Mindfulness, Interest-Taking, and Self-Regulation

A Self-Determination Theory Perspective on the Role of Awareness in Optimal Functioning

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For the past quarter century, there has been a steady escalation of interest in mindfulness, along with the circumstances that facilitate it, and its psychological, behavioral, and health-related outcomes. Across this work, the construct of mindfulness has been variously defined (e.g., see Baer, Smith, & Allen, 2004; Brown & Ryan, 2003; Langer, 1978), contingent on scholars' line of research or theoretical perspective. Although differing in other respects, definitions of mindfulness across these schools of thought commonly recognize that the basic elements of mindfulness include attention to present-moment experience along with an attitude of receptivity and openness. Furthermore, in all instances, mindfulness is seen as a state of high-quality awareness that can enhance self-functioning, explaining the burgeoning popularity of mindfulness concepts, practices, and interventions.

In this chapter, we delve into the connections between high-quality awareness and self-regulation as researched and studied within our work on self-determination theory (SDT; Deci & Ryan, 2000; Ryan & Deci, 2000), an established empirically based theory of human motivation and optimal self-functioning. In considering this issue, we discuss two forms of awareness considered within SDT to exemplify open, receptive, and nondefensive processing, and which have been shown to facilitate integrative self-regulation.

The first of these is mindful awareness viewed as an open and receptive awareness of what is presently occurring (Brown & Ryan, 2003; Ryan & Rigby, in press; Schultz & Ryan, in press). In mindfulness, what is occurring in the present is observed without being grasped, manipulated, or actively processed. Instead, one allows experiences, thoughts, and perceptions to pass before one without attachment or judgment. Mindfulness so defined has been linked in numerous studies to enhanced self-regulation and wellness (Brown, Ryan & Creswell, 2007).
A second form of open and receptive awareness is a more focused form of mindful attention we label interest-taking (Ryan & Deci, 2008a; Weinstein, Przybylski & Ryan, 2012). Whereas mindful awareness as defined in Brown & Ryan (2003) emphasizes an open and receptive mode that is heavily influenced by Buddhist conceptions of mindfulness, interest-taking is drawn from early studies within SDT of self-regulation and growth that described “relaxed interest” and reflectivity (e.g., see Deci & Ryan, 1985). In interest taking, one actively reflects in a curious and non-defensive way upon a selected phenomenon. Because the mind is actively engaging and exploring an “object” of focus, interest-taking is distinct from many definitions of mindfulness outlined within Buddhist traditions. However, both mindfulness and interest-taking share a receptive, open attitude—one that is free from ego involvement and other forms of judgmental thinking. The concept of interest-taking also shares interesting parallels with Langer’s (1989, 1997) conception of mindfulness as creative cognitive engagement with an object of interest, in which one is open to information and multiple perspectives, as portrayed in multiple chapters within this volume.

What connects mindful awareness and interest-taking within SDT is that both entail high-quality awareness, which, because of its nondefensive nature, allows for more informed and congruent self-regulation. In fact, trait measures of mindfulness and propensities toward interest-taking are highly correlated (e.g., \( r = .57 \), Weinstein et al., 2012), suggesting their shared characteristics. SDT further proposes that, albeit in somewhat distinct ways, both mindful awareness and interest-taking: (1) facilitate more autonomous self-regulation; (2) potentiate greater satisfaction of basic psychological needs by enhancing people’s experiences of autonomy, competence, and relatedness; and (3) conduce to more investment in intrinsic (e.g., growth, intimacy) versus extrinsic (financial success, fame) life goals and aspirations. Herein we discuss research supporting each of these three propositions, as well as the processes through which these potentiating relations occur, thus illustrating some of the major psychological pathways through which mindful awareness and interest-taking are connected to enhanced self-functioning, high-quality relationships, and the positive life outcomes associated with them. First, however, we provide an overview of how high-quality awareness came to be studied within SDT, and how it interlaces with the concept of self-regulation.

**Awareness and SDT: Overview of Their Connections**

Although mindful awareness as a foundation for self-determined functioning was discussed early on in SDT (e.g., Deci & Ryan, 1980), more refined theory and research coordinating concepts of awareness and motivation within SDT began in earnest with the work of Brown and Ryan (2003). Hypothesizing that quality of awareness relates to the quality of self-regulation, Brown and Ryan sought to provide an operational definition of mindfulness that could be used in furthering research on this relation, and in exploring the many other salutary effects of mindfulness. In developing their Mindful Awareness and Attention Scale (MAAS) Brown and Ryan drew heavily on Buddhist thought in both the Zen and Tibetan traditions. These Eastern traditions
have commonly described mindfulness as a core, "natural" state of mind characterized by open and receptive awareness that conduces towards greater self-regulation and well-being. Thus, Brown and Ryan conceptualized (and operationalized) mindfulness as an attribute that could be assessed in all individuals, regardless of whether they engaged in specific mindfulness-cultivating practices (Brown, Ryan, Loverich, Biegel, & West, 2011). They also operationalized mindfulness both as a dispositional, or individual difference, variable (capturing propensities to be more or less mindful) and as a state variable that fluctuates from situation to situation (showing the vulnerability of mindfulness to contexts). That is, mindfulness is understood as an attribute that varies both between persons and within person (see Brown & Ryan, 2007). In line with their thesis that mindfulness supports autonomous regulation, Brown and Ryan (2003) used an experiencing sampling methodology to show that at both dispositional and state levels of analysis, mindfulness was indeed associated with more autonomous functioning. Specifically, in both adult and college samples, participants were asked at varied points within their day to rate their current mindfulness, mood, and other state-related variables, as well as to complete a measure assessing their relative autonomy in the moment. Results revealed that the more mindful the person was, both in general and in any given moment, the more they experienced their actions as autonomously undertaken and volitional (see also Levesque & Brown, 2007). These findings thus lent support to the overall thesis that mindful awareness supports autonomous functioning. However, this is a complex relation, about which we shall need to elaborate further.

