a particular attuned state. As indicated, however, activities may fall in multiple boxes. For example, one may be witnessing while listening to a friend by being aware of one's own reactions, the friend's body language, and even the surrounding environment. In contrast, one could also be completely absorbed in the friend's story, and not pay attention to any of the above.

This typology can be useful in a number of ways, many of which were described in the introduction. Empirical research is needed in order to test the above typology, and determine whether the common elements are indeed common amongst all attuned states, and whether the three dimensions account for their diversity. Such

**TABLE 4; TYPOLOGY OF PEAK STATES**

**Factors common to all peak states:**

**Heightened awareness and attention**  
**Self-transcendence**  
**Intrinsically valuable**

**Dimensions by which peak states differ, and example activities:\***

<b>ABSORBED</b>	<b>Thinking</b>	<b>Non-thinking</b>
<b>Telic</b>	Computer programming	Rock climbing
<b>Non-telic</b>	Daydreaming	Concentration meditation

<b>WITNESSING</b>	<b>Thinking</b>	<b>Non-thinking</b>
<b>Telic</b>	Reflective writing	Martial arts
<b>Non-telic</b>	Listening to a friend	Mindfulness meditation

\*These activities may fit in multiple boxes, and can be experienced differently by different people at different times

studies can test these dimensions both using phenomenological methods such as surveys and interviews, as well as through neuroscientific methods such as the use of fMRI scans to identify whether there are neurological markers that can be associated with differing positions on the dimensions. In addition to testing the elements and dimensions themselves, studies should evaluate which peak states are most appropriate for which situations. Such research can illuminate which states should be cultivated by managers, artists, programmers, researchers, and other professions, and in what proportions. It may also point to important implications for organizational structure, architectural design, and even social policy, as we become more aware of states that make us most happy, and most productive. The

integrative study of attuned states will shed light not only on the nature of the mind and consciousness, but also provide a more broadminded view of what variety of states constitutes the good life.

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