

# Mindfulness and Motivation: A Process View Using Self-Determination Theory

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## Abstract

Mindfulness and motivation are both highly researched topics of great consequence for individual and social wellness. Using the lens of self-determination theory, we review evidence indicating that mindfulness is differentially related to different types of motivations, playing a facilitating role for highly autonomous forms of motivation, but not for externally controlled or introjected (self-controlling) forms of motivation. A key contribution of this review is our contention that mindfulness confers a range of intra- and interindividual benefits (e.g., well-being and prosociality) in part through its relation to autonomous motivations, a claim for which we outline preliminary evidence. Finally, we discuss how future research connecting mindfulness and motivation is important for both fields of study, for applied practices in areas such as psychotherapy and business, and for enhancing understanding of the processes underlying human wellness.

## Keywords

mindfulness, motivation, self-determination theory, autonomy

In this article, we bring together two phenomena that may at first not seem easily related, namely, mindfulness and motivation. *Mindfulness* is defined as open attention to the present moment (Brown & Ryan, 2003). Although several definitions of mindfulness have been offered, it is generally considered to be a receptive state of observing without judgment what is occurring, without specific goals or aims (Brown & Ryan, 2003; Creswell, 2017; Kabat-Zinn 2003).<sup>1</sup> In contrast, *motivation* concerns both energy and direction, mobilizing effort toward specific aims. How could these distinct constructs be linked? In what follows, we review research connecting mindfulness and motivation using the framework of *self-determination theory* (SDT; Ryan & Deci, 2017), showing how mindfulness may be particularly important in supporting highly volitional, or *autonomous*, motivations and in inhibiting unwanted potential actions.

SDT research concerns human motivation, and particularly autonomous motivation, which is characterized by people's full and willing engagement in an activity. SDT researchers have especially focused on factors in social and cultural contexts that enhance or diminish people's autonomous motivation, such as variations in reward contingencies, leadership styles, types of feedback, and rationales for acting. This focus on social and cultural factors has had practical import because it has shed light on how the strategies of parents, teachers, clinicians, coaches, and managers affect motivation, and it can inform effective interventions to increase autonomous engagement. Yet, given that this is a theory of *self-regulation*, researchers in SDT are interested not only in how factors external to the person affect motivation, but also in how intrapersonal factors mobilize self-motivation. Perhaps the intrapersonal process most centrally discussed and researched within SDT is mindfulness (Brown & Ryan, 2015; Weinstein et al., 2009).

SDT specifically proposes that mindfulness conduces to autonomous forms of motivation, or motives characterized by a sense of volition and self-endorsement (Ryan & Deci, 2017). The theory posits that mindfulness affords individuals more awareness of internal phenomena, such as urges, emotions, impulses, and needs, as well external conditions, such as seductions, conflicts, and pressures. Although mindfulness does not "cause" subsequent motivation, the open, nondefensive awareness facilitated by mindfulness puts

individuals in a better position to engage in reflective choices and identify self-congruent actions. SDT proposes that mindfulness supports the process of integration, wherein people's motives become more informed by their intrinsic interests, abiding values, and deep priorities. Persons higher in mindfulness are less likely to be influenced by automatic responses, defenses, and attachments, which makes self-congruent decisions and actions more likely (Levesque & Brown, 2007; Niemiec et al., 2010). Mindful states can be cultivated in various ways, such as via formal meditation practices (see Creswell, 2017), but also via present-moment awareness during one's everyday activities, such as walking, communicating, or working (Fredrickson et al., 2019).

Yet according to SDT, mindfulness does not support all forms of motivation. Greater awareness may in fact be associated with less motivation of certain types. For example, one might mindfully observe how peer pressures are leading one to behave against other personal values. That observation of inner conflict then becomes a consideration when one makes subsequent choices concerning whether to conform to these pressures. SDT suggests, in fact, that several forms of motivation, such as ego-driven achievement motivation and externally controlled motivations, will likely not be enhanced by mindfulness and may even be reduced in individuals higher in mindfulness.