In their conceptualization of mindfulness, Brown and Ryan (2003) specifically delineated between awareness and attention, both of which can be more or less mindful. Awareness refers to the subjective experience of internal and external phenomena; it represents the pure perception of the field of events that encompass our reality at any given moment. At its fundamental level, awareness can be understood as a cognitive process whereby phenomena are simply perceived. Such perceptions are occurring constantly in our minds: We sit on a park bench reading a book as our peripheral vision senses the branches of a nearby tree swaying in the breeze and simultaneously feel the air brushing across our cheek. After some time, our ears pick up the distant rumble of an approaching storm. All of these perceptual inputs constitute the field of awareness that our senses bring to us moment to moment.

Attention, by contrast, is an aspect of consciousness whereby we select from this rich field of perceived phenomena an object of focus (Brown & Ryan, 2004). Attention is thus a conscious engagement with selected phenomena that enter awareness, marked by focusing that awareness on a certain phenomenon that emerges in the field of awareness. Simply put, what we perceive in our minds—our awareness—presents an opportunity space of phenomena from which we can then select for focused attention.

One form of mindful attention has recently been described within SDT through the concept of interest-taking (see Deci, Ryan, Schultz, & Niemiec, in press; Ryan & Deci, 2008a; Weinstein et al., 2012). Like mindful awareness, interest-taking is conceptualized as a relaxed attention that is open and receptive. But whereas, in mindfulness, one is actively aware of phenomena as they occur without actively choosing and exploring from said phenomena, in interest-taking awareness is directed (i.e., actively focused) on specific phenomena that may be salient in the individual's experience.
Mindfulness and Self-Determination Theory

Interpersonal interest-taking is thus a focused receptivity or detached curiosity and wonder about something that arises. Through mindful awareness, people receive what is occurring and observe what unfolds in experience without being strongly focused or selective; through interest-taking, people bring relaxed interest and a receptive attention actively to bear on selected inner or outer events of significance (see Deci et al., in press; Ryan & Deci, 2008a).

For instance, Weinstein (2009) performed an experiment in which participants wrote an essay about their qualities as a friend, and then were rejected by another (confederate) participant, leading to negative feelings. In her experiment, Weinstein had participants write about a distracting topic, write about their feelings and reactions, or write about feelings and reactions while “taking an interest” in what occurred for them. The latter “interest-taking” condition was assumed to conduce toward a more reflective, nonjudgmental perspective on inner and outer events. Participants in both conditions were then given the friendship profiles of both the person who rejected them and a neutral participant uninvolved in previous tasks. Although participants in all conditions rated the rejecter negatively, only those in the “interest-taking” group showed no transfer of this negatively to the “innocent” participant, suggesting more integrated self-regulation in this emotional context. They also showed less distress as an aftereffect of rejection.

Both of these types of high-quality awareness can be occupied with outer sensory activations, such as sights and sounds in our environments. But of course this is not the only source of experience: Internal processes also generate phenomena that, like the stimuli in the external world, we are aware of only to varying degrees. As we sit with our book on the park bench, a nostalgic daydream might arise sparked by the words we read. In this case, there is a sixth source of perception, which is the mind itself—or, more specifically, the fount of thoughts and emotions that arise endogenously in the mind and felt somatically (e.g., heart pounding from joy). Proust (2003) referred to such risings of thought and emotion as “involuntary memory” via a phenomenon called the “Madeleine effect,” in which he described the example of a rich stream of memories being sparked spontaneously simply by the act of dipping a cookie (a madeleine) into his drink. Thus, awareness and attention are not limited only to perceptions arising through the five senses; we can also more or less mindfully observe thoughts and feelings as they rise within us. Even strong emotions that many times we see as inexorably part of the self can be observed as they wax and wane. Because such thoughts and emotions need no proximal external stimulus, they cannot be reduced to merely the reaction to something occurring through the primary senses. Put differently, even without any immediate sensory input, thoughts and emotions spontaneously arise.

