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## Mindfulness and the Quality of Organizational Attention

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**M**indfulness as depicted by Levinthal and Rerup (2006) involves encoding ambiguous outcomes in ways that influence learning, and encoding stimuli in ways that match context with a repertoire of routines. We add to Levinthal and Rerup's conjectures by examining Western and Eastern versions of mindfulness and how they function as a process of knowing an object. In our expanded view, encoding becomes less central. What becomes more central are activities such as altering the codes, differentiating the codes, introspecting the coding process itself, and, most of all, reducing the overall dependence on coding and codes. Consequently, we shift from Levinthal and Rerup's contrast between mindful and less mindful to a contrast between conceptual and less conceptual. When people move away from conceptuality and encoding, outcomes are affected more by the quality than by the quantity of attention.

*Key words:* mindfulness; attention; encoding; conceptualizing; mindful organizing

Organizational life is filled with special cases that have to be fitted to a given repertoire of actions. (Levinthal and Rerup 2006, p. 508)

That prosaic description lies on top of several basic tensions in organizational studies. These two Crossroads papers restir several tensions such as those that occur between behavior and cognition, controlled and automatic processing, interpretation and information processing, conceptual and nonconceptual perceiving, mind and body, and routine and nonroutine. At the core of these tensions lies the very meaning of organization and organizing. Tsoukas (2005) describes that core like this:

A distinguishing feature of organization is the generation of recurring behaviours by means of institutionalized roles that are explicitly defined. For an activity to be said to be organized implies that types of behaviour in types of situations are connected to types of actors. . . . An organized activity provides actors with a given set of cognitive categories and a typology of action options. . . . On this view, therefore, organizing implies generalizing; the subsumption of heterogeneous particulars under generic categories. In that sense, formal organization necessarily involves abstraction. (p. 124)

Our reading is that both the organization and its people are concepts, mentally formed collections of direct experiences with a name. Although ultimately neither people nor organizations exist, conventionally they not only exist, they are necessary foundations for mindfulness to come into existence. Concepts hold activities and people together long enough for people to plan and coordinate their actions and then to learn from the results and accumulate experience. But whereas these activities of conceptualizing provide economy, permanence, and efficiency, there are costs of conceptualizing of which

some become apparent when people take a closer look at mind and experience.

When people engage in actions with meditative properties that are directed inward (e.g., concentration),

[they] begin to have insight into what the mind, as it is experienced, is really like. Experiences, they notice, are impermanent. This is not just the leaves-fall, maidens-wither, and kings-are-forgotten type of impermanence (traditionally called gross impermanence) with which all people are hauntingly familiar but a personal penetrating impermanence of the activity of the mind itself. Moment by moment new experiences happen and are gone. It is a rapidly shifting stream of momentary mental occurrence. Furthermore, the shiftiness includes the perceiver as much as the perceptions. There is no experienter, just as Hume noticed, who remains constant to receive experiences, no landing platform for experience. This actual experiential sense of no one home is called selflessness or egolessness. Moment by moment the meditator also sees the mind pulling away from its sense of impermanence and lack of self, sees it grasping experiences as though they were permanent, commenting on experiences as though there were a constant perceiver to comment, seeking any mental entertainment that will disrupt mindfulness, and restlessly fleeing to the next preoccupation, all with a sense of constant struggle. (Varela et al. 1993, pp. 60–61)

So, to return to the opening description, organizing is about impermanent special cases, impermanent fitting, and impermanent repertoires of actions. How these three are reconciled is a root issue in organizational analysis. If attempts to reconcile are framed as an interest in organizing rather than in organization, then people are in a better position to acknowledge impermanence (they see that coordination and interdependence are not routines, but are activities that need to be reaccomplished).

To view the life of organizations as organizing is also to notice and reduce the discontent triggered by futile clinging to the impermanent (the need to reorganize is not seen as a failure of commitment but as the inevitable rise and fall of patterns that are not rooted in one's own personal agency). As people become more aware of the workings of the mind and accept those workings as the resources for collective action, they are in a better position to produce wise action.

