MINDFULNESS AS METACOGNITIVE PRACTICE

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The dangers of mindless behaviors remain better defined than their remedies. Even as mindfulness becomes increasingly prevalent, we lack clarity on three key questions: What is mindfulness? How does mindfulness training operate? And why might mindfulness matter for organizations? In this article I introduce a new conceptualization of mindfulness, which I call metacognitive practice. Metacognitive practice is so named because it blends insights from metacognition and practice theory to answer these three key questions. First, when seen as metacognitive practice, mindfulness is not a single mode of information processing to be applied in all situations. Instead, it is a metacognitive process by which people adjust their mode of information processing to their current situation. Second, this metacognitive process is made possible by three specific beliefs that supersede lay beliefs about human information processing. A core function of mindfulness training, thus, is to provide a context that cultivates these beliefs. Third, when these beliefs are put into practice, people gain greater agency in how they respond to situations. This matters for organizations, because as people interrelate their individual actions into a collective response, metacognitive practice can get embedded in amplifying processes that transform the organization—or in fragmentation processes that threaten it.

Mindfulness is currently in vogue. Over 13 percent of the working population has received some mindfulness training—and organizations from progressive Silicon Valley firms like Google to traditional corporate mainstays like General Mills train their employees by the thousands (Gelles, 2015; Olano et al., 2015). Scholars have responded to this trend with a notable stream of work on the topic (Reb & Atkins, 2015). Given how popular mindfulness is in organizational practice and scholarship, one might expect it to be well understood by now. But this is not the case. We lack answers to even the most basic questions: What is mindfulness? How does mindfulness

training operate? And why might it matter for organizations? These three questions cannot be answered independently. How we define and train mindfulness determines its impact on organizations. The challenge for organizational and management theory (OMT) scholars, thus, is not merely to better define mindfulness but to do so in a way that explains how mindfulness works in organizations. Otherwise, scholars may invest their time in a construct that lacks clarity, and practitioners may embrace mindfulness training without understanding its potential impact on their organizations.

Clarifying mindfulness and its impact on organizations requires shifting from a "borrowing" process to a "blending" process (Oswick, Fleming, & Hanlon, 2011). Borrowing takes existing definitions and applies them to organizations without changing them much—and is the dominant approach to mindfulness in OMT. But borrowing may be inappropriate for mindfulness, given its lack of a clear existing definition. For instance, mindfulness is often defined by what it is *not*: mindlessness. People are mindless when they rely primarily on established concepts to interpret situations, which makes them respond to situations without discerning their unique features (Ashforth & Fried, 1988). It is much harder to define mindfulness by what it *is*. To do so, OMT scholars have used two borrowed definitions. Both of these

prior definitions treat mindfulness as an information processing style, but they have critical differences. One entails inhibiting the use of concepts (Brown & Ryan, 2003; Kabat-Zinn, 1994), whereas the other entails refining concepts through use (Langer, 2014; Sternberg, 2000). Some see these definitions as inherently different (Good et al., 2016), whereas others see them as related (Sutcliffe, Vogus, & Dane, 2016). Part of the problem is that vague phrases like "be in the present moment" hint at similarities between these definitions but do not actually reconcile their differences. This lack of clarity should make us question whether mindfulness is just an umbrella construct for several different ways to remedy mindlessness (Lutz, Jha, Dunne, & Saron, 2015; Williams & Kabat-Zinn, 2011). If so, scholars have reason to be wary. Umbrella constructs can spark excitement in a topic, but this excitement often declines when differences under the umbrella cannot be reconciled (Hirsch & Levin, 1999).

In this article I therefore apply a blending process to mindfulness: identifying assumptions that make its prior definitions hard to reconcile and then replacing these assumptions with alternate assumptions (Oswick et al., 2011). These alternate assumptions come from research on metacognition and practice theory. *Metacognition* entails the processes by which people monitor and adjust their information processing (Fernandez-Duque, Baird, & Posner, 2000; Nelson, 1996). *Practice theory* offers a model of information processing that interfaces well with OMT theories of routines, resources, strategy, and more (Feldman & Orlikowski, 2011; Nicolini, 2012). This blending process results in a new conceptualization of mindfulness that reconciles its prior definitions into a coherent whole, rather than an umbrella construct—and better situates it in organizations. This new conceptualization rests on three principles. First, when people monitor the state of their information processing relative to their current situation, they gain agency to adjust what information they process and how they process it. Second, people's beliefs about information processing can enable or constrain their agency to make these adjustments. Third, when people adjust their information processing, they respond to situations with more flexibility.

Because this new conceptualization of mindfulness blends insights from metacognition and practice theory, I call it "metacognitive practice." Metacognitive practice provides much-needed answers to the key questions posed at the outset of this article: What is mindfulness? How does

mindfulness training operate? And why might it matter for organizations? When conceptualized as metacognitive practice, mindfulness is not a single style of information processing, as in prior definitions. Instead, mindfulness is the metacognitive process by which people adjust their mode of information processing based on the situation at hand. Mindfulness training operates by replacing constraining beliefs about information processing with enabling beliefs that increase people's agency to make these adjustments. And mindfulness matters for organizations because in organizations people must interrelate their actions to form a collective response to situations (Weick, 1979). Thus, if mindfulness helps people respond to situations with more flexibility, then this flexibility can be amplified through social interrelating to beneficially transform the organization— or it can fragment interrelating in ways that erode coordination and competencies.

As a roadmap, the structure of this article mirrors that of Figure 1. I first compare the model of information processing assumed in prior definitions of mindfulness with the alternate model from practice theory (the middle level). I then integrate insights related to metacognition, such as the three beliefs cultivated by mindfulness training (the upper level). Finally, I explore how a conceptualization of mindfulness blending practice theory and metacognition clarifies its impact on organizations (the lower level). I conclude with contributions for scholars and practitioners.

WHAT IS MINDFULNESS?

In this section I compare two models of information processing that could underpin mindfulness. One model is assumed in prior definitions, whereas the alternate model comes from practice theory. I suggest that the practice theory model best improves the clarity of mindfulness and its relation to organizations. This model also surfaces a key paradox of defining mindfulness as an information processing style, as prior definitions have done. This paradox, I suggest, can be overcome by treating mindfulness as a metacognitive process. These two alternate assumptions, blended together, form the basis for conceptualizing mindfulness as metacognitive practice.