Yet what arises can be illuminated with more or less high-quality awareness or attention, a point particularly relevant to the discussion of mindfulness (Epstein, 1995). For example, consider that we can experience an emotion without being attentive, or sometimes even aware, of that emotion. We may, for example, feel angry without conscious attention that “I am angry.” In fact, anger may not even be recognized, especially if that might represent a threat to one’s self-image (Ryan, Deci, Grolnick, & La Guardia, 2006). Alternatively, rather than being swept away by anger, or balling up one’s fists in denial, a person can allow awareness of anger to become clear and/or
bring active attention to the emotional experience itself. Being aware of the emotion, however, it is different than judging it as bad or good or having positive or negative reactions to this affective state; it is simply a neutral, receptive openness. If done with the observant mode associated with mindfulness, the person may, in fact, gain enhanced emotion awareness.

Brown and Ryan (2003) illustrated this facilitating effect of mindfulness on emotion awareness. They assessed participants’ current emotional states using both an explicit (self-report) scale and an implicit measure based on the Implicit Association Test (IAT; Greenwald & Farnham, 2000). They found that whereas people low in mindfulness showed no correlation between self-reported and implicitly measured emotion states, those high in mindfulness showed robust positive correlations between these indicators. This suggests that mindful persons have greater awareness of their background emotional states.

Similarly, with regard to interest-taking, Roth (2013) recently reported on two experiments in which people were exposed to a highly emotional film sequence. Roth then had them suppress their emotions, reappraise their emotions, or “take-interest” in what they experienced. He then had them return to the laboratory days later to reexperience the film. Of the three groups, the interest-taking group showed lower arousal, both subjectively and physiologically assessed, even while demonstrating better memory for the film. Put differently, taking interest in one’s emotions seems to have inoculated against being “tossed about” by those emotions, while also allowing for a clearer mental processing of the film itself.

Indeed, important in both SDT research and work on awareness is the notion that shows that people can be unaware, or only dimly aware, of their inner preferences and motives, which leads them to more controlled forms of regulation. For example, Weinstein, Ryan, et al. (2012) showed that people vary in their awareness of sexual preferences, such that some persons did not consciously report preferences for which they showed an affective proneness. Those persons tended to come from homes where parents were controlling or authoritarian. Similarly, Niemiec et al. (2010) showed that persons low in mindfulness were more likely to act defensively when faced with existential threats. In contrast, people higher in mindfulness more fully processed existential threats and thus were less subsequently affected by them when making judgments about others. These data suggest that a low quality of awareness can lead to compromised, controlled, and defensive functioning, whereas mindfulness can supply a protective or ameliorative factor.

**Awareness: The Qualitative Concept of “Openness”**

Kabat-Zinn (1990) and many others have described mindfulness as having an **attitudinal** or qualitative component. This qualitative component of mindfulness is often referred to as a state of “open” awareness or “receptive” attention. Yet what is meant by open or receptive in this context is not always clear. As noted by Brown, Ryan, and Creswell (2007), openness describes a state of consciousness most associated with **observing** rather than **controlling**. It is a bare display of what is taking place at any given moment. Self-control, by contrast, involves a state of consciousness during which we
are not observing, but directing, our energies towards a desired goal. When observing, we are conscious of the self as a process (Brown & Ryan, 2004; Ryan & Rigby, in press) and are primarily focused on allowing perceptions to unfold without constraining or shaping them towards a specific goal or outcome. Openness, therefore, refers to a quality of consciousness that is not evaluative or actively shaped by preexisting ideas or intentions, but is fully receptive to allowing the experience to simply occur “as it is.” It is for this reason that the concept of observing (rather than shaping) is used to define the experience of open awareness.

Taking on the role of the “observer self” also implies a conscious state in which we are not only openly observant of experiences as they are perceived through our five senses, but similarly positioned as an observer of our own thoughts and emotions as they arise—either in response to specific external precipitants or as they spontaneously arise by themselves. Situated as an observer that is “openly aware,” we are mindful and fully cognizant of thoughts and emotions as they occur, but are not controlled or “caught up” within them. For example, a nostalgic memory does not carry us away into a reverie (pleasant or otherwise) that shifts our focus away from the present moment, nor does a strong emotion gain such a tight grip on us that we are no longer an observer but are driven by the emotion in how we interpret an experience, or in the actions we take, potentially crowding out the flexibility and openness to the experience as it exists without such emotional clouding.

This is easier said than done! Moreover, it presupposes a number of psychological capacities associated with emotion regulation (Ryan et al., 2006). Specifically, within mature emotion regulation, emotional phenomena are allowed as informational inputs—they provide important information. In less mature emotion regulation, emotions are controlling inputs—one’s behavior is driven or controlled by feelings or reactions (Vanssteenkiste & Ryan, 2013). One can see from this description how mindful awareness and attention to what is occurring allow emotions to be treated as more informational input. One can be aware of what one feels without “attaching to it” or feeling compelled to identify the feeling with oneself, a huge aid in self-regulation. The distinction between consciousness (context) and mental content, also referred to as decentering and desensitization (Martin, 1997), enhances autonomous self-regulation because behavior is guided by authentic awareness rather than distorted self-cognitions. This is one reason why mindfulness training has become an important element in treatment of impulsive disorders, such as borderline personality (Ryan, 2005).