These two Crossroads papers approach that common goal of wise action from different sets of assumptions. To interrelate these two sets of assumptions means that we need to be clear on just what is being blended so that we can see what kind of blend, if any, is possible.

In the following discussion, we look briefly at the several meanings of mindfulness that have been associated with organization studies and package them as distinction making, enriched distinction making, and beyond distinction making. We dwell on the third package, beyond distinction making, partly because it is a set of meanings for mindfulness that have been lost in Western thinking. Mostly we dwell on these Eastern nuances, though, because they clarify the distinctiveness of mindfulness and show how it can be reconciled with perspectives that focus on less-mindful routine functioning.

## Mind and Mindfulness

Eastern philosophy and psychology, the sources of the concept of mindfulness, begin with the assertion that "all things are preceded by the mind" (Wallace 1999, p. 185). If we grant that assumption, made some 2,500 years ago, then contemporary topics such as organizing and organizational learning are dependent on qualities of mind and the way those qualities interrelate. To pursue this dependence, people interested in the topic of mind in the context of organizational life ask questions such as, What are processes of mind? What mechanisms tie those processes together? and What are the effects of different configurations of these processes on adaptation? A sample question would be, "How are the processes and contents of attention influenced by the conditions of task-based interdependency found in those settings we conventionally designate as organizations?" (Weick 1979, pp. 32–33). Conjectures about some of these interrelations of mind are insightfully proposed by Levinthal and Rerup in their Figure 1 (p. 504). We intend to add to their conjectures by taking a closer look at the Western and Eastern versions of the concept of mindfulness, and use our observations as a backdrop to comment on their discussion.

If "mind" precedes everything else, just what is the "it" that is doing the preceding? "Mind indicates the complex of man's faculties involved in perceiving, remembering, considering, evaluating, and deciding" (*Webster's New Dictionary of Synonyms* 1984,

p. 538) and that complex of faculties can be studied in at least two ways, each one driven by a slightly different treatment of mind. First, the term *mind* can be used to depict "the totality of hypothesized mental processes and acts that may serve as explanatory devices for psychological data. . . . Here, mental components are hypothesized because they have, in the proper theoretical frame, considerable explanatory power" (Reber 1995, p. 460). The second usage is more cautious and depicts mind as "a collection of processes [the argument being] that the several processes generally studied under the rubrics of *perception and cognition* constitute mind [italics in original]. Here, there is no real effort to define, only to enumerate and to seek to understand those processes enumerated" (Reber 1995, p. 461). If you strip theory away from the first meaning, you get the second meaning. Either way, to study mind is to be concerned with mental processes, mental acts, psychological data, perception, and cognition, and to embed these in a theoretical frame or to enumerate them in order to better understand them.

Less formally, Reber (1995, p. 460) describes the concept of mind as "the battered offspring of the union of philosophy and psychology." That being the case, one can rightly ask: Why in the world would anyone use a *battered offspring* to rescue organizational studies, a field that is already struggling to become something other than a low paradigm field? The short answer is that mind is useful because it directs attention to issues other than those closely tied to organizational behavior and a behavioral theory of the firm. To focus on behavior is to examine topics such as automaticity, routine, mindlessness, habit, path dependence, momentum, and inertia. To focus on mind is to examine topics such as alertness, attention, abstraction, and awareness. These latter ideas complement an emphasis on behavior because they determine the context of behavior, the interpretation of the behavior, and what one learns from the outcomes of behaving.

## Varieties of Mindfulness

If *mind* in the broadest sense is about a totality or a collection of processes, then mindfulness is about "ways in which these diverse processes interrelate" (Weick et al. 1999, p. 88). The perspective on mindfulness articulated in this article is grounded in patterns of interrelation among processes of perception and cognition that "induce a rich awareness of discriminatory detail and a capacity for action" (Weick et al. 1999, p. 88). Patterns of this kind are especially visible in so-called high-reliability organizations (HROs). These organizations face special problems of learning because their continuous exposure to potential crises means that their next failure to meet aspirations could also be their last-ever action. Mindfulness in these organizations is focused on

clear comprehension of emerging threats and on factors that interfere with such comprehension. Faced with such contingencies, these organizations spend (a) more time examining failure as a window on the health of the system, (b) more time resisting the urge to simplify assumptions about the world, (c) more time observing operations and their effects, (d) more time developing resilience to manage unexpected events, and (e) more time locating local expertise and creating a climate of deference to those experts. These capabilities have been labeled *mindful organizing* (Weick and Sutcliffe 2001).