The Information Processing Model Assumed in Prior Definitions of Mindfulness

The model assumed in prior definitions dates back at least to Descartes but took hold in
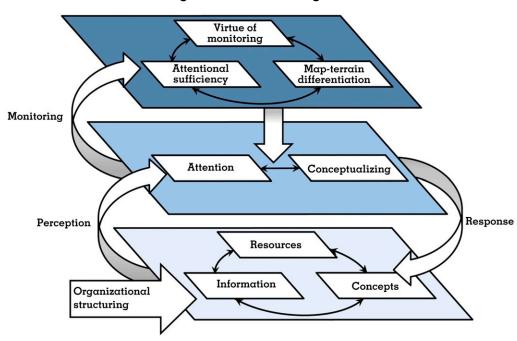
FIGURE 1
Metacognitive Practice in Organizations

Note: The bottom level depicts organizational situations, the middle level depicts information processing, and the top level depicts metacognitive processing.

psychology during the cognitive revolution (e.g., Broadbent, 1958). In this model information processing follows a linear sequence. In this sequence people first perceive a large amount of objective information in situations: color, volume, texture, direction, and so forth. The information at this point is still "raw": it is processed only to a superficial level. For levels of deeper processing, information must proceed further, to the conceptual end of the sequence. At this end of the sequence, people use concepts to more fully interpret what the situation means and how best to respond to it.

Mindlessness becomes a risk at the conceptual end of the sequence (Ashforth & Fried, 1988). Concepts help people interpret situations. But people can only interpret a small amount of the information they perceive. So, to use concepts, they must first use attention to filter out some of the information, while allowing the rest to proceed. It is therefore possible that the filtered-out information could have been important—and if people had allowed this information to proceed in the sequence, they may have responded differently to the situation. This linear sequence model is therefore all about trade-offs. People can perceive a large amount of information in situations,

but process it only superficially. Or they can conceptualize deeper interpretations of a situation, but using a smaller amount of the available information. However, they cannot do both at the same time.

To avoid mindlessness—that is, to be mindful—people must manage this trade-off between perception and concepts. How, exactly, should they manage it? This is where opinions differ. The two prior definitions of mindfulness both assume the linear sequence model. But they locate mindfulness at opposing ends of the sequence. In one, mindfulness expands the perceptual end of the sequence. In the other, mindfulness refines the conceptual end. Both are compelling, but they appear irreconcilable because of this model's assumed trade-off between perception and concepts.

Mindful attention. The first definition—*mindful attention*—emphasizes the early perceptual end of the linear sequence (Brown & Ryan, 2003; Kabat-Zinn, 1994). This definition originated in clinical settings for people with mental distress. Such people habitually conceptualize in self-limiting ways. For instance, if they fall short of a goal, their minds might start to wander down a dark path: conceptualizing themselves as worthless, their situation as bleak, and their best response as

giving up. Mindful attention limits these dangers by keeping information processing at the early perceptual end. It prolongs people's "initial contact with the world" before concepts take hold (Brown, Ryan, & Creswell, 2007: 212). Mindful attention thereby prevents people's minds from wandering away from situations to potentially negative conceptualizing (Schooler et al., 2011). It also prevents concepts like judgments or expectations from filtering out much information from situations. As a result, people will perceive a larger amount of information (Dane, 2011). Such information could disconfirm their concepts and cue new responses. In sum, mindful attention remedies mindlessness by limiting the overall influence of concepts on information processing.

Mindful conceptualizing. The second definition—*mindful conceptualizing*—emphasizes the later conceptual end of the linear sequence (Langer & Moldoveanu, 2000; Sternberg, 2000). This definition originated in the study of repetitive situations. When people repeat situations over and over, they form concepts. These concepts link typical features of the situations with a dominant response, which can prevent people from considering alternative ways of responding. For instance, people repeatedly receive requests for minor favors. Thus, they form a concept of how such requests typically proceed and how to handle them—which is why people often respond to such requests without discerning the unique features of a specific request (Langer, Blank, & Chanowitz, 1978). Mindful conceptualizing limits this risk by helping people refine their concepts. People refine their concepts when they continuously make distinctions between the current situation and other past situations (Langer, 2014). Making distinctions helps people notice the unique features of their current situation, which allows them to conceptualize alternatives to the dominant response. In sum, mindful conceptualizing remedies mindlessness by always refining established concepts.

The Alternate Information Processing Model from Practice Theory

The alternate model from practice theory draws on sources as diverse as phenomenology, cognitive science, and philosophy of mind (Dreyfus, 1995; Rowlands, 2010; Wheeler, 2005). It was introduced explicitly to solve issues with the linear sequence model. In this alternate model, perception and concepts are intertwined—and how

deeply they process situations depends on a person's level of expertise in the situation. For instance, consider chess (see Dreyfus & Dreyfus, 2005). Beginners need concepts like "a weakened king's side" to notice opportunities for attack. But with time they learn to perceive ever-subtler variations of these board positions and the best responses to them. Their concepts remain abstract, but as they gain expertise, these concepts are supplemented by enhanced perception. Experts can perceive 50,000 board positions and respond to them within 5 to 10 seconds without hurting their performance. They can respond so quickly because they are no longer using concepts. Perception lets them *see* how to respond to situations. It embodies expertise that is too subtle and situation specific to be captured by abstract concepts.

Thus, in this model perception and concepts are not opposed. They are intertwined in ways that depend on expertise. This model is called practice theory because people develop expertise by participating in practices like chess. But chess is not unique; salespeople, teachers, corporate lawyers, and university administrators all have expertise in their respective practices (see Chia & Holt, 2006; Sandberg & Tsoukas, 2011). In all these cases, any trade-off between perception and concepts seems to disappear. Perception and concepts can entail either superficial or deep levels of processing depending on one's level of expertise. Thus, practice theory does not make any claims about the sequence of information processing mechanisms. It instead discusses *modes of engagement*: the actual first-person experience of information processing in a specific situation. In particular, people shift between two modes of engagement based on their level of expertise.

Absorbed engagement. People mostly act within *absorbed engagement*—spontaneously drawing on their expertise to respond to situations without needing to use concepts (Chia & Holt, 2006). People in absorbed engagement have participated in a particular organizational practice long enough to embody the relevant expertise. As with the chess players, they simply see what must be done and how to do it. As a result, they experience situations as a holistic landscape: the information they perceive makes sense based on their previous actions, and they know how to use the available resources to keep continuing with their current actions. However, this absorbed engagement stops during moments known as *breakdowns* (Dreyfus, 1995).

Breakdowns are any "situation of non-obviousness" where people cannot continue acting on the basis of their existing expertise (Winograd & Flores, 2008: 165), such as when people cannot interpret the meaning of a situation, when they cannot locate a response, or when their actions produce unexpected outcomes.