Self-Determination Theory and Mindfulness: The Three Propositions

The continuum of motivation and mindfulness

As we have noted, SDT sees the quality of awareness as foundational to autonomous functioning, and thus as integrally associated with quality of self-regulation. Within SDT, motivational quality is understood in terms of a continuum of relative autonomy (Ryan & Connell, 1989) with more autonomous forms of self-regulation
associated with greater well-being and positive performance outcomes (e.g., Blais, Sabourin, Boucher, & Vallerand, 1990; Gagné & Deci, 2005; Reeve & Jang, 2006; Ryan, Patrick, Deci & Williams, 2008). We now consider some of the forms of self-regulation along that continuum and how they are more or less infused with mindfulness.

Intrinsic motivation Intrinsic motivation is defined by having deep interest and enjoyment in activities themselves. There is a here-and-now component to most intrinsically motivated activities that is also conducive to mindfulness. For example, the present centered attention to what is occurring that one might experience in playing tennis can be conducive to both performance and a mindful and positive experience. The focus on immediacy can even feel transcendent, especially if it is absent of judgment and instead is open and perceptual, as articulated famously in Gallwey’s depictions of the “inner game” (Gallwey, 1974), and Csikszentmihalyi’s depictions of “flow” (Csikszentmihalyi, 1990). It is this quality of experience that leads people to pursue such activities; it is simply for the enjoyment they bring without the need for any additional incentive or outcome. This, too, conduces to mindfulness, insofar as when being mindful, agendas and instrumental investments must be suspended. Thus, it is important to both mindful states and intrinsic motivation that one’s engagement is not shaped by extrinsic agendas, whether they be tangible rewards or some attainment of nirvana.

At the same time, intrinsic motivation and mindfulness are distinct constructs. For instance, one can be intrinsically motivated and not particularly in a mindful state. This happens when one is “lost” or absorbed in experience without the observant capacity to oversee the flow of events. In immersion, one can be mindless with respect to what is occurring in and around one. In such absorption, we find that individuals can make poor choices, such as playing video games for too long (Przybylski, Rigby, & Ryan, 2010; Rigby & Ryan, 2011). That is, absorption, and sometimes flow states, can be marked by an immersion that can pull one out of mindful awareness. Thus, while a person can be both intrinsically motivated and mindful (and these are generally positively correlated), these are not identical.

Beyond intrinsic motivation, many things we pursue are not done purely for their own sake. They are instrumental in achieving some other outcome, and can thus be said to be extrinsically motivated. Simply put, we are “doing X to achieve Y.” Here, the notion of motivational quality becomes quite relevant, as the instrumental reasons for pursuing activities can vary greatly with respect to their motivational quality. Self-determination theory outlines four distinct types of extrinsic motivation (or regulation) that fall along a continuum of motivational quality, and each of which is differentially related to mindful awareness.

External regulation External regulation refers to a person’s behavior being regulated by purely external contingencies, such as pursuing a reward, or acting to avoid an explicit punishment, and it represents the least autonomous form of behavioral regulation. Here, one has no personal investment or valuing of the activity, and because action is merely a means to an end, motivational quality for the activity is typically
quite low. The person often invests the minimal energy required for outcome attainment, and behaviors are not easily maintained or transferred to environments unless contingencies remain operative (Ryan & Deci, 2000). As understood within SDT, in external regulation there has been little or no internalization, upon which maintenance and transfer depend.

Because external regulation is characterized by controlling contingencies, the focus of attention is instrumental and at the same time draining of energy because it involves self-control. In fact, considerable evidence shows depletion and loss of vitality as consequences of external regulation (e.g., Ryan, Bernstein, & Brown, 2010; Ryan & Deci, 2008b). In short, external regulation is not conducive to mindful awareness, in part because it both directs and constrains awareness and attention, and in addition entails active internal control over competing propensities.

Introjected regulation Introjected regulation occurs when one has internalized some of the reasons for pursuing the activity but has not yet identified with the activity as being valuable or interesting. Instead, in introjection, the individual is motivated to sustain feelings of worth and esteem. Thus, they are driven to attain self- and other-approval, and to avoid feelings of guilt, shame, or anxiety associated with failure at introjected goals or standards. Thus, while there is no explicit contingency controlling the person, intrapsychic pressures control behavior. There is some internalization, but it is also accompanied by inner conflict, pressure, and ego depletion.

A particularly important way in which introjection has been studied within SDT is through the concepts of ego involvement (Ryan, 1982) and contingent self-esteem (Roth, Assor, Niemiec, Ryan, & Deci, 2009). Ego involvement entails a motivated form of perception in which the individual is focused on maintaining or enhancing feelings of self-worth. Ego involvement is thus a form of engagement and attention shaped by our ego needs, rather than representing a position of being fully open to experience (Niemiec, Ryan, & Brown, 2008). The dynamics of ego involvement are largely incompatible with having a relaxed interest in, or open, receptive, and detached focus on the relevant experiences because one is instead defensively focused on self-esteem maintenance. In fact, when mindful, self-esteem is not an issue (Ryan & Brown, 2003), and when one becomes mindful of potential ego involvement, ego involvement itself tends to dissipate.

