



# Mindfulness Meditation as an On-The-Spot Workplace Intervention<sup>☆</sup>



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## ARTICLE INFO

### Article history:

Received 6 May 2016

Received in revised form 28 January 2017

Accepted 31 January 2017

Available online xxxx

### Keywords:

Mindfulness

Meditation

Temporal focus

Affect

Threat

Intervention

## ABSTRACT

This article introduces the concept of mindfulness meditation as an on-the-spot intervention to be used in specific workplace situations. It presents a model of when, why, and how on-the-spot mindfulness meditation is likely to be helpful or harmful for aspects of job performance. The article begins with a brief review of the mindfulness literature and a rationale for why mindfulness could be used on-the-spot in the workplace. It then delineates consequences of on-the-spot mindfulness interventions on four aspects of job performance - escalation of commitment, counterproductive work behaviors, negotiation performance, and motivation to achieve goals. The article closes with three necessary conditions for an on-the-spot mindfulness intervention to be effectively used, as well as suggestions for how organizations, managers, and employees can facilitate the fulfillment of these necessary conditions. Possible negative consequences of mindfulness and which types of meditation to use are considered. Taken together, these arguments deepen our understanding of state mindfulness and introduce a new manner in which mindfulness can be used in the workplace.

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## 1. Introduction

Many employees have turned to mindfulness meditation in order to reduce and deal with stressors they face at work. Fortune 500 corporations such as Google, Ford, Intel, and General Mills have started mindfulness-based training programs for their employees (Hayes, 2014; Hughlett, 2013; Pinsker, 2015; Tan, 2012). Corporate CEOs have spoken publicly about the benefits they experienced by practicing meditation (Carlock, 2014; Lockhart & Hicken, 2012). The Potential Project, a

company which specializes in corporate mindfulness trainings, now has offices in most major cities throughout the world (Bigelow, 2014).

Mindfulness meditation is a practice which cultivates mindfulness, a state of consciousness in which people have present awareness and nonjudgmental acceptance of internal and external experience (Brown & Ryan, 2003; Dane, 2011; Kabat-Zinn, 1990; for other definitions of mindfulness, see Sutcliffe, Vogus, & Dane, 2016; for relevant methodologies, see Choi & Leroy, 2015). Present awareness and nonjudgmental acceptance have been thought of as two separate factors (Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008). The purpose of this article is to introduce the concept of an *on-the-spot mindfulness intervention*, in which an individual induces a state of mindfulness when it is needed in a specific workplace situation. On-the-spot mindfulness interventions, relative to long-term mindfulness training interventions, may have the benefits of costing less time and money, as well as allowing people to be less mindful in situations when mindfulness is actually counterproductive.

Although scholars in industrial-organizational psychology and organizational behavior have begun to conduct research on mindfulness meditation (e.g., Hülshager et al., 2014; Long & Christian, 2015) and other mindfulness concepts (e.g., Weick & Putnam, 2006; Weick & Sutcliffe, 2006; Weick, Sutcliffe, & Obstfeld, 2005), the quick adoption of mindfulness practices is outpacing the research on the topic. Having an unclear understanding of the consequences of mindfulness could lead to overprescription and misuse (Grant, 2015; North, 2014).

However, it is also possible that mindfulness is being used too rarely. Many people are miserable at work, engage in unproductive forms of conflict, and have a great deal of trouble cutting their losses and admitting when they are wrong. If cultivating mindfulness on-the-spot helps

<sup>☆</sup> I acknowledge support from FCT – Portuguese Foundation of Science and Technology (project “UID/GES/00407/2013”), a Católica-Lisbon SBE research grant, the INSEAD R&D Committee, and the INSEAD-Wharton Alliance. For feedback on previous drafts, I am grateful to Sigal Barsade, Wilson Bastos, Rachel Hee Seo Hafenbrack, Quy Huy, Philippe Jacquart, Zoe Kinias, Ravi Kudesia, Jackson Lu, Shefali Patil, Jennifer Petriglieri, Luis Filipe Roxo, Álvaro San Martín, Francesco Sguera, Stefan Thau, Sarah Wittman, Andy Yap, Editor-in-Chief Naveen Donthu, and one anonymous reviewer who went well above and beyond the call of duty. For impactful conversations, I thank Justin Berg, Lucille Beverly, Dan Cable, Yann Cornil, Horacio Falcão, Zen Goh, Adam Grant, Charles Hafenbrack, Cindy Hafenbrack, Matt Hafenbrack, Ivona Hideg, Linda Hoyt, Lynn Isabella, Adam Kay, Will Maddux, Amer Madi, Jean-François Manzoni, Pooja Mishra, Jared Nai, Jay Narayanan, Laura Noval, Burak Oç, David Patient, Hayagreeva Rao, Jochen Reb, Marian Ruderman, Samantha Sim, Isabelle Solal, Kenneth Tai, Nico Thornley, Jutta Tobias, Dan Turban, Kathleen Vohs, Batia Wiesenfeld, Valery Yakubovich, An Yi, Maurizio Zollo, attendees of the Wharton Management Department PhD Seminar, the INSEAD Singapore Brown Bag, and the Wharton-INSEAD Alliance PhD Consortium, and attendees of presentations at Bocconi, Católica-Lisbon SBE, Darden, EMLYON, ESSEC, IE, INSEAD, London Business School, Nova SBE, Singapore Management University, and Sungkyunkwan GSB.

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### A Framework for Mindfulness Meditation as an On-The-Spot Workplace Intervention

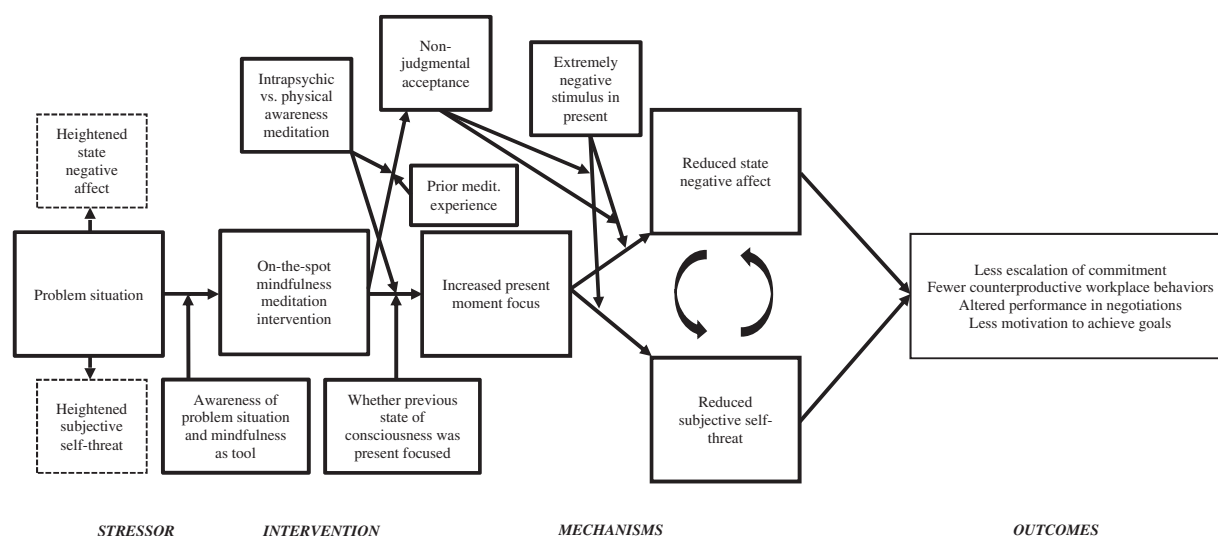


Fig. 1. A Framework for Mindfulness Meditation as an On-The-Spot Workplace Intervention.

reduce these and other issues (Hafenbrack, Kinias, & Barsade, 2014; Hülsheger, Alberts, Feinholdt, & Lang, 2013; Long & Christian, 2015), then the framework advanced in the present article is valuable for both business practitioners and theorists.