Deliberative engagement. When faced with breakdowns, people switch to a deliberative mode of engagement. During *deliberative engagement,* people use concepts to diagnose why their expertise failed and how to repair it (Chia & Holt, 2006). Instead of being fully immersed in action, people must reflect on what to do. This fractures their experience of a holistic landscape: information, actions, and resources no longer flow together in seamless way. Instead, people in deliberative engagement have to single out particular pieces of information, reassess how their actions interrelate with the actions of others, and puzzle over the best way to use their resources. When breakdowns are mild, people can continue acting while they diagnose the problem (Yanow & Tsoukas, 2009). But severe breakdowns make any action impossible; people must repair their expertise through abstract conceptual reasoning before they can reenter absorbed engagement.

Comparing the Two Information Processing Models

These two models of information processing thus differ in a key respect: the linear sequence model entails a trade-off between perception and concepts, whereas the practice theory model portrays perception and concepts as intertwined. Either model could underpin mindfulness in OMT. But I suggest that the practice theory model is preferable for three key reasons: it is more accurate, it is more relevant to organizations, and it enables a more precise analysis of organizations.

Accuracy. The linear sequence model and its key trade-off between perception and concepts remain unsupported (Cohen, 2014). After decades of inconclusive evidence, debate on the topic stalled and has largely been abandoned. A linear sequence is too simplistic to accurately model the mechanisms of information processing (Allport, 1993). But a more accurate model would require a level of complexity beyond the scope of OMT, with multiple processors operating in parallel and recursively. Practice theory is therefore more promising for OMT. It accurately models the first-person experience of information processing, rather than inaccurately modeling its complex underlying mechanisms in terms of a trade-off between perception and concepts.

Relevance. By placing perception and concepts in opposition, the linear sequence model is hard to relate to organizations. It portrays perception in terms of objective raw information. But such information is rare in organizations; it is available mostly at the organization's "periphery," where customer interactions or frontline operations occur (Regnér, 2003). By the time it reaches managers, most information becomes alphanumeric, not perceptual. For instance, managers do not objectively perceive operational quality by watching the assembly line. Instead, they read internal reports that distill the perceptual information into a "sigma" scale that captures defects-per-million (Mezias & Starbuck, 2003). The linear sequence model thus portrays perception in a way that would limit the relevance of mindful attention in organizations (Table 1, rows 2–4).

Similar limits exist with concepts. Both prior definitions of mindfulness portray concepts in a way that is consistent with their origins but is less relevant to the roles that concepts play in organizations. Namely, mindful attention originated in clinical settings where concepts often cause mental distress. And mindful conceptualizing originated in repetitive settings where people are unlikely to respond to novel information unless they refine their concepts. Concepts can serve different roles in organizations. Unlike in clinical settings, concepts in organizations store valuable lessons from past experience. These lessons also help people interrelate their actions by providing a shared understanding of how their actions will fit together (Feldman & Pentland, 2003). And unlike in repetitive settings, novel information is plentiful in organizations. But novelty can reflect random noise, rather than something meaningful. Concepts therefore provide stability in organizations (Tsoukas & Chia, 2002). They prevent people from anchoring their responses on noise. Thus, if people limit the influence of concepts on information processing, or constantly refine their concepts, they might erode their organization's competencies—forsaking the lessons of experience while making it hard for people to interrelate their actions (Levinthal & Rerup, 2006; Table 1, row 6). Taken together, the linear sequence model and its use in prior mindfulness definitions have limited relevance to OMT.

TABLE 1
Reconciling Prior Mindfulness Definitions in Metacognitive Practice

Prior Definition		Relevance for OMT	Treatment in Metacognitive Practice
Mindful attention	+	Emphasizes how people dynamically regulate their attention over time, in contrast to more static "resource" accounts that imply scarcity (cf. Warm, Parasuraman, & Matthews, 2008)	Models how monitoring helps people notice and thus control mind wandering, especially when concepts are active (see Pathway 5)
	–	If mindfulness requires direct perception of objective information, this process is relevant mostly at the periphery of organizations	Models perception and concepts as intertwined, so mindfulness applies throughout the entire organization
	–	Without conceptual processing, it becomes implausibly hard to learn new tasks, filter out task-irrelevant perceptual information, or notice breakdowns—all of which require conceptual expectations and judgments	Models how concepts direct attention at low level of expertise, but how absorbed engagement guides attention at high levels (see Pathway 1) and how monitoring helps people notice breakdowns (see Pathway 4)
	–	If mindfulness is perceptual, it limits abilities to articulate expertise and coordinate across people (Weick & Sutcliffe, 2006: 521), which harms collective responses to breakdowns	Emphasizes how monitoring increases the ability to articulate otherwise implicit aspects of absorbed engagement, which improves coordination (see Pathway 3)
Mindful conceptualizing	+	Recognizes that concepts can be a key source of flexible responses—if people refine prior concepts to interpret their current situations	Models conceptualizing as an activity that occurs in the wake of mild breakdowns to help repair expertise and continue action
	–	Refining established concepts in light of current situations may erode competencies and cause people to anchor on random noise	Models conceptualizing as an activity that occurs in the wake of mild breakdowns, not as something that people should always do
	–	Conceptualizing singles out isolated parts of situations, which prevents people from entering a holistic landscape of absorbed engagement, thereby limiting their developing expertise	Emphasizes how deliberative engagement using concepts results from breakdowns and how absorbed engagement makes better use of existing expertise in a holistic landscape
	–	Distinction making can refine concepts but may lack the "computational power" to doubt established concepts (Chi & Ohlsson, 2005)	Models how distinction making fixes minor breakdowns by refining conceptualizing as people act on breakdowns (see Pathway 5)
Mindful metacognition	+	Identifies an important and understudied role of monitoring that helps people detach from their conceptual interpretations of situations	Incorporates this role in the map-terrain differentiation belief, which is most needed during severe breakdowns (see Pathway 6)
	–	Does not model the metacognitive adjusting function or any metacognitive beliefs, which paints an incomplete picture of metacognition	Introduces three key metacognitive beliefs and models how they influence both the monitoring and the adjusting functions
	–	Focuses on personal outcomes, downplaying the promise and dangers alike of doubting established concepts in social interactions	Models how doubt produces responses that transform situations and how this can either fragment or support heedful interrelating

Note: The + and – signs indicate whether the feature of a definition is relevant to OMT or not. Features with a negative sign contain assumptions that are incompatible with organizational contexts, whereas features with a positive sign provide insights into core OMT phenomena. The six pathways are summarized in Table 2.