This formulation and research stemming from it have import both for SDT and for the field of mindfulness. Regarding SDT, the theory proposes that greater autonomy reflects greater integration, such that persons feel more authentic and self-endorsing of their actions. Associations between more autonomous motivation and greater mindfulness are suggestive of the open, non-defensive emotional and cognitive processing required for such integrative processing (Roth et al., 2019). Identifying practical means for enhancing autonomy and integration that can be self-initiated and maintained, such as mindfulness practices, would be of value from an intervention perspective (Brown et al., 2007).

A joint focus on mindfulness and motivation may also illuminate areas of existing mindfulness research. For example, there is substantial evidence that greater mindfulness is associated with greater subjective well-being, but often there is less clarity about how these positive effects are accrued—that is, how mindfulness leads to greater wellness. The SDT account suggests that one pathway through which mindfulness enhances wellness is by facilitating greater autonomous regulation of behavior, which in turn is associated with a greater sense of congruence and less conflict when acting, more satisfaction, and less stress (e.g., Shannon et al., 2020). That is, SDT predicts that autonomy partially mediates the relations between mindfulness and wellness outcomes. This fits with findings (e.g., Weinstein et al., 2009) that more mindful people not only cope more effectively with the stress they encounter, but also tend to incur less stress, presumably through making more self-endorsed and well-integrated choices.

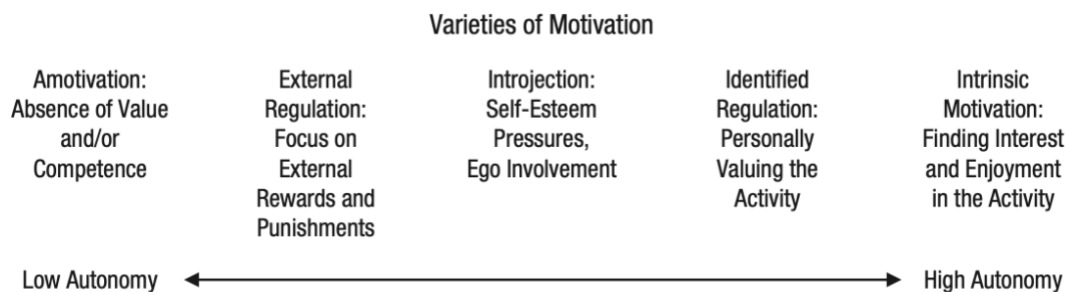
SDT also posits that acting with mindfulness and acting with autonomy are elements of *eudaimonia*—the Aristotelian conception of living a good life that expresses one's excellences and virtues (Ryan et al., 2013). SDT proposes that human propensities are fundamentally eudaimonic—that is, tending toward growth, cooperation, and altruism, in the absence of social factors that thwart such tendencies. Further, SDT states that humans' natural inclinations toward eudaimonia are facilitated by motivations that are autonomous in nature. When autonomously motivated, individuals are more likely to internalize adaptive social values and norms, which tend to be prosocial and holistic. Further, autonomous motives are potentiated by mindfulness, insofar as mindfulness facilitates more integrative, reflective processing of values and propensities. Thus, to the extent that mindfulness promotes autonomous motives, it may promote prosociality and eudaimonia more broadly. This theorizing may also help to explain the empirical links among mindfulness, autonomy, and prosociality (Donald et al., 2019, 2020). Taken together, the relations between mindfulness and motivation arguably account, at least in part, for links between mindfulness and benefits for the self (i.e., individual well-being) and for others (i.e., prosociality).