First, this article will review the concept of mindfulness and explain why it can be used on-the-spot. Second, this article will present a theoretical model (see Fig. 1) that traces how problem situations trigger the need for on-the-spot interventions and the processes by which these interventions influence aspects of job performance. Third, this article will outline necessary conditions for on-the-spot mindfulness interventions and how organizations and managers can facilitate them, including a consideration of which meditations are likely to be effective and when. Taken together, this article deepens our understanding of mindfulness and introduces a manner in which it can be used in the workplace which complements existing dispositional and long term training approaches in a way that may help employees.

## 2. Mindfulness in the workplace and why it can be used on-the-spot

Although meditation is not necessary in order to induce the state of consciousness of mindfulness (Brown & Ryan, 2003; Dane, 2011), the canonical means of cultivating mindfulness is indeed through meditation.<sup>1</sup> As a reflection of this, more than 2.7 million people have downloaded the Headspace meditation smartphone app (Wang, 2015), which can be used at one's desk. Some organizations with meditation programs also have designated meditation rooms that employees can use even when meditation classes are not in session (Huffington, 2013). Apple CEO and co-founder Steve Jobs was known to meditate before going on stage for important public speeches (Gelles, 2015). This suggests that many employees already meditate in specific situations at work.

<sup>1</sup> Businesspeople have used other means to encourage mindful awareness as well. Phil Jackson, former head coach of NBA teams the Chicago Bulls and LA Lakers, used insights from meditation to design practice exercises such as scrimmaging without speaking or with the lights off in order to encourage players to be more mentally present (Gelles, 2015). Checklists force airline pilots to focus on each step of the take-off and landing processes to avoid distraction and mistakes (Gawande, 2010). Nuclear power plant managers are known to change the structure of paper forms so that plant operators do not go on psychological "auto-pilot" and make mindless mistakes when filling them out (Levinthal & Rerup, 2006; Schulman, 1993).

Despite the real world importance and utility of mindfulness in specific situations, the literature on mindfulness meditation has devoted little theorizing to it being used as an on-the-spot intervention. Instead, the literature has largely operationalized mindfulness in terms of a measured trait which reflects how much individuals' baseline attentional patterns focus nonjudgmentally on the present moment rather than automatically on the past or future (Brown & Ryan, 2003; Kabat-Zinn, 1990). Scholars have also examined long-term training programs lasting between two and 12 weeks which are meant to develop a personal meditation practice in which participants meditate nearly every day (e.g., Hülsheger et al., 2013; Wolever et al., 2012).

Nonetheless, the aforementioned examples and recent studies suggest that people who have not had extensive formal meditation training could and do still use mindfulness as a tool. A single session of *physical awareness* mindfulness meditation (in which attention is directed towards physical sensations, such as those of one's breath) lasting between 3 and 30 min has led to beneficial cognitive, affective, and behavioral changes immediately thereafter (Arch & Craske, 2006; Hafenbrack, Kinias, & Barsade, 2014; Lloyd, Szani, Rubenstein, Colgary, & Pereira-Pasarin, 2016; Lueke & Gibson, 2015; Reb & Narayanan, 2014; Rosenstreich, 2016; Winning & Boag, 2015) including reduced sensitivity to negative stimuli (Kiken & Shook, 2011), improved focus on the task at hand (Mrazek, Smallwood, & Schooler, 2012), and reduced retaliatory behaviors (Long & Christian, 2015). Some training programs include even shorter periods of meditation, such as the duration of a single breath (Tan, 2012).

Beyond the benefits of on-the-spot mindfulness interventions, there are also potential costs to the long-term mindfulness trainings which increase trait mindfulness, particularly if such trainings are stripped of philosophical or moral considerations such as what is the right thing to do (Farb, 2014; Purser & Loy, 2013). Increasing one's trait mindfulness makes a person more mindful overall in their day-to-day life such that they generally focus more on the present moment and less on the past and future. This could be problematic because focusing on past experience aids learning (Tesluk & Jacobs, 1998) and enables people to have a more positive outlook on life (Mitchell, Thompson, Peterson, & Cronk, 1997) and focusing on desired future states is critical for motivation (Locke & Latham, 2006; Zimbardo & Boyd, 1999). There is also an avoidance risk such that people may use mindfulness to disconnect from situations when they would be better served to critically think through their challenges (Brendel, 2015) or prepare for potential

threats (Norem & Cantor, 1986). Even the process of mind-wandering - which is typically thought to be a liability because it draws attention away from the task at hand towards the past and future and can thus impair various types of performance (Smallwood & Schooler, 2015) - has been found to facilitate incubation of creative ideas (Baird et al., 2012) and can improve performance if the content of the thoughts one's mind wanders to are problem-focused (Dane, in press). Mentally projecting oneself into the past and future can also increase subjective meaning in life (Kray et al., 2010; Waytz, Hershfield, & Tamir, 2015).

At the extreme, if a person was nearly always mindful of the present moment and focused nearly none of their attention on the past or future, they may be less motivated, learn less from past experiences, think less critically about how to manage or prevent future problems, be less creative, and feel their life has less meaning.<sup>2</sup> Interventions also broadly have a tendency to occasionally cause unintended, unforeseen negative consequences (Taleb, 2012), which may be true to a greater extent for an intervention that is psychologically invasive such that it changes mental routines compared to an intervention that does not. These considerations suggest that one benefit of mindfulness being cultivated on-the-spot when it is needed in the workplace, compared to long term meditation training, is that using mindfulness on-the-spot would allow people not to be mindful in other situations when mindfulness may be counterproductive.

The following three sections will explain the steps of the proposed model from the beginning to the end. The final section will consider necessary conditions for effectively using on-the-spot mindfulness interventions, as well as ways for organizations, managers, and employees to fulfill those conditions.

### 3. Problem situations and on-the-spot intervention

The starting point of this model is that people are in a problem situation such that they experience acute job stress. In these situations, people tend to experience heightened negative affect and/or subjective self-threat (Fox, Spector, & Miles, 2001; Petriglieri, 2011). Some examples of problem events that can trigger these negative feeling states include receiving negative feedback (Stucke & Sporer, 2002), being treated unjustly by co-workers (Skarlicki & Folger, 1997), being abused by a supervisor (Tepper, 2007), finding out one's prior decision did not pay off (Staw, 1976), and facing layoffs (Ashford, Lee, & Bobko, 1989; Brockner, Grover, Reed, & Dewitt, 1992).