Collectively, these five processes focus attention on the discriminatory details that get lumped into categories. It is that shift from perception to conception that threatens rich awareness of discriminatory detail. The stubborn reality in these systems is that small deviations are easy to correct but hard to detect in their early stages. Consequently, substantial system resources must be invested to produce early detection, but the necessary resources are not so much financial as they are attentional. Small failures have to be noticed (*preoccupation with failure*) and their distinctiveness retained rather than lost in a category (*reluctance to simplify*). People need to remain aware of ongoing operations if they want to notice nuances that portend failure (*sensitivity to operations*). Attention also is crucial for locating pathways to recovery (*commitment to resilience*) and the expertise to implement those pathways (*deference to expertise*).

### Distinction Making

The prevailing way to conceptualize mindfulness has been to borrow from Langer's (e.g., 1989) ideas that echo a Western line of thinking. By *Western* we mean that her ideas are essentially a variant of an information-processing perspective. When organizations are viewed as information processing systems, they are said to consist of

embedded routines through which information is stored and enacted. Some researchers have taken this to mean that organizations are systems that process and code information in a computational manner. That is, the problem that organizations face is one of searching and processing relevant information when such search is costly and decision makers are boundedly rational. (Lant and Shapira 2001, p. 2)

Langer's variant argues that routines induce mindless action and that performance improves when coded information is differentiated more fully and more creatively. Such differentiation is a joint product of refining existing categories, adopting new categories, and developing greater awareness of multiple perspectives on context.

Langer is less concerned with practices that increase mindfulness than she is with practices that reduce mindlessness (e.g., Langer and Moldoveanu 2000, p. 3). She acknowledges that her ideas are grounded in research

and an admittedly Western, rather than Eastern, perspective. Moreover, for her, mindfulness is focused on learning to switch modes of thinking rather than on meditation, and is also concerned with the process of noticing new things that involves seeing both similarities in things thought different and differences in things thought similar (Langer 2005, p. 16). She advocates interventions that promote discrimination of subtle cues previously unnoticed. When these cues are noticed, routines that had been unfolding mindlessly are interrupted, and when routines are disrupted, the resulting void is similar to the void induced by meditation. When either void is created, past experience no longer serves as a firm guide, and the disruption stirs the cognitive pot. Because the void is momentarily tough to categorize and label, it serves as a moment of nonconceptual mindfulness. This means that during this moment more is seen, and more is seen about seeing itself.

Mindfulness as information processing is clear in Krieger's (2005) definition that

mindfulness is a psychological state in which individuals engage in active information processing while performing their current tasks such that they are actively analyzing, categorizing, and making distinctions in data. (p. 127)

Mindfulness as information processing is also clear in the model proposed by Fiol and O'Connor (2003, p. 60). They argue that people paying attention to failure, simplification, and resilience produces mindfulness. Mindfulness, in turn, broadens environmental scanning, generates interpretations that are more context relevant, and produces decision behavior that is more discriminating; "Those who manifest mindfulness engage in thought patterns that allow them to make a larger number of currently relevant, more precise distinctions" (Fiol and O'Connor 2003, p. 59). The relevant point here is that acts of mindfulness grounded in distinction making, conceptualizing, and refinement of concepts are acts of information processing (Lant and Shapira 2001).