## **SDT's Continuum of Autonomy**

Although in many theories, motivation is seen as a unitary variable of which a person has more or less, SDT suggests that motivation has distinct sources that influence its qualities and consequences. Specifically, SDT poses a taxonomy of motives (Fig. 1) that are theoretically ordered along a continuum of relative autonomy. At the low end of autonomy is *amotivation*, a state in which one has no value or sense of efficacy for acting. Still nonautonomous is *external regulation*, which refers to acting to comply with externally controlled rewards and sanctions. Midway along the continuum of autonomy is *introjection*, acting because of “shoulds” and “mustifications” or from motives that concern looking good and avoiding shame in one’s own eyes or in the eyes of other people. Even more autonomy is evident in *identified regulation*, defined as taking action that one personally values. Finally, the highly studied phenomenon of *intrinsic motivation* is an autonomous form of motivation, manifest when a person engages in actions out of inherent enjoyment and interest. We note that within SDT, motivational states characterized by relatively high autonomy (i.e., identified regulation and intrinsic motivation) are said to reflect integrated functioning, and thus in the current context, we use these terms interchangeably.

The presumed continuum underlying SDT’s taxonomy was initially supported by studies testing the theory’s prediction of an ordered set of correlations between motivation types, or a *simplex pattern*. Specifically, motives that are adjacent along the hypothetical continuum should be most highly correlated, and relations between motives that are further apart on the continuum should be lower in a graded way (Ryan & Connell, 1989). This simplex pattern has been reliably observed, as shown by a recent meta-analysis (i.e., a study that aggregates the results of earlier studies. Data extracted from 486 studies involving more than 200,000 participants provided clear support for a continuum-like structure (Howard et al., 2017).

Experiences of autonomy are relevant and consequential across multiple domains. Greater feelings of autonomy predict greater persistence, greater well-being, and, in contexts where quality of motivation matters, better performance (Vansteenkiste et al., 2020). The large body of evidence for this effect is beyond the scope of this review, but we point to other reviews on how autonomous motivation relates to an array of outcomes (e.g., Howard et al., 2021; Ryan & Deci, 2017).



**Fig. 1.** The taxonomy of motivational forms within self-determination theory and their relative autonomy.

## Mindfulness and Its Facilitation of Autonomy

As an observing, not judging, state, mindfulness would appear to support autonomous functioning in multiple ways. When individuals are more open to what is occurring without distortion, their subsequent behavior can be more informed, selective, and volitionally supported (Hodgins & Knee, 2002; Niemiec et al., 2010). Being mindful of the present, free of defenses and judgments, allows information to flow and for what is pertinent to become clearer and more salient. Put another way, mindfulness precipitates less ego involvement, reactivity, and attachment to phenomena, and this allows for more deeply valued, authentic responses, which are wholly endorsed. In SDT, mindfulness is expected to promote integrative tendencies through open attention to the present moment, which allows more clarity and deeper processing of experiences (Ryan & Deci, 2017). Thus, mindful processing makes integrated self-functioning more likely, as individuals are more able to access the full range of important considerations when making choices (Brown et al., 2007). Further,

mindfulness is expected to be most strongly and positively linked with intrinsic motivation, the most autonomous form of motivation within SDT, because it promotes individuals' innate tendencies toward mastery, curiosity, and interest in activities.

The initial research on the relations between mindfulness and autonomy (Brown & Ryan, 2003) used a method called *experience sampling*, which involves participants making frequent self-reports about their experiences over time. The results showed that variations in daily autonomy were predicted by both trait and state mindfulness. In other studies, greater mindfulness has been associated with the pursuit of more autonomous values and with increased intrinsic motivation on some tasks (e.g., Brown et al., 2016).