This research proposes that if people are in a problem situation, they can self-induce a state of mindfulness through a short (e.g., 10 min) meditation. As will be discussed in greater depth in a later section on practical considerations, these on-the-spot meditation interventions could be accomplished by listening to a physical awareness guided meditation or an *intrapsychic* guided meditation (in which the focus of attention is on internal phenomena such as one's thoughts or emotions) via a recording on a computer or smartphone with headphones at one's desk.

The type of meditation used can influence what a state of mindfulness means, in terms of which of the two constituent factors of present awareness and nonjudgmental acceptance is heightened. If a person's previous psychological state is not fully focused on the present moment, a mindfulness meditation induction, particularly if it is the physical awareness type, will increase present awareness and reduce how much they are focusing on the past and/or future (Hanh, 1999; Hafenbrack, Kinias, & Barsade, 2014).<sup>3</sup> This change in temporal focus will generally lead to reduced feelings of negative affect and self-threat,

except in cases where there is an extremely negative stimulus taking place in the present moment and individuals are not able to nonjudgmentally accept that stimulus. The following section explores these mechanisms.

### 4. Mechanisms of on-the-spot mindfulness interventions

Present awareness routinely reduces how negative and threatened people feel. This section explores the mediating mechanisms of reduced state negative affect and subjective self threat, as well as the moderating roles of negative present stimulus intensity, non-judgmental acceptance, meditation type, and prior meditation training.

#### 4.1. The mediating role of negative affect

Reducing negative affect is one of two key mediating processes through which on-the-spot mindfulness interventions can operate. Affect refers to the feelings which individuals or groups (Kelly & Barsade, 2001; Smith & Ellsworth, 1985) experience and their external manifestations. Affective states often carry over from one event to the next, even if the events are unrelated (Lerner & Keltner, 2000). Affective states experienced early in the day act as affective primes which color subsequent events and influence job performance (Rothbard & Wilk, 2011). Negative affect in particular arises when individuals face or experience harm or fail to make sufficient progress towards their goals (Carver & Scheier, 1990).

Focus on the future and/or past is empirically associated with less-pleasant affective states. In an experience sampling study in which participants were surveyed several times per day, Killingsworth and Gilbert (2010) found that individuals who were thinking about their present moment experience reported more happiness at that time and shortly thereafter than those who were thinking about the past or future. Trait mindfulness is associated with increased positive affect and decreased negative affect (Brown & Ryan, 2003). Ways of orienting attention to the present moment other than mindfulness, such as becoming immersed in the task at hand or contemplating something much larger than oneself, also increase pleasant feeling states (Csikszentmihalyi, 1990; Rudd, Vohs, & Aaker, 2012). Focusing on the past is particularly strongly related to negative affect (Shipp, Edwards, & Lambert, 2009).

Mindfulness practice is guided by the premise that even if people have major problems such as a terminal illness, "as long as [they] are breathing, there is more right with [them] than wrong with [them]" (Kabat-Zinn, 1990, p. xxviii). Thus, attending to and connecting with the present moment can help people feel better by directing attention away from past or future issues they replay in their minds to a status quo that is mostly (if not totally) okay. Recent studies found that a single session of physical awareness mindfulness meditation can immediately change one's emotional state and reactivity to negative stimuli. For example, 15 min of focused-breathing mindfulness meditation reduces negative affect (Hafenbrack, Kinias, & Barsade, 2014), reduces outward-focused negative emotions (Long & Christian, 2015), reduces negative affect in response to aversive pictures and increases behavioral willingness to view those pictures longer (Arch & Craske, 2006), and reduces stereotyping due to suppressing automatic negative associations (Lueke & Gibson, 2015). These findings suggest that on-the-spot mindfulness likely reduces employees' state negative affect in the workplace.

#### 4.2. The mediating role of self threat

Reducing subjective self threat is another of the two key mediating processes through which on-the-spot mindfulness interventions can operate. Threat is the presence of adverse circumstances (Staw, Sandelands, & Dutton, 1981). On the individual level, subjective self-threat is the intrapsychic experience of perceiving past, present, or (usually) future harm to oneself due to adverse circumstances.

<sup>2</sup> n.b.: A number of cognitive, affective, and behavioral benefits to having high trait mindfulness have been documented (Dane & Brummel, 2014; Glomb, Duffy, Bono, & Yang, 2011; Good et al., 2016; Reb, Narayanan, & Chaturvedi, 2014).

<sup>3</sup> Alternatively, using an intrapsychic form of mindfulness meditation can facilitate non-judgmental acceptance (Papies, Barsalou, & Custers, 2012; Papies, Pronk, Keesman, & Barsalou, 2015).

There is reason to believe that people tend to be more self-focused when they are focusing on the past or future compared to the present moment (Mainemelis, 2001). Neuroscientific findings suggest that the thoughts which cycle through one's mind during mind-wandering, which is characterized by focus on the past and future, tend to relate to the self-concept (Damasio et al., 2000; Gusnard, Akbudak, Shulman, & Raichle, 2001; Mason et al., 2007). Mind-wandering has even been termed “self-generated thought” (Smallwood, 2013, p. 519) due in part to its relevance to self-related memories and goals.

When mind-wandering, individuals think about events that happened to them in the past or may happen to them in the future, such as who they want and do not want to become (Markus & Nurius, 1986). Furthermore, Bluedorn (2002, pp. 112–116) asked students how far in the past they usually focus when they think about “things that happened long ago” and how far in the future they usually focus when they think about the “long term future”. In both cases, less than 2% of respondents reported that they think about time periods beyond their expected lifetimes. This evidence further suggests that the things people think about in the past and future tend to be self-relevant and may lead to increased self-focus.

Mindfulness may reduce the strength of subjective self-threat through three processes. First, increasing present awareness may reduce how much people think about self-threatening things in the past or future by interrupting rumination and worry. In so doing, mindfulness can reduce the cognitive salience (Taylor & Fiske, 1978) of self-threatening things which are not occurring in the present moment, likely reducing the extent that those threatening mental representations impact the self-concept.

Second, either the present awareness or the nonjudgmental acceptance aspects of mindfulness may reduce self-focus (Baumeister, 1995) or the extent to which self-esteem is a salient concern. Thus, even if a stimulus is objectively threatening, people who are in a mindful state may be less sensitive to it. This is because it may be more difficult to feel threats to the self in an overpronounced way when one is not self-focused.

Third, cultivating nonjudgmental acceptance makes people's reactions less automatic (Glomb et al., 2011) by allowing individuals to pause before deciding how to feel or respond. This relates to how meditators argue that pain is unavoidable but suffering is a choice (Gelles, 2015). This ability may create a mental space that makes an immediate problem or feared outcome feel more like a single fleeting event (Papies et al., 2012; Papies et al., 2015), instead of having it feel like the totality of one's experience - or even one's being. This mental space may take some of the sting out of negative stimuli, leading to greater psychological resilience.