Precision. Practice theory, in contrast, is directly relevant to OMT; the rhythm and pacing as people shift between the two modes of engagement are integral to how they organize (Sandberg & Tsoukas, 2011). Consider operators of a circuit board assembly machine who faced a breakdown (see Tyre & von Hippel, 1997). Drawing on their expertise, they perceived that the machine was placing components in wrong locations on the circuit board and knew the consequences. But they could not diagnose the cause—either among themselves or in conversations with off-site engineers. Yet, when an engineer arrived, he instantly perceived the cause: loose screws on the camera that guides placement.

This example shows the precision of practice theory. Expertise in organizational practices guided what information various people perceived: operators looked at the machine output, while the engineer looked at the machine itself. It further shows how people in different groups must be able to articulate the conceptual logic of their absorbed engagement to resolve breakdowns. Rather than perception and concepts existing in a trade-off, the two are intertwined. People perceive by building on conceptual understandings—and specific situations determine whether they will use concepts or articulate concepts to others. Even in this example, where perception of objective raw information was possible, the linear sequence shed little light. As such, of the two models, practice theory enables a far more precise analysis of organizations.

Blending Mindfulness, Practice Theory, and Metacognition

The value of the practice theory model, however, becomes most evident when it is blended with mindfulness. A key feature of this model in the blending process is its emphasis on how people vary their information processing based on their situation. This feature provides three benefits: it helps integrate the two prior definitions of mindfulness, it identifies their downsides, and it surfaces an important paradox at the heart of these prior definitions. This paradox motivates the need to view mindfulness in terms of metacognition rather than information processing.

Integration. OMT scholars remain conflicted about how to reconcile mindful attention and mindful conceptualizing (cf. Good et al., 2016; Sutcliffe et al., 2016). Practice theory, however, can reconcile these prior definitions as part of a single integrated process. For instance, practice theory describes two modes of engagement: absorbed engagement and deliberative engagement. The phenomenology of mindful attention, where people process situations in a more direct and perceptual manner, is largely indistinguishable from that of absorbed engagement. And the phenomenology of mindful conceptualizing, where people process situations by refining their concepts, entails a form of deliberative engagement. Practice theory, however, does not merely describe the phenomenology of these prior definitions but integrates them into a single process. It suggests that people should not try to process situations using perception unless their perception is enhanced by expertise. And they should not try to reconceptualize situations unless their expertise breaks down. Thus, the information processing styles entailed by prior definitions of mindfulness need not be treated as conflicting remedies or placed under an umbrella construct. They are part of a single process and become more or less useful based on the situation at hand.

Downsides. Indeed, a key benefit of the practice theory model is that it helps identify the situations in which these information processing styles will produce downsides (see Table 1). For instance, mindful attention emphasizes perception, rather than using concepts as a filter. It may therefore limit people's ability to perform tasks in situations where a lot of irrelevant information exists, since they would pay attention to even "trivial" information instead of filtering it out (Dane, 2011: 1005). Similarly, consider mindful conceptualizing. As the chess example showed, people must leave concepts behind to attain expertise rather than mere competence. The 50,000 board positions that experts can identify are embodied in their perception, not stored in concepts. Thus, continual distinction making will prevent expertise from developing (Dreyfus & Dreyfus, 2005).

Agency paradox. These downsides surface a crucial paradox at the definitional heart of mindfulness. The paradox is that mindfulness is discussed in terms of the agency to change one's responses to situations—but mindfulness has been defined as an information processing style, which fails to model the processes that are most essential to this agency. By definition, agency requires that people adjust their information

processing to the situation at hand (Bandura, 2006; Emirbayer & Mische, 1998). Agency therefore cannot be tied to any single style of information processing, whether that style favors perception (as with mindful attention) or concepts (as with mindful conceptualizing). Indeed, if mindfulness is defined as a style of information processing, then people in a "mindful" state can paradoxically be mindless. A person could be in a "mindful" state by favoring perception or concepts—even in a situation where that information processing style produces downsides. According to the definition, they would be mindful. Yet, in reality, the person using that "mindful" style of information processing would either have to be oblivious to the downsides of that style or lack the ability to adjust their information processing style to better suit their situation. Defining mindfulness in this way thus seems to erase its very essence.

Metacognition. The mark of mindfulness, therefore, is not what information processing style people use but how they adjust their information processing to the situation at hand. To resolve the agency paradox, mindfulness cannot be defined as an information processing style. Rather, it must be defined in terms of the underlying processes by which people determine their information processing style in a situation. These processes are metacognitive in nature. Indeed, metacognition originated in educational psychology for precisely this purpose: to model how students monitor their comprehension levels as they read and, thus, adjust their reading strategies (Flavell, 1979).

In the metacognition framework, people respond to situations based on the interplay of a lower-order information processing level and a higher-order metacognitive level (see Figure 1; Nelson, 1996). At the information processing level, people perceive, conceptualize, and respond to situations. The higher metacognitive level entails three processes (Fernandez-Duque et al., 2000; Flavell, 1979). First, people can *monitor* the state of their information processing in real time, as they perceive, conceptualize, and respond to current situations. Monitoring is therefore responsible for the ongoing sense people feel for whether or not they are in a familiar situation, have relevant expertise, are successfully enacting their intended responses, and so forth. Second, based on monitoring, metacognition can *adjust* information processing. For instance, adjustments may filter out irrelevant perceptual information, replace established interpretations, or select new responses to situations. Third, people monitor and adjust the state of their information processing in light of their metacognitive beliefs. These *beliefs* concern how information processing works, what strategies best regulate information processing, and which responses should be utilized.

Metacognition helps resolve the agency paradox by modeling how people can adjust their information processing based on their current situation (Pressley, Borkowski, & Schneider, 1987). Indeed, metacognition may even entail "the most distinctly human" aspect of agency, because without its processes of monitoring, adjusting, and beliefs, people cannot respond to their situations with flexibility (Bandura, 2006: 165). However, metacognition only provides a framework that specifies *which* processes matter. It cannot alone explain *how* these processes should be put into practice. Mindfulness has much to offer here. Practice theory scholars have long noted that some people can better adjust their mode of engagement to their situations, but they have not identified why (Louis & Sutton, 1991; Yanow, 2015). Mindfulness offers unique value because a deeper examination of mindfulness training can help identify this missing element.

HOW DOES MINDFULNESS RELATE TO TRAINING?