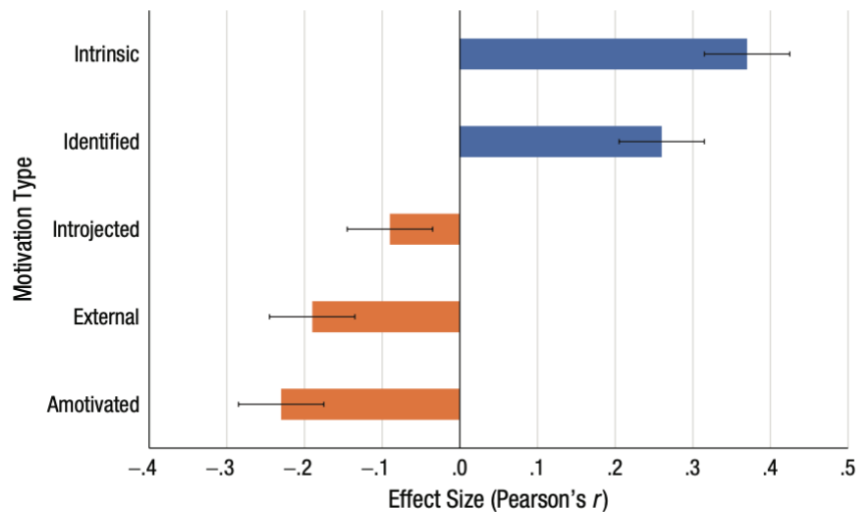
More recently, Shannon et al. (2020) examined the role of autonomy in accounting for the relations among mindfulness, well-being, and stress in student athletes. Mindfulness was associated with lower stress, greater well-being, and higher satisfaction of the need for autonomy. Crucially, autonomy partially explained the links between mindfulness and both well-being and stress. This suggests that mindfulness enhanced well-being and reduced stress in part by increasing athletes' capacity to autonomously regulate their behavior. This is consistent with other findings on the role of autonomy in mediating links between mindfulness and well-being and performance outcomes. However, further well-designed experimental studies are needed in order to rigorously test these potential pathways.

These findings also converge with Ludwig et al.'s (2020) suggestions that greater mindful awareness allows the reward value of behaviors to be more accurately assessed and revised, thus providing information that helps people change their behaviors in a less effortful way. That is, mindfulness awakens the processing of relevant experiences and comparisons, such that choices are more informed and changes in behavior are experienced as more valued and less conflicted.

Mindfulness does not, however, and theoretically should not, enhance all forms of motivation, and may even reduce motivation of certain types (e.g., Hafenbrack & Vohs, 2018), particularly those not characterized by autonomy (Ludwig et al., 2020; Weinstein et al., 2009).

Mindfulness has, for example, been found to inhibit the pursuit of extrinsic rewards and goals across a range of settings and to be associated with reduced reactivity in emotionally arousing situations (e.g., Brown et al., 2013). Because mindfulness facilitates greater alignment of actions with internalized values, the pursuit of extrinsic goals, such as status or wealth, is less likely among more mindful individuals because such goals are not readily or wholly self-endorsed.

Another recent meta-analysis, by Donald et al. (2020), summarized how mindfulness relates to SDT's different types of motivation. The authors identified 89 studies, involving more than 25,000 participants, in which measures of mindfulness were examined in relation to SDT-based measures of motivation. As illustrated in Figure 2, there was consistent support for mindfulness being positively associated with autonomous forms of motivation and being unrelated or negatively related to external regulation and amotivation. In fact, mindfulness was associated with SDT's autonomy continuum in the predicted, graded way. Donald et al. also examined experimental evidence across 21 studies, again finding evidence that mindfulness interventions lead to more autonomous (i.e., identified and intrinsic) motivations, though they noted the need for further, high-quality intervention studies to corroborate these findings.



**Fig. 2.** Meta-analytic associations between mindfulness and varieties of motivation proposed by self-determination theory (Donald et al., 2021). Error bars represent 95% confidence intervals.

## Mindfulness, Autonomy, and Their Self-Related and Social Consequences

It may seem ironic to claim that greater mindfulness, a state characterized by an egoless, no-self emphasis, leads to greater autonomy, or fuller self-functioning (Ryan & Rigby, 2015). It may also seem ironic to claim that the greater self-functioning associated with autonomy is positively associated not only with greater well-being, but also with more selfless acts (Martela & Ryan, 2016). Yet SDT predicts both of these “ironic” relationships, and they have been supported by research studies.