Consistent with these notions, trait mindfulness has been found to predict reduced defensiveness in response to existential threat (Niemic et al., 2010), and mindfulness meditation has been found to reduce the extent to which current experience is encoded in the brain area associated with one's self-narrative (Farb et al., 2007). Similarly, theoretical work has argued that mindfulness meditation quiets the ego (Brown, Ryan, & Creswell, 2007, p. 212) and reduces reactivity to threat (Heppner & Kernis, 2007).

#### 4.3. The moderating roles of negative present stimulus intensity, nonjudgmental acceptance, meditation type, and prior meditation training

Even though present awareness routinely reduces how negative and threatened people feel, there may be boundary conditions under which it does not have such an effect. One important example is when something extremely threatening is taking place in the present moment, such as when an individual is experiencing extreme physical discomfort or immediate existential uncertainty. Patients undergoing major medical procedures, soldiers in a warzone, and women in childbirth, for example, may at times mentally retreat to the past or moderately distant future as a way to cope with how difficult the present moment and

immediate future are (Shipp et al., 2009). Such temporal escapism may be adaptive. Similarly, disasters like the unexpected death of a loved one or close colleague are often too big and traumatic for people to simply psychologically distance themselves from in a short period of time. Such disasters may seem to temporally expand to form an episode or ordeal while people make sense of them (Weick, 1993).

Using a beginner's understanding of mindfulness meditation and guided recordings to cultivate present awareness when present circumstances are terrible may have little to no effect. Focusing directly on pain in a physical awareness meditation or engaging in an intrapsychic meditation such as trying to witness one's thoughts and emotions as they arise may actually make individuals feel even worse. This is because those individuals may unintentionally further immerse (Kross, Ayduk, & Mischel, 2005) themselves in their pain, sorrow, fear, or rumination and lack the psychological detachment or resilience to deal with it.

One factor that could cancel out the boundary condition of an intense negative present stimulus is the ability to nonjudgmentally accept it. In contrast to how present awareness can be cultivated on the state level by a single session of physical awareness (focused-breathing) meditation for novices (Hafenbrack, Kinias, & Barsade, 2014), there is currently no published evidence that a single session of physical awareness meditation can lead to nonjudgmental acceptance. This dearth of evidence could reflect how nonjudgmental acceptance is a meta-cognitive skill (Bernstein et al., 2015; Bishop et al., 2004) which requires different training to acquire.<sup>4</sup> For example, a single session of intrapsychic meditation training in which people adopt a detached perspective can help individuals view their thoughts less judgmentally (as merely fleeting mental events: Papies et al., 2012) and “accept whatever thoughts and reactions they experience” (Papies et al., 2015, p. 156). This suggests that intrapsychic meditations can induce nonjudgmental acceptance, whereas physical awareness meditations might not.

However, intrapsychic meditations may be less likely than physical awareness meditations to increase present awareness because, even though people attend first to their current thought or emotion, it is natural for one's train of thought to move quickly on to an event, person, or goal or in the past and/or future which caused or relates to that thought or emotion. Physical sensations, by contrast, continue to be in the present moment. In sum, physical awareness meditations tend to immediately increase present moment awareness whereas intrapsychic meditations may less reliably increase present awareness and be more associated with increasing nonjudgmental acceptance.

Extant evidence suggests that experienced meditators are able to face extremely negative stimuli, and this may be because the type or high level of nonjudgmental acceptance needed to accept extremely negative stimuli can be reliably developed over time as part of long-term mindfulness training (Kabat-Zinn, 1990). This can change the quality of attention in the present such that one can better directly face problems that would typically be suppressed (Bernstein et al., 2015; Bishop et al., 2004). This is supported by experienced meditators' increased use of approach-based and decreased use of avoidance-based coping (Weinstein, Brown, & Ryan, 2009), as well as their ability to attend to and accept their own errors and the negative affect that coincides with them (Teper, Segal, & Inzlicht, 2013). As noted, trait mindfulness, which theoretically includes nonjudgmental acceptance, has been found to reduce defensive responses even to the contemplation of one's own mortality (Niemic et al., 2010). Experienced meditators, perhaps because they have developed the skill or dispositional tendency towards nonjudgmental acceptance, apparently are able to let the experience of a negative stimulus flow through them and then let it go.

<sup>4</sup> Alternatively, some scholars have questioned whether mindfulness should be defined as encompassing nonjudgment at all (Dreyfus, 2011; Purser & Milillo, 2015).

## 5. Examples of workplace outcomes

Based on the processes of negative affect and self threat, this section outlines four workplace outcomes predicted to follow from on-the-spot mindfulness meditation interventions, as well as several further downstream outcomes. The four workplace outcomes are less escalation of commitment, fewer counterproductive work behaviors, altered performance in negotiations, and less motivation to achieve goals. As a complement to the extant literature on how mindfulness facilitates rest and recovery (Hülshager, Feinholdt, & Nübold, 2015; Hülshager et al., 2014) and thus employee well-being, as well as how mindfulness improves job satisfaction (Hülshager et al., 2013), the outcomes that follow in this section deal with organizational and psychological conditions which have been less studied in the workplace in conjunction with mindfulness. These outcomes are also likely to be influenced by on-the-spot mindfulness in light of previous findings relating them to negative affect and/or self-threat. In sum, these outcomes were chosen because they are important, likely to be influenced by on-the-spot mindfulness meditation, and comparatively more novel. This section both reviews the nascent related literature and makes theoretical predictions that can be tested in studies in organizations.

### 5.1. Less escalation of commitment

Managers and decision-makers show a tendency to escalate their commitment to losing courses of action (Staw, 1976), “one of the most robust and costly decision errors addressed in the organizational sciences” (Sleesman, Conlon, McNamara, & Miles, 2012, p. 541). This tendency occurs in relation to how cognitively salient (and thus painful) past costs are (Strough, Schlosnagle, & DiDonato, 2011) but is also facilitated by focusing on the future, due to concerns about how to resolve those costs (Staw, 1981), and the experience of both negative affect (Coleman, 2010; Wong & Kwong, 2007) and self threat (Sleesman et al., 2012).

For these reasons, on-the-spot mindfulness is likely to reduce escalation of commitment. As preliminary support of this, Hafenbrack, Kinias, and Barsade (2014) found in a series of laboratory experiments that state mindfulness via physical awareness meditation reduced the incidence of the sunk-cost bias, which is the tendency to continue an endeavor once an investment in money, effort, or time has been made (Arkes & Blumer, 1985). The sunk cost bias is also often a determinant of escalation of commitment (Sleesman et al., 2012). Glomb et al. (2011) have also argued that mindfulness may reduce escalation of commitment due to increased response flexibility, which also could be due to reduced self-threat (Staw et al., 1981). Relatedly, Kudesia, Baer, and Elfenbein (2015) found that an intrapsychic meditation intended to induce mindful meta-cognition, which is more related to nonjudgmental acceptance out of the two factors, helped people discover solutions that were farther from their initial inclinations. Individuals are thus likely to benefit from physical awareness or intrapsychic mindfulness when deciding whether to escalate their commitment to a course of action in which they have already invested or make a significant change of course.