In the previous section I argued that mindfulness is not an information processing style. Rather, it is a metacognitive process, one that informs how people adjust their information processing to their current situation. I also argued that a deeper examination of mindfulness training is needed to understand how people actually put metacognition into practice. In this section I therefore examine mindfulness training in traditional and therapy contexts. In doing so I identify the crucial but undertheorized role of the metacognitive beliefs that shape how people monitor and adjust information processing. I thus elaborate three beliefs of special importance.

Examining Mindfulness Training

A deeper examination of mindfulness training has three key benefits. First, it helps address prevalent misconceptions about mindfulness training in the current literature. Second, it better

contextualizes traditional ideas about the role of metacognition in training. Third, it surfaces a third definition of mindfulness that is known in therapy trainings but seldom addressed in OMT.

Misconceptions. At least some of the appeal of mindfulness stems from its presumed basis in Buddhist meditation trainings. But it is no easy matter to extract scholarly insights from these culturally and historically situated trainings. Indeed, central ideas in the mindfulness literature serve as rough approximations of the source material (Grossman, 2011). Included among these is the idea that mindfulness is best defined as an information processing style. This idea most likely stems from a popular misreading of an introductory lesson by the monk Nyanaponika Thera (1973), when it was published in book form (Sharf, 2014). Despite Thera's protestations, this idea proliferated into the mindfulness literature—including OMT (see Purser & Milillo, 2015).

Tradition. In contrast to the current literature, which emphasizes information processing, traditional approaches more strongly emphasize metacognition. The role of metacognition in mindfulness training is perhaps most clearly described within the Tibetan zhäntong tradition (Hookham, 1991; Stearns, 2010). This tradition argues that people can keep monitoring as their information processing shifts between absorbed and deliberative modes of engagement (Kudesia & Nyima, 2015). Mindfulness training serves to help people maintain monitoring with stability in order to realize the "three natures" of first-person experience (Garfield, 2002). Namely, when people keep monitoring, they step back mentally and relate to the contents of their information processing with detachment. As a result, they realize that their concepts have no basis in reality: concepts are tools of the imagination used to interpret events. This is known as the "imaginary nature." People also realize that their perceptions do have a basis in reality but are dependent on causes and conditions: the way a person perceives a situation depends on their past experiences and their current intentions. This is the "dependent nature." In Buddhism, people who realize this nature of information processing gain agency to respond to situations in an enlightened manner. They can better detach from self-centered thoughts and feelings and respond to situations in the interest of a broader, system-level perspective. This is known as realizing the "perfected nature."

Therapy. These traditional Buddhist ideas about monitoring have recently been put to use in therapy contexts. In fact, in the third definition—*mindful metacognition*—mindfulness is this very process of stepping back and monitoring concepts with detachment (e.g., Bernstein et al., 2015; Shapiro, Carlson, Astin, & Freedman, 2006; Teasdale et al., 2002; Wells, 2005). For decades therapists tried to help their patients change specific negative concepts. Now, therapists inspired by this third definition use mindfulness training to change how their patients *relate* to concepts: recognizing that concepts are tools of the imagination and therefore have no basis in reality (Hayes, Villatte, Levin, & Hildebrandt, 2011). This recognition helps free patients from their negative concepts. It could have similar importance within OMT but has received little study to date.

Three Beliefs Entailed in Metacognitive Practice

The most important benefit of examining mindfulness training, however, is the emphasis it brings to beliefs, which remain undertheorized (Teasdale, 1999). Both traditional and therapy contexts imply that beliefs could offer new insights into how mindfulness training works. The current explanation is that mindfulness training increases the capacity of neural regions that help people monitor and adjust information processing (Chiesa, Calati, & Serretti, 2011; Verhaeghen, 2016). This explanation is likely true, especially for long-term training (Lazar et al., 2005). But the shorter-term training in organizations may not primarily change people's neural capacity to monitor or adjust. Rather, it may change beliefs that shape *how* people monitor or adjust.

Consider a common mindfulness training exercise. In this exercise participants hold an ice cube in their hands as it melts. Initial reactions are often negative: the cold feels unpleasant and the exercise seems pointless. Yet when trainers instruct participants to monitor their information processing, the participants' experience changes. They often realize how the unpleasant feeling of the cold ice leads them to conceptualize the entire exercise as pointless, which then generates anger at the trainer for wasting their time and even diminishes their

opinion of other participants who take the pointless exercise so seriously. Without changing people's neural capacity, this exercise changes their beliefs about information processing; they see the interdependence among what information they pay attention to, how they monitor their information processing, and how they relate to their concepts. Such changes in beliefs form a crucial link: explaining how exercises during mindfulness training can shape information processing during everyday situations (see Table 2).

Three beliefs in particular seem especially integral to mindfulness training.

Attentional sufficiency. First, attentional sufficiency is the belief that attention is not depleted by use. It challenges the common constraining belief that paying attention now makes one less able to pay attention later. To be sure, people can only attend to a limited number of things at any *one point* in time. But there is little evidence showing that people necessarily must lose their ability to sustain attention *over time* (Bruya, 2010; Kurzban, Duckworth, Kable, & Myers, 2013). During training, people sustain attention for prolonged periods of time to phenomena like ice melting in their hand or the feeling of breathing. Training may reshape beliefs that attention is a scarce resource that

TABLE 2
Metacognitive Practice and Engagement Modes

Mode Phenomenology	Characteristic Property	Metacognitive Practice Pathway	Influence on Organizations
Absorbed engagement • More perceptual • Holistic landscape • Embodied knowing • Private experience	Without past experiences and expert judgment, people lack a basis to decide what perceptual information to process or filter out in a particular situation	1. Greater ability to use concepts like goals and step-by-step procedures to filter irrelevant perceptual information Key belief: attentional sufficiency	Reduces the time needed for skill acquisition at the early stages—and improves the ability to follow through on plans (Kanfer & Ackerman, 1989)
	Over time, the many steps in tasks can become excessively compiled and fuse together, making absorbed engagement rigid and, thus, subject to breakdowns	2. Greater flexibility within absorbed engagement—because monitoring inhibits excessive levels of compilation Key belief: virtue of monitoring	Facilitates improvisation and more granular adjustments to routines (Cohen & Bacdayan, 1994; Levinthal & Rerup, 2006; Moorman & Miner, 1998)
	Embodied, situation-specific knowledge and feelings are difficult to articulate, especially to others, which is precisely what is needed during breakdowns	3. Greater ability to articulate aspects of absorbed engagement like procedures, intuitions, emotions, and assumptions Key belief: virtue of monitoring	Helps people share their expertise with others (Dreyfus & Dreyfus, 2005) and better interrelate their actions (Weick & Roberts, 1993) to respond collectively
Deliberative engagement • More conceptual • Isolated parts • Verbal knowing • Potentially social	Breakdowns may not be noticed early when they are most easily controllable, prompting ineffective switching from absorbed to deliberative engagement	4. Greater ability to notice subtle affective sensations of "conflict" helps better switch modes of engagement Key belief: virtue of monitoring	Facilitates continuous learning over time (Yanow, 2015) and helps people respond to situations that require deliberation (Louis & Sutton, 1991)
	Conceptualizing can drift into task-irrelevant thoughts or into ruminating about the task, both of which withdraw deliberation from the situation at hand	5. Greater ability to self-regulate attention and direct conceptualizing toward relevant information Key belief: attentional sufficiency	Improves task performance when tasks are not especially engaging (Beal, Weiss, Barros, & MacDermid, 2005) and aids recovery from minor breakdowns (Yanow & Tsoukas, 2009)
	Deliberative processes like distinction making may lack the computational power to transcend established concepts that constrain responses to situations	6. Greater ability to doubt established concepts, rather than refining them through awareness of assumptions Key belief: map-terrain differentiation	Cultivates doubt, which poses dangers for social interrelating, but also helps fix severe breakdowns in organizations (Nystrom & Starbuck, 1984)