### Enriched Distinction Making

Our own work makes extensive use of Langer's ideas. In 1999 (Weick et al. 1999), as we mentioned earlier, we defined mindfulness as a rich awareness of discriminatory detail generated by organizational processes. In 2001, we refined Langer when we described mindfulness as

the combination of ongoing scrutiny of existing expectations, continuous refinement and differentiation of expectations based on newer experiences, willingness and capability to invent new expectations that make sense of unprecedented events, a more nuanced appreciation of context and ways to deal with it, and identification of new dimensions of context that improve foresight and current functioning. (Weick and Sutcliffe 2001, p. 42)

Levinthal and Rerup (2006) also adopt an enriched version of mindfulness when they describe it as high sensitivity of perception and high flexibility of behavior to respond to diverse, changing stimuli (p. 505). They also describe mindfulness as the conversion of experience into reconfigurations of assumptions, frameworks, and actions (p. 507).

In subsequent sections we will argue that when people enrich the distinctions they make, their efforts begin to resemble practices associated with mindfulness meditation (i.e., Eastern pathways to mindfulness). As a result, their experience becomes less mediated by concepts and more nonconceptual. For example, when people make more distinctions and more-refined distinctions they often see some of the limits of singular categories and even of categorizing itself; their attention becomes more focused and they see the costs of scattered attention; they pay more attention to what is happening here and now; they experience entities as less substantial and more transient; they see the liabilities of swift thinking when they slow down to register finer distinctions; and there is gradual recognition that changes in events as well as in oneself as perceiver are often not of one's own making. When people engage in distinction making, they begin to realize how readily we put our experiences into unexamined conceptual boxes (Kabat-Zinn 2002, p. 69), how reluctant we are to examine those conceptual boxes, and how much we discover when we become less dependent on those boxes.

### Beyond Distinction Making

There is more to mindfulness than its capability to counteract mindlessness. The following description, drawn from Eastern thought, suggests what lies beyond mindlessness and what issues arise when routines and mindfulness are juxtaposed:

Mental Habituation to standard reactions, to sequences of activity, to judgments of people or things proceeds by way of associative thinking. From the objects, ideas, situations and people that we encounter, we select certain distinctive marks, and associate these marks with our own response to them. If these encounters recur, they are associated first with those marks selected earlier, and then with our original or strongest response. [Note: This is a crude first-order description of learning.] Thus these marks become a signal for releasing a standard reaction, which may consist of a long sequence of connected acts or thoughts familiar through repeated practice or experience. This way of functioning makes it unnecessary for us to apply new effort and painstaking scrutiny to each single step in such a sequence. The result is a great simplification of life, permitting us to release energy for other tasks. In fact, in the evolution of the human mind, associative thinking was a progressive step of decisive importance. It enabled us to learn from experience, and thus led up to the discovery and application of causal laws.

Yet along with these benefits, associative thinking can also bring many grave dangers if it is applied faultily or thoughtlessly and not carefully controlled. Let us draw up a partial list of these danger points:

1. Associative thinking, recurring again and again in similar situations, may easily perpetuate and strengthen faulty or incomplete initial observations, errors of judgment, and emotional prejudices such as love, hate and pride.
2. Incomplete observations and restricted viewpoints in judgment, sufficient to deal with one particular situation, may prove quite inadequate and entail grave consequences if mechanically applied to changed circumstances.
3. Due to misdirected associative thinking, a strong instinctive dislike may be felt for things, places or persons which in some way are merely reminiscent of unpleasant experiences, but actually have no connection with them.

These briefly-stated instances show how vital it is for us to scrutinize from time to time the mental grooves of our associative thoughts, and to review the various habits and stereotype reactions deriving from them. In other words, we must step out of our ruts, regain a direct vision of things, and make a fresh appraisal. (Thera 1997, pp. 51–52)

The key warning here is against the dangers of thoughtless, faulty, uncontrolled thinking. The primary source of such dangers is associative thinking in the form of normalizing. The concept of normalization was drafted to explain Vaughan's (1996) finding in the Challenger shuttle disaster that reified launch routines in NASA were preserved when anomalous events produced by inadequate solid rocket booster seals, events that should have been singled out and given a distinctive label, were normalized as acceptable deviations that fit within the preexisting labels and routines. Normalization means converting anomalies and uncertainties into acceptable risks or simply ignoring them (Vaughan 2005, pp. 46–47). The concept of normalization of deviance, "characterizes the routine nature of organizational encounters with risk which unfold over long periods... [and] explodes the myth of the sudden accident" (Hutter and Power 2005). In place of the myth are data showing that "risks are 'built in' to the daily routines and operational culture of organizational life" (p. 14). Accidents are not sudden, they are incubated and give off daily warning signals. This is why attention needs to be made more stable (i.e., norms and routines must specify and reward attention to intended objects) and more vivid (i.e., distractions need to be removed).