### 5.2. Fewer counterproductive workplace behaviors

Employees often respond in counterproductive ways to workplace stressors (Chen & Spector, 1992) such as perceived injustice (Thau, Aquino, & Wittek, 2007), thwarted belonging (Thau, Aquino, & Poortvliet, 2007), and abusive supervision (Tepper, 2000; Thau, Bennett, Mitchell, & Marrs, 2009). Self-threat has been found to increase aggressive responses and violence (Baumeister, Smart, & Boden, 1996; Bushman & Baumeister, 1998). Furthermore, job-related negative affect has been found to spread quickly between individuals (Barsade, 2002) and explain the relationship between job stressors and counterproductive workplace behaviors (Fox et al., 2001).

Physical awareness type on-the-spot mindfulness may reduce counterproductive workplace behaviors. Ruminating less about past issues, worrying less about future issues, and experiencing less self-threat and negative affect, are likely to reduce the impulse to engage in retaliatory behaviors (Bies & Tripp, 1996) which are aggressive, antisocial, deviant, violent, or otherwise harmful to individuals or the organization. As support of this notion, Long and Christian (2015) found in a laboratory study that state mindfulness via physical awareness meditation reduced retaliation to injustice, explained by decreased outward-focused negative emotions. Abusive supervision is also comparatively less constrained among supervisors who are low in trait mindfulness (Liang et al., 2016). Individuals are thus likely to benefit from on-the-spot physical awareness mindfulness when they experience the impulse to engage in counterproductive work behaviors, although intrapsychic meditation could be helpful as well.

### 5.3. Altered performance in negotiations

Negotiation is a joint decision-making process in which parties with different preferences determine how to allocate resources (Bazerman & Carroll, 1987). There are several ways that on-the-spot mindfulness meditation could alter performance in negotiations. On one hand, mindfulness can improve negotiation performance because people become better able to self-regulate, develop positive regard for the self and other, change their self-narrative (Kopelman, Chen, & Shoshana, 2011) to fit the needs of the situation at hand (Kopelman, Avi-Yonah, & Varghese, 2012), notice creative ways to increase mutual value (Falcao, 2012), and react less automatically to stimuli (Glomb et al., 2011). Mindfulness gives people more control over their emotions and may enable them to strategically display specific emotions, such as anger (Sinaceur & Tiedens, 2006; Van Kleef, De Dreu, & Manstead, 2004; but see Yip & Schweinsberg, 2017), that help them perform better.<sup>5</sup> Mindfulness can reduce naturally occurring anxiety (Kabat-Zinn et al., 1992), a discrete emotion within the umbrella construct of negative affect, which could improve negotiation outcomes when anxiety is harmful (Brooks & Schweitzer, 2011). Culture is a possible moderator. The studies which found that expressing anger led to increased concessions by one's negotiation counterpart (Sinaceur & Tiedens, 2006; Van Kleef et al., 2004) were conducted in the US and the Netherlands, yet the opposite effect has been found in Japan (Adam, Shirako, & Maddux, 2010). As partial support of this view, Reb and Narayanan (2014) found that physical awareness and meta-cognitive mindfulness meditation inductions improved value-claiming in distributive negotiations in four studies with East Asian (Singaporean) participants.

On the other hand, mindfulness can reduce naturally occurring anger (Borders, Earleywine, & Jajodia, 2010), which could impair negotiation outcomes in the cases in which anger is helpful. Identity threat in the form of stereotype reactance has also been found to facilitate improved negotiation performance with Western participants (Kray, Thompson, & Galinsky, 2001). Another possibility is that some of the positive effects of mindfulness in negotiation, such as by strategic emotional displays and editing one's self-narrative, require meta-cognition (which characterizes nonjudgmental acceptance), whereas the negative effects, such as by reducing anger, do not require meta-cognition. This suggests intrapsychic forms of meditation may be more helpful to negotiation performance than are physical awareness forms of meditation. In line with this view, Hafenbrack, Barsade, & Kinias (2014) found evidence for the negative effect of physical awareness type state mindfulness on negotiation performance in a laboratory study with Western (United States) participants. In sum, on-the-spot mindfulness interventions are likely to influence negotiation performance, but whether the

<sup>5</sup> While much of the management literature treats negative affect as a broadband umbrella construct (e.g., Amabile, Barsade, Mueller, & Staw, 2005; Staw & Barsade, 1993), it nonetheless consists of discrete negative emotions which can have different downstream effects (Lerner & Keltner, 2000; Lerner, Small, & Loewenstein, 2004).

influence is positive or negative may depend on several moderating factors such as national culture, the discrete negative emotion one had been feeling, and whether the mindfulness meditation used is intrapsychic or physical awareness in nature.

#### 5.4. Less motivation to achieve goals

Thinking about the past and future can facilitate motivation (Karniol & Ross, 1996; Markus & Nurius, 1986; Zimbardo & Boyd, 1999). For example, goals are hypothesized desired future states which energize task performance and were set in the past relative to the time period in which a task is being performed (Locke & Latham, 1990). Similarly, subjective satisfaction is often inversely related to objective achievement (Schwartz et al., 2002), which suggests being unsatisfied with what one has personally accomplished so far can drive a person to seek for more. Furthermore, a popular paradigm in motivation research stresses the importance of focusing on both goals and the “negative status quo” (e.g., Oettingen et al., 2009).

Goal-setting “implies discontent with one's current condition” (Locke & Latham, 2006, p. 265), which may engender the experience of self-threat. Self-threat has also been found to increase some forms of task motivation (Derks, Scheepers, Van Laar, & Ellemers, 2011; Kray et al., 2001; Scheepers, 2009). Conversely, self-affirmation, another means of reducing self threat (Steele, 1988), can lead to goal disengagement (Vohs, Park, & Schmeichel, 2013). Additionally, negative affect is thought to narrow attention (Friedman & Förster, 2010), which may aid in goal-shielding (Shah, Friedman, & Kruglanski, 2002), and has been found to increase performance standards (Cervone, Kopp, Schaumann, & Scott, 1994). Hafenbrack (2016) found in a series of laboratory experiments that induced physical awareness type state mindfulness reduced motivation towards unpleasant tasks. This evidence suggests that on-the-spot mindfulness may cause individuals to be more accepting of the status quo, think less about outcomes they desire in the future, and thus be less motivated to achieve goals.

### 6. Three necessary conditions and how to fulfill them

In order for employees to successfully engage in an on-the-spot mindfulness intervention, three necessary conditions must be fulfilled: Employees must be aware that they are in a problem situation, they must be aware of on-the-spot mindfulness intervention as an available tool, and they must actually engage in the meditation. There are a number of things that organizations could do in terms of job design (Hackman & Oldham, 1976), their mindfulness offerings, and communication with employees to increase the likelihood of fulfilling these three necessary conditions. This section presents each of these necessary conditions and outlines suggestions for how organizations, managers, and employees can fulfill them.

#### 6.1. Necessary condition 1: Awareness of problem situation

The first condition is that people need to recognize that they are in a problem situation such as being overly stressed, escalating their commitment, being emotionally reactive, mistreating a subordinate, entering a very high stakes meeting with a difficult person, ruminating about past problems, or catastrophizing about future problems such as the possibility of layoffs. This first step requires that people notice cues from the environment, patterns from past events, or their own emotions or thoughts.