people literally "pay" to use. Attention is sufficient, not scarce. This enabling belief will make people more willing to sustain attention during their everyday situations (Jensen, Vangkilde, Frokjaer, & Hasselbalch, 2012).

Virtue of monitoring. Second, virtue of monitoring is the belief that monitoring is valuable and appropriate. It entails a greater receptivity to internal experiences—including potentially unpleasant experiences—rather than the more common, but constraining, tactic of avoiding them (Hayes et al., 2011). As the ice exercise showed, in training, people learn how simply monitoring information processing can help them sustain attention to situations and interpret their situations in new ways. This enabling belief makes people more likely to monitor on an ongoing basis.

Map-terrain differentiation. Third, map-terrain differentiation is the belief that one's "map" of situations does not necessarily reflect the "terrain" on which they act. During training, people engage monitoring to step back and detach from their processing of situations. This detached monitoring helps them replace a common constraining belief that their experience of a situation necessarily reflects objective reality (Shapiro et al., 2006). Instead, they recognize how their experience may not have a basis in reality. This enabling belief helps them embrace doubt about their expertise when faced with breakdowns in their everyday situations (Kitchner, 1983).

Taken together, these beliefs foreground an incredibly generative insight: information processing bends around our understanding of it. Mindfulness is not merely a capacity to monitor and adjust information processing. It is a specific way of doing so, as informed by unique beliefs. Mindfulness training thus operates by providing a context in which people can identify and challenge their constraining beliefs about information processing—and replace them with more enabling beliefs. These new enabling beliefs can then be applied outside training contexts to help people adjust their information processing as they respond to their everyday situations.

WHY DOES MINDFULNESS MATTER IN ORGANIZATIONS?

In the previous section I argued that mindfulness is a metacognitive process. During this process, people draw on three beliefs to monitor their information processing and adjust it to their current situation. In this section I make this process more concrete. To do so I explore six pathways by which it enables more flexible responses to organizational situations. I then foreground a tension between such flexibility and organizational structuring. This tension can resolve into amplifying processes that transform the organization—or into fragmentation processes that threaten it.

Six Pathways of Metacognitive Practice in Organizations

When seen as metacognitive practice, mindfulness entails the coming together of expertise embedded in perception and concepts, enabling beliefs about information processing, and the crucial human ability to step back and monitor one's mental activity—all of which jointly shape how people engage with situations. Through metacognitive practice, monitoring helps people increase the robustness of both absorbed and deliberative modes of engagement and helps them more flexibly adjust their mode of engagement to the situation at hand. As such, metacognitive practice produces different consequences in different organizational situations. These different consequences can be considered in light of six specific pathways, as summarized in Table 2. Each of these six pathways reflects a different level of expertise that a person can have in an organizational situation. Considering these six pathways helps reveal why mindfulness cannot entail a single mode of information processing that a person can apply in all situations. Rather, mindfulness entails the ongoing adjustment of a person's mode of engagement to their current situation—adjustments that are made possible by the metacognitive process of monitoring.

Pathway 1: Gaining expertise. When people lack expertise, they must rely on the expertise of others. This expertise is often stored in concepts. Concepts incorporate the collective expertise of many people in organizations in a general way that can be shared with others (Tsoukas & Chia, 2002). Concepts can include chessboard positions or step-by-step procedures for circuit board assembly. Monitoring helps people use concepts to filter out information defined as irrelevant (Fernandez-Duque et al., 2000). Instead of processing all the available information "without judgment," as some mindfulness scholars argue, people at this stage *must* use organizational

concepts to direct their information processing. Otherwise, they cannot get absorbed in organizational situations.

Pathway 2: Retaining expertise. As people gain expertise, their conceptual knowledge starts to get "compiled" (Anderson, 1982). During compilation, the many smaller steps of a task fuse together into fewer bigger steps. Compilation makes it easier to perform tasks but can cause problems if left unchecked. For instance, people become less able to adjust their responses and less able to discover new responses when their compiled response fails. Unless a task is very repetitive (Table 3, row 1), excessive compilation can make absorbed engagement inflexible and more likely to result in breakdowns. The dangers of compilation expand in organizations because people need to interrelate their actions through routines. And routines are stored in the same type of memory that is affected by compilation (procedural memory; Cohen & Bacdayan, 1994). Yet continued monitoring may reduce the dangers of excessive compilation. This is why people who receive mindfulness training show more ability to adjust their response steps (Greenberg, Reiner, & Meiran, 2012). They retain their expertise in a manner that allows for more flexible responses.

Pathway 3: Articulating expertise. During compilation, people rely less on conceptual knowledge. As a result, they can lose their ability to articulate what they are doing or why they are doing it (Anderson, 1982). This traps expertise in individuals (Dreyfus & Dreyfus, 2005), and without the ability to articulate expertise, people find it hard to fix breakdowns. Consider NASA's Columbia shuttle disaster. An unexpected problem arose during launch, but it was never solved because people could not articulate the logic of their absorbed engagement (Dunbar & Garud, 2009). In contrast, if people articulate the steps in their tasks (Hutchins, 1991) or the logic of their prior spontaneous responses (Salvato, 2009), they form a shared basis to interrelate their actions. By reducing compilation, monitoring may help people better articulate their absorbed engagement. This includes not only cognitive aspects like its task steps or logic but also its emotional aspects (Carlson, 2013). For instance, monitoring helps people step back and view their emotions from a detached perspective, where emotions become easier to articulate (Farb et al., 2010; Heeren, Van Broeck, & Philippot, 2009). Given that emotions imply interpretations of

situations (Bartel & Saavedra, 2000), articulating both emotions and concepts can help people fix breakdowns.