In Eastern philosophy and psychology, the interplay that is associated with processes of mind is focused more explicitly on internal processes of attention and attending. For example, mindfulness is described as "non-superficial awareness. It sees things deeply, down below the level of concepts and opinions... it manifests itself primarily as a constant and unwavering attention that

never flags and never turns away” (Gunaratana 2002, pp. 147–148). Eastern versions of mindfulness equate it with nonjudgmental observation, impartial watchfulness, nonconceptual awareness, present-time awareness, nonegoistic alertness, goalless awareness, and awareness of change (Gunaratana 2002, pp. 139–142). In its most stark Eastern rendition, mindfulness is described as “the nonforgetfulness of the mind with respect to a familiar object, having the function of nondistractedness” (Wallace 2005, p. 226). Mindfulness is about reducing distraction and holding an intended object in mind.

Implicit in these descriptions is the idea that mindfulness is about qualities of attention such as its focus, stability, sustainability, filtering, and vividness. Furthermore, there is the clear implication that conceptual refinement, such as that espoused by Langer, by itself is a fairly elementary means to improve perception. When these implications are directed at the specific question of how HROs cope with risk and uncertainty, the emerging answer is that HROs become more vulnerable to error when their attention is scattered, distracted, unstable, short lived, dominated by abstractions, and lax, all of which predispose people to misestimate, misunderstand, and misspecify what they think they face (Schulman 2004).

An analogy using microscopes may make the focus of mindfulness clearer. A biologist looking through a microscope seems to be simply seeing and observing, but the kind of microscope—ultraviolet, phase contrast, interference contrast, X-ray, electron, acoustic—makes a difference:

Since the early twentieth century, even the conventional light microscope has essentially been a Fourier *synthesizer* [italics added] of first or even second-order diffractions. Thus, we must either modify our notion of seeing or hold that we never see through a serious microscope; for the “normal” physics of seeing is seldom used in observing living materials through such a device. In short, we do not see through a microscope, we see with one. (Wallace 2000, p. 62)

In like manner, we don’t see through concepts, we see with them, and are sometimes blinded by them. Concepts are important, not because they represent, but because they enable us to cope. To see more clearly by means of concepts, we need to refine the concepts. This is Langer’s contribution. To see more clearly, though, we also have to understand how conceptualizing itself interferes with seeing. This is what Eastern mindfulness contributes. Here the analogy is one where mindfulness acts in a manner much like preparing slides for a microscope. Depending on the preparation, people can experience insight or confusion:

A specimen of research that is to be examined with the help of a microscope has first to be carefully prepared, cleaned, freed from extraneous matter, and firmly kept under the lens. In a similar way, the “bare object”

to be examined by wisdom, is prepared by Bare Attention (mindfulness). It cleans the object of investigation from the impurities of prejudice and passion; it frees it from alien admixtures and from points of view not pertaining to it; it holds it firmly before the Eye of Wisdom, by slowing down the transition from the receptive to the active phase of the perceptual or cognitive process, thus giving a vastly improved chance for close and dispassionate investigation. (Thera 1996, pp. 34–35)

Mindfulness, therefore, is as much about the reversal of normalizing as it is about encoding and matching situations with routines. Mindfulness is important because it weakens the tendency to simplify events into familiar events and strengthens the tendency to differentiate events into unfamiliar events. Therefore, less-mindful practice normalizes, more-mindful practice anomalizes. By *anomalize* we mean that mindfulness captures unique particulars, i.e., differences, nuances, discrepancies, and outliers that slow the speed with which details are normalized. These visible anomalies foreshadow potential problems and opportunities, and preclude incubation until events become unmanageable.