In many cases, people do not notice what is going on while it is happening. People's existing knowledge structures and beliefs tend to influence which aspects of experience those people attend to and how they interpret them (e.g., Dane, 2010; Nickerson, 1998; Walsh, 1995). For example, people typically do not notice most logical inconsistencies that they are asked to search for in a text passage unless they have domain knowledge of the topic matter and have had training in how to activate

that past knowledge (Hasselhorn & Korkel, 1986). There is a large body of research on mind-wandering which suggests that people routinely become distracted from the task at hand to unrelated thoughts in the past or future (Smallwood & Schooler, 2015). People also frequently demonstrate focalism – an excessive focus on their goal at the expense of other factors (Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000).

The extant research thus suggests that most people would not always be adept at noticing the triggers for on-the-spot mindfulness, at least not initially. One could even imagine a ‘catch-22’ in which some of these situations, such as escalating commitment and mistreating a subordinate, are somewhat common despite their being so destructive partly because, for ego-protective reasons, people tend not to clearly see these issues for what they are in the moment, let alone beforehand (Staw, 1976). The paradox in these cases would be that the people who would most benefit from an on-the-spot mindfulness intervention could be the ones who are least likely to notice or admit that they need one (akin to Sitkin, See, Miller, Lawless, & Carton, 2011). At the same time, managers or leaders cannot be expected to always know whether it would benefit an employee to meditate at a given time because most of the problem situations in which mindfulness would help are intrapsychic, personal, or context dependent.

#### 6.1.1. How to fulfill necessary condition 1

To help fulfill the first necessary condition, it could be helpful to provide, even as part of mindfulness training, a lesson identifying escalation of commitment, abusive supervision, and other issues that research has indicated are problems that mindfulness can help solve (but for which people can have a blind spot in the moment). Just knowing the definitions of these concepts and the boundaries of them can also make people more aware of whether they are in one of those problem situations (although it is unlikely to debias them on its own: Fischhoff, 1982; Milkman, Chugh, & Bazerman, 2009). Employees could be provided with an infographic or poster containing reminders of problem situations, which they could post in their offices or cubicles. It could contain questions people can ask themselves such as, to gauge escalation of commitment: “If you had not already started this course of action, would you start it now based on what you have learned?” Another question could be: “Are you so stressed right now that it is difficult to do your work?”

Having the appropriate technological systems and processes in place is a main determinant of whether knowledge sharing and application efforts succeed (Riege, 2005). Likewise, there are ways that technology could help people become more aware that they are in a problem situation. For example, similar to the pop up screens that inquire whether academics are really sure they want to submit a manuscript to a journal, when a trader is doubling down on a position where they have already lost money, the computer software could create a dialogue box that asks them if they are sure that they want to make this choice or if they would like to take some time to meditate briefly. Scheduling software for meetings such as Microsoft Outlook could inquire whether an employee has had a difficult relationship in the past with the person they are meeting with, if that person has a reputation for being difficult to get along with, or if the focal employee is highly anxious about the meeting. If the employee answers affirmatively to any of these questions, the software could automatically add a suggested period of meditation to the calendar immediately before that meeting which would cue a reminder when that time came. Companies that want to maximize the ability of employees to realize when they are in a problem situation and are willing to spend a great deal of money towards that end could use a gamification approach (Deterding, Sicart, Nacke, O'Hara, & Dixon, 2011) to build a videogame-type simulation in which employees build intuition (Dane & Pratt, 2007) in noticing the situations in which mindfulness would be helpful or not (akin to Morewedge et al., 2015).

If employees are aware of the problem situations that on-the-spot mindfulness can solve, they could also encourage or remind each other to meditate when they think it would be helpful (Kucinkas,

2014). Leaders and managers could set an example for other employees by doing so themselves, although as discussed below, care must be taken not to appear to be proselytizing. Immediately in the wake of lay-offs or other events that are broadly stressful for many employees, organizations could encourage employees to meditate or take advantage of their mindfulness offerings. Organizations could also encourage their employees to meditate when a drastic change in market conditions or their competitive landscape requires a potentially radical change in corporate strategy (Kudesia et al., 2015) or heightened awareness of present cues.

### 6.2. Necessary condition 2: Awareness of mindfulness as a tool

The second necessary condition is that the employee needs to know about on-the-spot mindfulness intervention as an available and relevant tool. They need to know what mindfulness is, how it can be used on-the-spot, and that it is a helpful solution or appropriate cognitive strategy (Pressley, Borkowski, & Schneider, 1987) for their current problem or situation. For this to happen, education is almost surely necessary. Using mindfulness as an on-the-spot intervention is a new idea and researchers are still currently examining the consequences of state mindfulness in physical awareness and intrapsychic forms.

#### 6.2.1. How to fulfill necessary condition 2

To help fulfill the second necessary condition, it would be beneficial to provide mindfulness training that acknowledges the idea of an on-the-spot mindfulness intervention and makes some adjustments specific to it. Such a program would share some features with long-term meditation training programs, except it could be accomplished in far fewer class meetings or even with recordings alone. The way content is presented could be tweaked such that participants are not (as) encouraged to keep up a daily meditation practice. The time of day and location could vary, in order to increase the likelihood that people will be able to draw on mindfulness spontaneously in different settings. Presenting mindfulness topics randomly or simultaneously instead of in sequential blocked lessons could help people's ability to use it effectively as well (Baldwin, Pierce, Joines, & Farouk, 2011; Shea & Morgan, 1979)

Participants could be given guidance about how physical awareness meditations may be more useful for them if they are going to use them on-the-spot rather than as part of a daily routine. To the extent that a mindfulness training program presents research findings in it, as is the case at Google (Tan, 2012), it may help to emphasize research related to state mindfulness inductions rather than long-term trainings or naturally occurring variation in trait mindfulness. Participants could be provided with this article.

Physical awareness meditations may be particularly well-suited for on-the-spot mindfulness interventions because they reliably induce present awareness. Focused-breathing meditation is often the type of meditation used to induce present awareness because one's breath is a simple, familiar experience that occurs in the present. However, focusing on other physical sensations such as those of eating (Tan, 2012) or walking (Hanh, 1991), or focusing attention on each section of the body in succession using a body scan meditation, could also be easily used even by novices to heighten present awareness. Focused breathing and body scan meditations are particularly versatile though because they do not require food nor the opportunity to walk around, so employees who work in an office could do these meditations at their desks.

In-person mindfulness training programs might not be an option for every organization. One limitation may be the monetary cost. For example, hiring a consultant for a collective mindfulness training can cost at least \$7000 (Hales, Kroes, Chen, & Kang, 2012). Companies that develop in-house mindfulness programs undoubtedly can spend much more than that.