Pathway 4: Noticing breakdowns. Breakdowns activate deliberative processes like search, problem solving, and sensemaking (March, 1994; Smith, 1988; Weick, 1979). But how do people notice them? Breakdowns do not exist *out there* objectively in the world. Rather, they come into existence subjectively, based on a person's expertise in a given situation. What the circuit board operators experienced as a severe breakdown the engineer experienced as a minor issue with a loose screw. Monitoring helps people notice the subtle sensations of "conflict" that often precede breakdowns: when they cannot identify a situation, locate a response, or face unexpected results from actions (Botvinick, Braver, Barch, Carter, & Cohen, 2001; Saunders, Rodrigo, & Inzlicht, 2016). By better noticing potential breakdowns, people can respond before they become severe.

Pathway 5: Directing concepts. In absorbed engagement, people's expertise spontaneously imbues a situation with meaning. This makes it easy to pay attention. For instance, chess experts see more happening on the chessboard, so they can more easily attend to the gameplay. But in deliberative engagement, people must use concepts, which often wander from the relevant information (Schooler et al., 2011). Monitoring helps people notice when their minds wander and bring conceptualizing back to the situation (Malinowski, 2013). It can therefore help people perform tasks that are not inherently interesting, thus prompting mind wandering (Beal, Weiss, Barros, & MacDermid, 2005). It also helps repair minor breakdowns. To repair minor breakdowns, people have to conceptualize. But they must direct this conceptualizing at information that is relevant to the breakdown—all while they try to fix it through action (Yanow & Tsoukas, 2009). Monitoring helps people direct their conceptualizing while they act (Fernandez-Duque et al., 2000). In so doing, it may help people consider alternatives to their current response (Langer, 2014). If one of these alternatives works, people can reenter absorbed engagement and can do so with refined expertise going forward.

Pathway 6: Doubting concepts. In severe breakdowns, however, action stops altogether. People are left either to "stare helplessly" at the situation or to change how they use concepts (Dreyfus, 1995: 79). Severe breakdowns cannot be

TABLE 3
Identifying and Repairing Fragmented Metacognitive Practice

Stage	Idealized Process	Fragmentation Risk	Potential Remedies
Personal practice	Mindfulness limits compilation, thus making absorbed engagement flexible	Highly repetitive tasks that are learned implicitly require high compilation levels	• Avoid encouraging mindfulness for these types of tasks (e.g., Lunn, 1948)
	Tactics like regularly changing forms or scheduling breaks can routinize mindfulness (Elsbach & Hargadon, 2006; Levinthal & Rerup, 2006)	Outcomes from such tactics may depend on metacognitive beliefs; employees who believe attention is sufficient may value these tactics, but they may be frustrating to others	• Attract, select, and retain employees with existing interest in mindfulness • Offer free mindfulness training • Leaders should role model mindfulness
		Tactics are context specific; for instance, changing forms adds helpful novelty to more automated jobs (Bainbridge, 1983) but will most likely hurt in more complex jobs	• Ignore easy one-size-fits-all solutions • Design custom tactics by considering how the specific nature of the work tasks and the relevant cognitive processes interact
Heedful interrelating	Mindfulness can be facilitated by heedful interrelating that articulates and doubts established concepts	Heterogeneity in map-terrain differentiation beliefs within a team could produce conflict; for instance, if some members challenge the concepts that other members closely identify with, those being challenged may lose their "ontological security" (Giddens, 1984: xxiii)	• Compose groups with less deep-level heterogeneity in metacognitive beliefs • Encourage team members to articulate absorbed engagement as they interrelate their actions (see Pathway 3) and make the environment psychologically safe to do so
	Mindfulness enables groups to continuously adjust their routines	It may be harder to doubt concepts than to reduce compilation, and groups may thus adjust the steps of routines but not their concept of the routine; such "practical drift" erodes past learning and coordination (cf. Snook, 2000)	• Groups should consider how the nature of their environment and the past experience of their members influence the deliberative and absorbed aspects of their performance (cf. Miller, Pentland, & Choi, 2012)
Organizational transformation	Mindfulness helps articulate expertise and doubt concepts in ways that will amplify through heedful interrelating to transform the broader organization	Less mindful managers may unnecessarily hamper transformations from amplifying, thereby frustrating employee voice and increasing employees' turnover intentions	• Managers should model metacognitive beliefs, shape relevant job characteristics, and encourage voice that facilitates change (cf. Vogus & Sutcliffe, 2007, 2012)
		Groups may transform collective responses in ways that make sense for their situations but clash with the logic or priorities of other groups, which leads to coordination problems or incoherence in emergent strategies	• Appropriately structure information flows to triangulate shared attention to emerging issues (e.g., Dunbar & Garud, 2009; Leveson, Dulac, Marais, & Carroll, 2009; Levinthal & March, 1993; Rerup, 2009)

fixed by refining concepts. Rather, severe breakdowns require people to doubt their concepts (Nystrom & Starbuck, 1984). Doubt helps people go beyond established concepts to discover a fundamentally new way to interpret a breakdown (Locke, Golden-Biddle, & Feldman, 2008). It does so by giving people a chance to explore their unstated assumptions not only about solutions to the breakdown but about the nature of the problem itself. This ability is important, since some 75 percent of strategic problems are first formulated in ways that must be later doubted (Lyles, 1981). But doubt

is difficult, partly because people have more practice refining concepts than doubting them (Chi & Ohlsson, 2005) and partly because embracing doubt can be anxiety producing (Stein, 2004). To this end, monitoring can help people not only detach from unhelpful concepts (Kudesia, Baer, & Elfenbein, 2015) but also from the accompanying anxiety.

Situating Metacognitive Practice Within Organizational Structure

These pathways help situate metacognitive practice in organizations. But they represent only half of the picture. A tension exists between how people enacting metacognitive practice respond to situations and how organizations structure situations. Organizations structure situations by directing information to people based on their expertise, providing established concepts to help people interpret situations, and allocating resources to help people interrelate their responses to situations (Ocasio, 1997; Ranson, Hinings, & Greenwood, 1980). Metacognitive practice entails agency that helps people respond to situations more flexibly. Such flexibility could transform the organization through amplifying processes—or could fragment it in hazardous ways (see Table 3). Which one occurs depends on how this tension is managed (cf. Emirbayer & Mische, 1998).