Identified regulation Identified regulation occurs when one personally values the goals they are trying to attain through acting, even if the activity itself is not inherently interesting. Here, motivational quality is significantly higher than in introjected or external forms of regulation, as there is a more personally relevant and valued reason for pursuing the behavior in question, leading to better performance and persistence (Burton, Lydon, D’Alessandro, & Koestner, 2006). Yet identifications can be more or less compartmentalized (Ryan & Deci, 2008a), and thus the relationship of identified regulation to mindfulness is complex. Persons higher in mindfulness are likely less prone to compartmentalization, in so far as greater mindfulness would allow one to observe one’s actual valuing processes, and identify activities and domains of value and that are more truly self-congruent and internally consistent. Nonetheless,
identifications, even when volitional, can be absorbing, and like intrinsic motivation their moment-to-moment pursuit can be more or less mindful.

**Integrated regulation** Integrated regulation is considered to be the highest quality form of regulation within SDT’s continuum of regulatory styles. Integrated regulation is in evidence when one not only values an activity, but also finds that activity congruent with one’s other values and propensities. Here, both mindful awareness and interest-taking can play a central role, allowing one to better detect discrepancies and conflicts inherent in one’s actions and thoughts. In other words, this open awareness provides a self-compatability check to avoid incongruent behaviors or to blend congruent behaviors with values that are already part of the self. One may, for example, not only see exercise as personally valuable to overall health, but also recognize how it increases one’s vitality and energy for spending time on other valued pursuits such as caring for work and family. Integration of an activity with other aspects important to the self is conducive to a more balanced and fulfilled life because all these different values and behaviors may help to harmonize need satisfaction (Milyavskaya et al., 2009). In contrast, when a specific regulation is strongly identified with, but not integrated, one can let it predominate over other valued activities (e.g., exercise taking over family time), leading to distress.

**Processes of internalization** Within SDT, the process of moving from more external or introjected forms of regulation towards identified and integrated forms of regulation is called internalization, and it is assumed that under supportive conditions, people are prone to increasingly internalize and integrate social norms and regulations. The one proviso is when these social norms or regulations are inherently in conflict with basic need satisfactions and the sentiments related to them (Deci & Ryan, 2012). Further, as we have mentioned, greater internalization is positively related to mindfulness (e.g., Brown & Ryan, 2003; Weinstein, Pryzbyski, & Ryan, 2013), as well as other indicators of positive functioning.

Higher quality regulatory styles—such as identified and integrated functioning—are largely a function of finding the personal value in experiences and activities, and “leaning forward” into these behaviors because one truly takes an interest in the benefit they have to one’s self. Mindful engagement with life experiences naturally conduce towards this process of internalization and more autonomous functioning by removing the ego involvements that cloud one’s ability to be open and receptive to the potential value of experiences. In addition, the open awareness that is the hallmark of mindfulness would be expected to aid in deeper integration of experiences into the self by enhancing one’s ability to see new points of connection and relevance between what is happening in the moment with other held experiences and values. In sum, mindfulness is expected to promote higher quality motivation and greater autonomous functioning by facilitating the process of internalization and decreasing the experience of control that arises by higher levels of ego involvement and introjection.

Thus, both theories of mindfulness and self-determination theory contain qualitative dimensions. In mindfulness theory, we have discussed the importance of the qualitative dimension of receptive openness. In SDT, we can see the importance of
autonomy as a qualitative distinction in the continuum of self-regulation. We also see that openness and nondefensiveness, as entailed in mindful awareness and autonomy, are positively correlated (Hodgins & Knee, 2002; Schultz & Ryan, in press), and as one moves up SDT’s continuum of autonomy, mindfulness is increasingly implicated.

We shall now turn to the relations between mindful awareness, interest-taking and two other core aspects of self-determination theory, namely basic need satisfaction (Deci & Ryan, 2000; Deci et al., in press) and the emphasis people put on intrinsic versus extrinsic goal pursuits (Kasser & Ryan, 1996).

Awareness as potentiating basic need satisfaction

A core tenet of self-determination theory posits that just as humans are governed by basic physiological needs—such as those for food and water—they also have some basic psychological needs that are universal and cross-developmental in nature. When persons pursue activities and relationships that are satisfying these needs, they are more persistent and experience greater integrity and wellness. Conversely, when social contexts or inner conflicts thwart or frustrate satisfaction of basic psychological needs, negative consequences including lower motivation (Deci & Ryan, 2000) and vitality (Ryan & Deci, 2008b) accrue.

Specifically, SDT specifies three basic psychological needs (although the list remains open) that fulfill the criteria of essential nutriments for the maintenance of growth, integrity, and wellness. The satisfaction of these needs invariably yields greater well-being and positive psychological, social, and physical outcomes. We next discuss each of these needs, namely the needs for competence relatedness and autonomy, and how mindful awareness and interest-taking can play a key role in potentiating their satisfaction.