Whether a company can afford in-person mindfulness training or not, it would be useful to provide short but effective meditation recordings to employees that they could use at their desks. Such recording are

available on subscription-based smartphone applications such as Headspace, Coach.me, or Mental Workout. There also free guided meditations available on the websites of organizations such as The UCLA Mindful Awareness Research Center (UCLA Mindful Awareness Center, n.d.: <http://marc.ucla.edu/body.cfm?id=22>) and The Free Mindfulness Project (Free Mindfulness Project, n.d.: <http://freemindfulness.org>). These recordings can be useful tools in the specific situations when employees want to engage in a short period of meditation.

### 6.3. Necessary condition 3: Execution of intervention

The third necessary condition is that the employee needs to actually engage in a meditation. To the extent that actually doing on-the-spot mindfulness meditations at appropriate times is a form of applied management knowledge, this is likely to be a difficult step above and beyond merely acquiring the conceptual knowledge of what on-the-spot mindfulness intervention is (Baldwin et al., 2011). Putting this into action also depends on logistical and social factors. Employees must have the time and space where meditating is feasible. They also need to feel that meditation is an acceptable use of their time and that they will not be criticized by co-workers who may see them practicing it nor punished in their performance reviews as a result.

#### 6.3.1. How to fulfill necessary condition 3

In light of how the lack of supervisor support is a key barrier to knowledge sharing and application, as well as how "there is still a perception amongst many managers that if people are not 'busy doing something' they are not [...] working productively" (Riege, 2005, p. 25), it would be important for managers to communicate that it is okay or even encouraged for employees to meditate at work. Evan Williams, a co-founder of the social network Twitter and publishing platform Medium, has told employees "... we're hiring you for your brain, and this makes your brain better. From a very selfish perspective we want you to do this. You won't be seen as doing nothing if you're meditating here" (Gelles, 2015, p. 238). Other leaders and managers could use a similar approach to signal to employees that meditating when it would help them in the workplace is acceptable. It could also be helpful to provide headphones, earplugs, eye patches, or a dedicated meditation room so that employees can meditate without being distracted by other events in the workplace. Such amenities could also function as symbolic artifacts of the organization's culture (Scott, 2008).

In order to get buy-in from employees for mindfulness practices, it is important that the way the practices are presented fits the organization's culture (McDermott & O'Dell, 2001), as well as employees' interests and identities. Despite being Google employee number 107 and having possessed a great deal of credibility as a result, when Chade-Meng Tan initially tried to start a mindfulness program at Google, no one showed up, in part because employees did not want to publicly acknowledge that they were stressed (Kucinskis, 2014). By reframing the program in a more positive manner around emotional intelligence, presenting empirical data on the benefits of meditation, and naming the program "Search Inside Yourself" – which fit the culture well of a company whose flagship product is an internet search engine – the program became so popular that it has since had a waiting list (Tan, 2012).

One of the skepticisms management or employees may generally have regarding implementing mindfulness programs is that they may seem to be religious in nature. However, although mindfulness meditation initially began as a religious practice in the Pali Canon of Theravada Buddhism over 2000 years ago in India (Harvey, 1990), the forms that mindfulness programs, concepts, and exercises have taken in modern Western psychology and organizations are often radically different from traditional Buddhist teachings and practices (Jha et al., 2015; Kudesia & Nyima, 2015; Purser & Milillo, 2015). To fit with the culture and goals of Western institutions, meditations are usually taught without the religious or philosophical considerations regarding, for example,

how one's actions ripple out towards other people or the environment (Kucinskas, 2014; Maddux & Yuki, 2006). Moreover, religious references to supernatural phenomena, as well as elements that could be perceived as dogmatic such as bowing, hand mudras, and guru worship, were removed when mindfulness practices entered Western organizations (Kucinskas, 2014).

In essence, the terminology and content of mindfulness meditation has been secularized in the process of entering secular Western institutions such as schools, businesses, academia, and hospitals due to the (in some cases legal) separation of sacred and secular institutions (Kucinskas, 2014). It is therefore advisable to use such mindfulness materials which are secular in nature and not to emphasize that mindfulness originally came from a religion. It may even be worth specifically mentioning that physical awareness type mindfulness meditation in and of itself is not a religious practice.

It is also important not to come off as proselytizing or to force employees to engage in mindfulness practice if they are not personally interested (Brendel, 2015). Being too forceful in encouraging mindfulness may be met with psychological reactance (Brehm, 1966) and constitute a value-destroying abuse of power (Falcao, 2012; Raven, 1958). Mindfulness can be an impactful tool to make available to employees, but they should not be ordered to do it as if it were a normal work task. That it initially came from a religion makes this particularly important (Kucinskas, 2014).

The less meditation experience that a person has, the more useful it is to listen to a guided meditation recording to help remind oneself to maintain focus on present experience, because otherwise minds habitually wander away from the present moment (Mason et al., 2007; Smallwood & Schooler, 2015). It may also be crucial for first time meditators to engage in a mindfulness meditation or two when they are not in a problem situation in order to notice what it feels like to meditate. This would be beneficial because then the common realization that it can be difficult to maintain attention on present experience (Hülshager et al., 2015) would not come as a surprise when using mindfulness as a tool later. The widely-demonstrated effectiveness of focused breathing meditation suggests it may be the best form of meditation to learn first.

Individuals can also intrapsychically induce a state of mindfulness without the aid of a meditation recording or trainer, particularly after they have listened to some recordings or attended some training sessions. In other words, state mindfulness can be used as part of a meta-cognitive reorientation technique, similar to specifically recalling positive work events (Binnewies, Sonnentag, & Mojza, 2009) or changing the emotion that one is experiencing (Brooks, 2014). One could focus on physical sensations at any time, even in the absence of a recording. On-the-spot mindfulness is an even more versatile tool when people are able to independently focus attention on present experience. People may realize that they are largely in control of their thoughts and how they feel, instead of needing to passively follow their mind wherever it chooses to wander or being unduly influenced by environmental cues.

## 7. Discussion

This article has presented a model of why, when, and how mindfulness meditation can effectively be used as an on-the-spot intervention in organizations. Business practitioners can use the model to predict when and how it would be worthwhile to meditate at work, versus when meditation is best avoided. Researchers can look to this model as a starting point and empirically test the predictions in order to better understand the efficacy of mindfulness interventions.

### 7.1. Practical implications

The model in this article can serve as a guide for employees to understand when cultivating a state of mindfulness is likely to be helpful to them versus when it is likely to be counterproductive. A heuristic people

could use is to ask themselves: "When I am feeling bad, is there a way that these negative feelings can help me perform better? Can I reframe my anxiety as excitement and let the nerves carry me (Brooks, 2014)? Can I channel my frustration to work harder or become more competitive (e.g., Bryant, 2014)?" If so, mindfulness may actually interrupt functional motivational or cognitive processes. However, when those negative feelings are too overwhelming or otherwise mismatched to the needs of the task at hand, mindfulness is a tool people could draw on to feel and perform better.

Relatedly, whether people could benefit from an on-the-spot mindfulness intervention is partly dependent upon their current state, including whether they are already mindful or present-focused. If people are already in a state of mindfulness or another mental state such as flow (Csikszentmihalyi, 1990) or absorption (Agarwal & Karahanna, 2000) which is at least as well suited to the needs of the task at hand, it would be counterproductive to interrupt how they were thinking and what they were doing in order to meditate, hoping to improve performance (Dane, 2011, 2015). Alternatively, when people's minds are wandering away from the task at hand such that it is difficult to complete their work tasks, or the nature of their work tasks require sustained attention or vigilance, it may be particularly helpful to cultivate mindfulness beforehand.