Studies have long shown the strong causal relations between greater autonomy and higher well-being, as we have described. Perhaps more surprising is the increasing evidence linking autonomy and autonomy-supportive environments with more prosocial and less antisocial behaviors. For example, Assor et al. (2018) reported on a program to enhance teachers’ support of autonomy in dealing with problems such as violence and bullying. The program not only reduced teachers’ controlling behaviors, but also led to less violence and more caring among students. On the controlling side, Joussemet et al. (2008) assessed the trajectories of aggressive behavior in children ages 6 through 12. Although children generally became less aggressive with age, the children of mothers who were more controlling remained on a more aggressive trajectory. A new meta-analysis by Donald et al. (2021) is a first step toward pulling such scattered findings together. Summarizing across 138 studies, the results revealed support for direct links between autonomy and prosociality and between controlled motives and antisociality, findings consistent across cultures and genders.

## Discussion

A growing body of findings supports the SDT view that one way in which mindfulness operates to increase well-being, reduce aggressiveness, and promote prosocial behavior is by facilitating autonomy—helping individuals to bring their goals, actions, and responses to the pressures and pulls of the world into alignment with personal values, and to be less susceptible to ego involvement, defensive reactions, and undue stress appraisals.

In asserting these connections, we do not argue that mindfulness is equivalent to, or automatically leads to, autonomy; rather, we are saying that mindfulness facilitates more autonomous functioning. Indeed, mindfulness, properly speaking, is not a motivational state at all—it is an observational, receptive one. Whereas

motivation provides energy for behavior, mindfulness helps individuals be more aware of and better process their experience. Mindful awareness thus provides fertile ground for autonomy, unveiling information that allows for more integrative decision making. This has important implications for practices from psychotherapy to business, as it suggests a role for mindfulness in fostering high-quality, volitional, motivation.

For a behavior to be autonomous, it is not necessary that it always be explicitly consciously reflected upon in that moment. It does require, however, that the behavior be informed by one's sensibilities and values, and if reflected upon, that it would be authentically endorsed (Ryan & Deci, 2017). Although many of the processes through which people gain a sense of autonomy and congruence are nonconscious, having organismic mechanisms yet to be explored (Di Domenico et al., 2016), the evidence thus far suggests that mindful awareness can provide important inputs to such processes, contributing to autonomous motivation and well-being. We should also emphasize, however, that in addition to having these positive effects on autonomous functioning, mindfulness can have its own direct effects on wellness-related outcomes, such as through its immediate impacts on mood, physiological arousal, worry, and other processes (e.g., Donald et al., 2016; Schultz & Ryan, 2019).

Although we have summarized a growing body of evidence establishing connections among mindfulness, autonomy, wellness, and prosocial propensities, there is much more to uncover. The practical import of this research area is potentially great, as it suggests that, just as social conditions that support people's autonomy can contribute to their experiencing more well-being and being more caring, individuals can enhance their *own* authenticity, well-being, and social contributions through cultivating mindful awareness.

### Recommended Reading

Brown, K. W., & Ryan, R. M. (2003). (See References). Presents several studies showing that both trait and state (momentary) mindfulness predict well-being and the first studies linking mindfulness with more autonomous motivation.

Donald, J. N., Bradshaw, E. L., Ryan, R. M., Basarkod, G., Ciarrochi, J., Duineveld, J. J., Guo, J., & Sahdra, B. K. (2020). (See References). Presents a meta-analysis of the associations between mindfulness and self-determination theory's different types of motivation.

Howard, J. L., Gagné, M., & Bureau, J. S. (2017). (See References). Reviews studies of self-determination theory's taxonomy of motives and reports a meta-analysis that establishes the continuum nature of the motives specified in the theory and in Figure 1.

Ryan, R. M. & Deci, E. L. (2017). (See References). Presents self-determination theory as a whole, including how it applies in schools, workplaces, sports, therapy, parenting, and other settings.

Ryan, R. M., & Rigby, C. S. (2015). (See References). Reviews both Buddhist and Western conceptions of self, showing how they differ and where they converge, and discusses the role of mindfulness in self-cultivation and well-being.

### Note

1. See Nilsson and Kazemi (2016) for more a more detailed overview of how mindfulness has been defined and operationalized within modern psychology, including conceptualizations of mindfulness as both a state and a trait.

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