Competence

Competence refers to our basic need to feel effective and successful in what we undertake (Deci & Ryan, 1985; Harter, 2012; White, 1959). Going further, competence is satisfied by the process of growth and elaboration of our skills and abilities. We have the desire not simply to succeed, but to grow by undertaking new challenges that stretch our abilities without overwhelming us. This is often achieved through pursuing optimal challenges that enable us to grow and increase our capacities and skills (Deci & Ryan, 1985).

A key contributor to experiencing greater competence satisfaction occurs when one perceives they are receiving strong informational feedback on performance (Deci & Ryan, 1985). Feedback is seen as informational when it is perceived to be directly useful to the individual in improving their performance and assisting in personal growth. By contrast, controlling feedback is experienced when feedback is perceived as judgmental or evaluative rather than supporting future growth or success, and is thus less useful in helping individuals improve their mastery.

Here, mindfulness plays an important potentiating role: by attenuating the tendency to engage in ego-protection and freeing up one’s mental energy to focus and assimilate all possible information, mindfulness greatly facilitates the capacity to absorb information in an open fashion. This receptive state allows for feedback to enhance
mastery (competence) and increase success and growth. Put differently, it is expected that mindfulness will lead to a greater propensity to perceive feedback on performance as being informational (rather than controlling), because (1) one is less predisposed to feel ego-involved in the feedback itself and (2) one is more receptive to all sources of information that are occurring in the moment, and can be potentially used for growth and improvement. By contrast, when less mindful and more ego-involved, information that could be helpful for growth is curtailed as the individual selectively attends or filters information in order to protect self-esteem. Thus, we can see direct relations between mindfulness and competence need satisfaction.

**Autonomy**  A second basic psychological need postulated by SDT is the need for autonomy. Autonomy literally means “regulation by the self.” The need for autonomy is thus best understood as the need that supports propensities to self-regulation; the need to feel volitional, integrated, and congruent in acting. When autonomous, the individual endorses the actions she or he is taking, and the path being traveled. By contrast, autonomy is thwarted when the person feels controlled, or experiences pressure, manipulation, or undesired constraints compelling their actions. Controlled actions thus feel alien (or “heteron”) as covered in the word heteronomous.

It is important within SDT to distinguish autonomy from the concept of independence (Ryan & Lynch, 1989; Van Petegem, Vansteenkiste & Beyers, 2013). Independence concerns nonreliance on others. There are many circumstances in which one can be autonomously dependent on others—that is, to willingly rely on them—a fact that is true across cultures (Ryan, La Guardia, Solky-Butzel, Chirkov, & Kim, 2005). It is also the case that one can be compelled to rely on others or to be nonautonomously dependent. Similarly, one can be autonomously or heteronomously independent, depending on why one is acting without social help or support.

In any case, many factors have been shown to facilitate autonomy satisfactions, including factors that are both developmental and situational. In terms of situations, feelings of autonomy can be enhanced or thwarted by factors such as how requests, goals, or rules are presented, how messages are framed and “incentivized,” and how meaningful are the options and opportunities for choice. With more controlling messages, salient surveillance or evaluation, and contingent use of rewards or sanctions, decreased experiences of autonomy and lower levels of motivation and vitality can be expected. By contrast, when more autonomy supportive communications and practices are used, opposite effects are had, as evidenced in multiple domains such as education (e.g., Black & Deci, 2000; Reeve, Ryan, Deci, & Jang, 2007), sports coaching (e.g., Bartholomew, Ntoumanis, Ryan, Bosch, & Thogersen-Ntoumani, 2011), and work environments (e.g., Baard, Deci & Ryan, 2004). Results consistently show that when individuals perceive greater support for their autonomy (and less controlling environments), they manifest a wide range of positive outcomes, including greater well-being, and vitality, a result shown across diverse cultures (e.g., Jang, Reeve, Ryan, & Kim, 2009).

As previously noted, situational mindfulness covaries with situational autonomy (Brown & Ryan, 2003, 2007). In addition to these situational factors, research has shown that feeling more autonomous in life is also a trait-level variable (e.g., Deci & Ryan, 1985; Weinstein et al., 2012). Simply put, individuals appear to have different
baseline levels of autonomous functioning, with those exhibiting greater autonomy showing the positive benefits outlined above. Most importantly, for this discussion, researchers have found a consistently strong relationship between dispositional autonomy and dispositional mindfulness (Brown & Ryan, 2003; Weinstein et al., 2012).

As with our discussion of competence, there are several potential mechanisms through which mindfulness may significantly bolster greater autonomy satisfactions. First and foremost is through the pathway of decreased ego involvement discussed previously: When one is not able to bring openness to the perception of events, and is constrained by feelings of defensiveness, rigidity in thinking, or other preconceptions in order to protect or enhance the “me-self,” there is a higher likelihood of feeling more controlled forms of regulation, including external regulation and, in particular, introjected regulation marked by feelings of internal guilt, pressure, or compulsion (Mageau, Carpentier & Vallerand, 2011; Vansteenkiste & Ryan, 2013). These are states of mind that are in contrast to feeling autonomy satisfaction and integrated, harmonious regulation.