Fragmentation risks. This potential for transformation or fragmentation is most evident when people must interrelate their individual actions into a collective response. For instance, product engineers may receive information flows about an unexpectedly high number of broken products returned under warranty. But useful user feedback information may remain cloistered within the sales department. Thus, even if the engineers enact metacognitive practice, they do so in light of poorly structured information flows. This makes them less likely to diagnose the cause of the product breakage (Table 3, row 7). They might accept an established concept like "structural integrity" as a diagnosis, which would cue a related routine: product reengineering. Yet what if an engineer gains access to customer information and enacts metacognitive practice to doubt the structural integrity diagnosis? The engineer may introduce a new concept of "product aesthetics"— the product breaks not because it is weakly designed but because customers find it uninspired and, thus, take poor care of it (Kudesia, 2015). This

new concept would cue a different routine related to product redesign: making the product beautiful rather than making it stronger.

Even here metacognitive practice could transform the situation—or it could fragment social interrelating. The transformational power of the "product aesthetics" concept depends largely on whether the other engineers are receptive to it or not. Given how harshly people often respond to others who doubt their organizational concepts (e.g., Van Maanen, 1978), there is little guarantee that this insight will bring about a collective response. Thus, if metacognitive practice facilitates doubt, it may be best that people who must interrelate all jointly enact metacognitive practice. Otherwise, one person may seize upon doubt, seeking to transform situations, while others seek to reproduce established responses, likely leading to interpersonal conflict (Table 3, row 4). Yet such fragmentation risks should not overshadow the potential for transformation of situations.

Heedful interrelating. To that end, consider engineers who jointly enact metacognitive practice and embrace their doubt. They do not merely swap concepts from "structural integrity" to "product aesthetics." Because they interpret their situation in new ways, new routines and resources become available for use (Feldman, 2004). And when they use these new routines and resources, their situation transforms (Sewell, 1992). Interpreting the product breakage as an aesthetics problem, for instance, could prompt the engineers to invite end users into focus groups. This new routine might cultivate closer relationships with the end users, encouraging them to share new information about their product use. Such new information, in turn, may serve as a resource that builds consensus among the engineers about the best collective response. This consensus will not only repair the current breakdown but can help the engineers interrelate in a manner that is more robust to future breakdowns. Other shared bases for interrelating that use coercion, convention, or compromise quickly fall apart when situations change (Follett, 1924). In this way, metacognitive practice can embed itself into the very processes by which people organize into collectives. When this happens, people generate high-quality "heedful" interrelating. In heedful interrelating, people act in ways that build a collective capacity to jointly respond to breakdowns (Weick & Roberts, 1993). People interrelate heedfully when they articulate their

absorbed engagement into the collective and adjust their responses to situations on the basis of this shared understanding.

Amplification. When the engineers jointly enact metacognitive practice as they interrelate, they cultivate a second effect besides heedful interrelating. This second effect is akin to a "hall of mirrors": their internal metacognitive practice is mirrored in their external interrelating (Schön, 1987). One person's willingness to offer their attention, be receptive to their internal experiences, and detach from their maps invites the other to do the same. This helps them see how the quality of their interrelating with one another reflects the quality of their practice with themselves. For instance, when switching concepts, the engineers may notice how doubting their maps need not produce anxiety but can actually make their work more interesting and, thus, easier to pay attention to. These are the three core beliefs that support metacognitive practice. People can therefore help each other enact metacognitive practice as they interrelate. As a result, an amplifying effect emerges: people who jointly enact metacognitive practice not only transform their situations but also strengthen the very metacognitive practice that enables them to transform situations. If metacognitive practice indeed amplifies in this manner as people interrelate, it seems to offer unique insight into how people transform their organizations and stay resilient to breakdowns.

DISCUSSION

Mindfulness is not an easy concept to pin down. For this reason, scholars and practitioners have accepted notions of "being in the present moment" with an attitude of "nonjudgment." But mindfulness is becoming far too prevalent to define so loosely. Metacognitive practice is one attempt to clarify mindfulness. To be sure, metacognitive practice entails major changes in how mindfulness is conceptualized in organizations. But these changes are intended to redeem the essence of the prior definitions, not to erase them. Metacognitive practice takes us deeper into "the present moment" to model first-person experience as it expands into a holistic landscape with expertise and fractures into isolated parts during breakdowns. It takes us beyond "nonjudgment" to model how past judgments produce new situations— and how new situations can help people refine or doubt these past judgments. And it takes us outside the confines of the individual to model how mindfulness becomes embedded in patterns of social interrelating.

Contributions

Scholars and practitioners of mindfulness in organizations have historically emphasized its effects on well-being (Kucinskas, 2014). This emphasis on well-being, however, draws attention away from other, potentially negative consequences of mindfulness (Hafenbrack, 2017; Purser & Milillo, 2015). It also ignores the possibility that mindfulness changes how people respond to situations as collectives, rather than as individuals. The blending process used to conceptualize mindfulness as metacognitive practice therefore does not merely reconcile prior definitions (Table 1). Instead, it builds out these missing areas of how mindfulness changes a broader range of behaviors (Table 2) and when these changes will positively or negatively impact organizations (Table 3). In doing so it can motivate new scholarly research and inform best practices for practitioner trainings.

In particular, scholars have identified several psychological processes by which individuals keep organizations resilient (Helfat & Peteraf, 2015; Teece, 2007), but they have not identified ways to help people better use these processes. Metacognition has been noted as one such way, but it remains underdeveloped (Hodgkinson & Healey, 2011). As a result, our view of individuals can overemphasize limits in psychological processes that constrain agency (Kilduff, 1993; Porac & Tschang, 2013). Metacognitive practice balances out this view by modeling how people exert agency in organizational situations. And it also traces this agency from individuals to collectives. As such, metacognitive practice helps clarify an idea that appeals to scholars and practitioners alike: when people respond to situations as collectives, their response can contain a greater intelligence than any one person could possess—and mindfulness may be integral to this collective intelligence (e.g., Eggers & Kaplan, 2013; Salvato & Rerup, 2011; Woolley, 2011).

Conclusion

In closing, our understanding of mindfulness has not kept pace with its growing prevalence in organizations. In this article I offer a new

conceptualization of mindfulness as meta-cognitive practice. It can help scholars and practitioners understand not only what mindfulness is but also how mindfulness works in organizations. In doing so I hope to deepen our appreciation of the ways that people exert agency in their everyday situations—and the conditions under which these exertions of agency can transform organizations and cultivate their capacity for resilience.

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