Furthermore, the possible differences in what state mindfulness is to novices versus experts can be helpful to guide practitioners' use of on-the-spot mindfulness. The current research argues that engaging in a short period of physical awareness meditation can immediately change temporal focus, directing attention to the present and away from the past or future, however it may take more time in repetitive meditation practice or different, intrapsychic or metacognitive types of meditation to build the tendency to nonjudgmentally accept strong negative stimuli occurring in the present moment. Thus, mindfulness is likely to be a reliably useful tool for novice practitioners when they are excessively ruminating on the past or worrying about the future. However, novice meditators or anyone who otherwise does not know how to nonjudgmentally accept or detach from negative stimuli, may remain uncomfortable when they attempt to sustain focus on intense negative stimuli which are occurring in the present moment.

While the literature on the benefits of trait mindfulness in organizations suggests long-term mindfulness training and regular practice may be beneficial for many employees, the use of short on-the-spot mindfulness interventions requires a considerably smaller investment of time or money, thus potentially rendering it a feasible option for more people. Additionally, on-the-spot mindfulness interventions would be employed precisely when needed, thus maximizing their impact at critical moments to a greater extent than, for example, a nighttime meditation class would, while otherwise minimizing the amount of time employees are taken away from work.

### 7.2. Theoretical implications

By explaining what an on-the-spot mindfulness intervention is and how it can be accomplished effectively, this research contributes to the literature on workplace interventions that improve the well-being or performance of individual employees (e.g., Bono, Glomb, Shen, Kim, & Koch, 2013; Grant et al., 2007; Wrzesniewski & Dutton, 2001) as well as the literature on mindfulness interventions in psychology (Creswell, 2017). One promising aspect of mindfulness as an on-the-spot intervention is that, if applied in appropriate situations, it has the potential to improve both well-being and performance.

The current research also contributes to the growing literature which predicts negative consequences of mindfulness (Dane, 2011). This article has explained why mindfulness can reduce motivation to achieve goals as well as impair negotiation performance in some situations, such as when angry Westerners use a physical awareness form of meditation. This article has also explored how present awareness can be problematic when people face intense negative stimuli in the present



yet they do not possess the nonjudgmental acceptance to be able to psychologically detach from that stimuli. Thus, different forms of meditation likely carry different costs and benefits. This article has also considered novel ways in which high trait mindfulness and the training programs that cultivate it could be counterproductive.

Alternatively, some have expressed skepticism as to whether achieving lasting trait mindfulness is even feasible. Dane and George (2014, p. 196) described the notion of substantively re-orienting one's temporal focus to the present moment as "a Sisyphean charge", suggesting that understanding the impact of future-oriented thoughts is a more realistic goal than eliminating them altogether. While this is a fair criticism, staying aware of the present moment during 8–15 min of physical awareness meditation, particularly with the help of a guided meditation recording, is probably much more feasible than doing so on a more lasting basis. While previous organizational research has made passing reference to state temporal focus (Foo, Uy, & Baron, 2009; Shipp et al., 2009), the current article is among the first to discuss how it can be cultivated and its importance in organizations.

### 7.3. Future directions

There are three mindfulness meditation intervention field experiments with employee samples in the literature, using mindfulness interventions that lasted between 10 days and 12 weeks. These mindfulness meditation interventions reduced perceived stress, improved sleep quality, and reduced heart rate variability (Wolever et al., 2012), reduced employee exhaustion and improved job satisfaction (Hülshager et al., 2013), and increased sleep quality and duration (Hülshager et al., 2015). However, the literature remains silent regarding shorter interventions that may produce equivalent benefits.

There are thus many possible effects of mindfulness in the workplace that have yet to be demonstrated. It would be helpful for scholars and practitioners to give more thought to how to best create reminders or technological aids which signal to employees when it is helpful to engage in an on-the-spot mindfulness intervention. The question of how much and which types of meditation cultivate nonjudgmental acceptance may also be worth investigating, including the question of whether a single session of physical awareness mindfulness meditation induces nonjudgmental acceptance.

The recent empirical literature on mindfulness in the psychology and management literatures includes few empirical papers which demonstrate a negative consequence of mindfulness meditation (Wilson, Mickes, Stolarz-Fantino, Evrard, & Fantino, 2015; but see Lloyd et al., 2016; see also Carrington, 1977; Stanley et al., 2006). There are also no intervention field studies in the literature that have shown the influence of mindfulness meditation on job performance, which scholars have argued is the most important dependent variable in organizational behavior (e.g., Bass, 1985). This article can hopefully help stimulate further empirical inquiry on this topic.

There are other lenses through which the phenomenon of mindfulness could be viewed. For example, rest and recovery in non-work hours has been found to be a key predictor of work engagement and proactive behavior (Sonnetag, 2003). Taking 8–15 min to meditate during a workday may serve as a smaller-scale period of rest and recovery and lead to similar benefits (Hülshager et al., 2014, 2015). Relatedly, mindfulness could serve as a means to either replenish cognitive resources after exhaustion (Inzlicht & Schmeichel, 2012) or transcend the notion that one's self-resources are limited (Kudesia, 2017). While negative affect and self-threat are key processes in this article because they are both proximal to mindfulness and likely to tax energy and self-resources, other processes that may underlie mindfulness effects could be investigated. New non-meditative forms of inducing mindfulness could also be investigated to use in settings or roles where physical awareness meditation would be impossible (e.g., truck drivers or assembly line workers who need to focus on a task without interruption).

It is also important for individuals to consider whether to stay in the jobs they currently have and deal with the issues there or not. Mindfulness meditation may have the potential to not only help individuals accept threatening or unjust events (Long & Christian, 2015) but also keep employees embedded in problematic work relationships (e.g., Sutton, 2007) or cultures for longer than they otherwise would be. Mindfulness meditation in such situations could thus be analogous to treating a symptom rather than its cause (Purser & Milillo, 2015). Employees' perceptions regarding whose interests their employers have in mind when encouraging mindfulness may also contribute to whether those employees use mindfulness as a tool.

It is possible that some people gain less benefit from meditation than others. For example, defensive pessimists disproportionately harness anxiety to motivate themselves (Grant, 2015; Norem & Cantor, 1986) to prepare for future challenges. On-the-spot mindfulness meditation may thus have more detrimental effects on their performance than for individuals who do not employ that strategy. There are also differences across national cultures in how people conceptualize time (Bluedorn, 2002) and the ways in which they are judgmental towards others (Kinias, Kim, Hafenbrack, & Lee, 2014). These factors may moderate the relationships between different forms of mindfulness and various outcomes.

## 8. Conclusion

Cultivating mindfulness on-the-spot in specific situations represents a potential means to cheaply and quickly harness the benefits of mindfulness when it would help while avoiding mindfulness when it would backfire. The time is ripe for business practitioners and scholars to consider this alternative manner in which to apply mindfulness in the workplace.

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