In many circumstances, controlling pressures and the potential for thwarted autonomy (e.g., from teachers, managers, parents, etc.) can be quite high. This is particularly true where people feel threats to security (Grolnick, 2003) or pressures from above (e.g., Assor, Kaplan, Kanat-Maymon, & Roth, 2005; Pelletier & Sharp, 2009). However, if mindfulness is active, such ego involvements will not dominate the interactions between manager/teacher and subordinate, nor overwhelm the person’s functioning. For example, Schultz, Niemiec, Legate, Williams, and Ryan (2013) recently assessed dispositional mindfulness in a heterogeneous sample of working adults, surveyed online about the conditions of their work, adjustment, and well-being. Results showed that although controlling work climates were associated with need thwarting in employees and more negative mental and physical wellness, mindfulness moderated that relation. Specifically, when conditions were autonomy supportive, those high and low in mindfulness benefited similarly. But under the adverse conditions of controlling supervision or management, mindful people displayed less psychological need thwarting, and in turn less distress. This is in keeping with experimental studies showing that mindfulness buffers people in stressful situations, through both less threatening appraisals of and more active coping with difficult circumstances (see Weinstein, Brown, & Ryan, 2009).

**Relatedness** Relatedness is the final basic psychological need postulated by SDT, referring to people’s fundamental need for interpersonal connections that are experienced as supportive and meaningful (Ryan, 1995; see also Baumeister & Leary, 1995). While today it is increasingly easy to use social networking technologies to connect and share the details of our lives with a multitude of individuals, relatedness satisfaction requires something more substantial: relatedness satisfaction is not just a function of the quantity of interpersonal connections, but the quality of these connections. That is, we want to feel that “I matter” to others, and in turn that others matter to us. It is characterized by relationships in which we feel understood, supported, and cared about.

A key aspect to creating this kind of qualitatively meaningful connection is the capacity to be emotionally available and present for others (Deci, La Guardia, Moller,
Given that mindfulness is largely defined by the state of “open awareness” we have outlined above, it follows that the capacity for meaningful connection to others—connections in which we are fully present and available to support and communicate—will occur when we are able to be fully in the moment, unburdened by “rigid” beliefs, defensive ego-protections, or other preconceptions that we bring to our interactions. By remaining flexible and open to what we are hearing from those around us, we are in the optimal position to respond in ways that are relevant and reflect empathy and a fuller understanding of the circumstances at hand. In this way, mindfulness contributes directly to potentiating greater opportunities for relatedness satisfaction.

Consider, for example, the important role of autonomy support in the experience of relatedness. Research has shown that relatedness is enhanced when an individual feels that another is supportive of their autonomy, a dynamic that spans from infancy (e.g., Whipple, Bernier, & Mageau, 2011) through adulthood (e.g., Baard et al., 2004) to old age (e.g., Kasser & Ryan, 1999). Barnes, Brown, Krusemark, Campbell, and Rogge (2007) found that mindfulness, assessed by the MAAS, predicted greater relationship satisfaction and investment. In this research, partners discussed a salient conflict. After the discussion, partners higher in mindfulness showed less negativity, anger, hostility, anxiety, and withdrawal. In addition, mindfulness positively predicted higher reports of love, commitment, and support for the partner following the discussion. Other studies have demonstrated that mindfulness is related to higher empathy and compassion for others (Beitel, Ferrer, & Cecero, 2005; Brown et al., 2007; Shapiro, Schwartz, & Bonner, 1998). It thus seems that this open receptiveness to internal and external cues, which defines mindfulness, may allow persons to be more present and responsive in interpersonal settings, enhancing relatedness satisfaction and connectedness.

Although we have focused on mindful awareness as potentiating relatedness need fulfillment, evidence points to the facilitating impact of interest-taking as well. For example, Weinstein et al. (2012) measured interest taking, along with other aspects of autonomy, and showed that it was associated with greater need fulfillment both between and within levels of analysis. Moreover, interactions with more interest-taking partners were characterized by greater closeness, empathy, and satisfaction.

Mindfulness as potentiating intrinsic versus extrinsic goal pursuits

In an attempt to understand how differing life goals and aspirations may influence behavior and well-being, a minitheory was developed within SDT called Goal Content Theory (GCT; Ryan & Deci, 2002). This is based on the empirically derived distinction between intrinsic and extrinsic goal contents (e.g., Kasser & Ryan, 1996), and the hypothesis that these different types of goals would influence well-being in different directions as a function of their relations to basic psychological need satisfactions (e.g., Ryan, Sheldon, Kasser, & Deci, 1996).

Several decades of research have confirmed that, indeed, not all goals in life are created equally: Intrinsic goals such as pursuing personal growth, community, or intimacy with others are inherently more likely to satisfy basic psychological needs, especially
for autonomy and relatedness, and thus foster wellness; whereas extrinsic goals such as
strivings for wealth, fame, or image (Sheldon, Ryan, Deci, & Kasser, 2004) can actu-
ally interfere with basic needs fulfillment. This was shown in a longitudinal study of
postcollege young adults. These adults tended to get what they wished for—those with
strong extrinsic goals attained such goals, and those with intrinsic goals also attained
theirs. Yet, whereas intrinsic attainments enhanced wellness, extrinsic attainments did
not. In addition, extrinsic attainments were associated with increased symptoms of
ill-being, while intrinsic goal attainment was associated with lower ill-being. There-
fore, the pursuit of intrinsic goals yields benefits to happiness and well-being, whereas
extrinsic goals, even when attained, can result in fewer wellness benefits and increased
risk for ill-being.

Just as mindfulness is seen as intensifying basic need satisfactions regarding com-
petence, autonomy, and relatedness, we likewise see mindfulness as playing a facili-
tating role in emphasizing intrinsic goals and aspirations over extrinsic ones. If one
is holding more open awareness of an experience, and is more in touch with one’s
feelings, thoughts, basic needs, and reactions, it follows that the greater satisfactions
that are derived from intrinsic goals and aspirations will be recognized and create a
stronger value for these activities (and, subsequently, greater motivation and sustained
engagement).

Indeed, initial research has shown positive relations between intrinsic goals and both
mindful awareness and interest-taking. For example, Brown and Kasser (2005) showed
that people assessed as high in mindfulness behaved in ways that were more eco-
logically responsible, reflecting the intrinsic aspiration of community contribution. Brown,
Kasser, Ryan, Linley, and Orzech (2009) found that people higher in mindfulness were
less susceptible to consumerist messages, less dissatisfied with their current economic
circumstances, and less stressed by aspirations for more. Mindfulness is also associated
with placing more emphasis on close relationships, another intrinsic goal (Brown &
Kasser, 2005). Similar to these findings with mindfulness, Weinstein and colleagues
(2012) found a positive relationship between interest-taking and more intrinsic val-
ues. It thus appears that people who are more mindful tend toward the principles of
living reflective of Buddhist ideals, which derive from recognition of how all
things are interdependent, and implicate our responsibilities for compassionate living
(Hanh, 1998).

**Conclusion**

Various approaches to well-being and performance have concluded that mindfulness
is a positive state, and agree that mindfulness contributes to self-regulation and well-
being of the individual, and of those around him or her (e.g., Brown et al., 2007).
In this chapter, we have been focusing on the integration of mindfulness with one
well-established theory of human motivation and personality development, namely
self-determination theory (Ryan & Deci, 2000). SDT concerns the conditions under
which we experience greater well-being, vitality, and personal growth. As discussed,
achieving such positive outcomes is largely related to functioning in autonomous
rather than controlled ways, obtaining the satisfaction of basic psychological needs.
for competence, autonomy, and relatedness, and pursuing goals that are consistent with the optimal satisfaction of these needs. We argued herein that mindfulness has been shown to have positive relations with all three of these processes (Ryan, Huta, & Deci, 2008). That is, mindfulness is a psychological state that facilitates autonomous self-regulation, and potentiates the satisfaction of basic psychological needs as well as the personal importance of intrinsic versus extrinsic goals and values. Moreover, SDT also points to an additional, more actively focused yet open and receptive mode of awareness, namely interest-taking, as also facilitating better behavioral and emotional regulation.

Underlying these potentiation effects of mindful awareness and interest-taking is the fact that these high-quality states of awareness are characterized by open awareness and a lack of ego involvement and biases, allowing one to have greater clarity about what is happening in the moment. This further enables the informational use of feedback and perceptions for growth and success (competence satisfaction), identification of meaningful and interesting paths of response that are truly of value to the self (autonomy satisfaction), and the ability to be more fully “present” in interactions with others (enabling greater relatedness satisfaction). When more mindful, persons also cope better with stressors and adverse conditions (Schultz et al., 2013; Weinstein et al., 2009). Finally, when mindful, one has a greater awareness of the value of intrinsic goal pursuits, which in turn yields increased basic need satisfaction and well-being, and a lessened emphasis on extrinsic goals, which are also related to higher levels of ego involvement and contingent self-esteem. This linkage between mindfulness and more intrinsic, and less materialistic goal contents is important in a world where needs and wants can be readily confused, and where the globe’s scarce resources can be better used for human wellness.

Much interesting work lies ahead in understanding the relations between mindfulness and interest-taking in greater detail, potentially leading to process models that bring greater clarity to their relations. It is possible that the openness and receptivity present in mindfulness facilitate interest taking by allowing for salient events to come into awareness more easily and with greater clarity. Interest-taking may subsequently supplement this with a more active, integrative engagement with what arises. Although both constructs have shown similar positive relations to basic need satisfaction and well-being, such hypothesized relations between the two concepts await further experimental and qualitative study.

References


**Further Reading**