#### Mindfulness Stabilizes Attention

Mindfulness is about remembering, but it is remembering an intended object in the present, not an object from the past. Buddhist texts describe this capability to remember as “not wobbling.” Eastern mindfulness means having the ability to hang on to current objects, to remember them, and not to lose sight of them through distraction, wandering attention, associative thinking, explaining away, or rejection. As described in *A Comprehensive Manual of Abhidhamma*, the Buddhist analysis of mind and mental processes, mindfulness has “the characteristic of not wobbling, i.e., not floating away from the object. Its function is absence of confusion or nonforgetfulness” (Bodhi 2000, p. 86). The image of not wobbling is meant to convey the quality that mindfulness “keeps the mind as steady as a stone instead of letting it bob about like a pumpkin in water” (Bodhi 2000, p. 371). To wobble in perceiving an object is to acquiesce in its conceptual associations before total awareness and nonforgetfulness can occur.

To illustrate the importance of the quality of attention to mindful action, consider a theoretical framework suggested by Wallace (1999; 2000, pp. 106–108). Wallace argues that the undisciplined mind succumbs “very swiftly to attentional excitation, or scattering; and when the mind eventually calms down, it tends to drift into attentional laxity in which vividness is sacrificed” (Wallace 1999, p. 176). Wallace hypothesizes the existence of a continuum of awareness in which there are successive pulses of cognition and awareness, each lasting for a short period of time (e.g., he suggests pulse intervals of 10 milliseconds, but the argument works just as well with longer intervals). Some of these pulses of

awareness are focused on a specific object (they are said to ascertain the object), and some are not focused on anything, even though they could be (nonascertaining moments). Considering only those pulses that are ascertaining, some of those ascertaining moments are focused on the intended object, and some of those ascertaining moments are focused on other objects. With these assumptions in hand, it is possible to describe mindful attention as scattered or stable and vivid or lax. To be more mindful is to attend with both greater stability and greater vividness.

The stability of attention is determined by the percentage of ascertaining moments that are directed at the intended object rather than at some other object. The greater the proportion of ascertaining moments that are focused on the intended object rather than on other objects, the greater the homogeneity of those ascertaining moments, and the more stable the attention. There may be relatively few ascertaining moments among all of the moments of awareness, but if all of those ascertaining moments that do occur are focused on the intended object rather than on other objects, then the attention is stable. Whether that attention is vivid or lax depends on the ratio of ascertaining to nonascertaining moments. As the density of homogeneous moments of ascertainment increases, so too does the vividness of the intended object.

The practical importance of not floating away from the object for organization theory is that the failure to accomplish this is viewed by many as a primary causal factor in organizational accidents (e.g., Turner 1994). If a discrepancy occurs when an unexpected event materializes or an expected event fails to materialize, this discrepancy interrupts a routine. The discrepancy momentarily becomes the object of attention, but this object is often lost soon thereafter when the discrepancy is glossed over, normalized, and treated as if it were a familiar event already encountered, named, and understood in the past. These associations interfere with continuing direct perception of the discrepancy, they draw attention away from the object, and they typically replace nonjudgmental observations with thoughts and concepts and emotional reactions that distort perceptions of the object. To wobble in perceiving an object is to acquiesce in its associations rather than discard those associations.

Using Wallace's ideas, it is possible to speculate further concerning specific organizational processes that could lead to greater mindfulness through the processes' effects on the stability and vividness of attention. For example, the five processes associated with organizing for high reliability (e.g., Weick et al. 1999) can be analyzed for their possible effects on attentional stability and vividness, and then on mindfulness. *Preoccupation with failure* involves a search for incipient failures to the exclusion of all else, suggesting that such preoccupation

induces vivid but potentially unstable attention (e.g., the term *failures* is plural, which suggests that there are multiple objects to monitor, with attention being scattered rather than stable. It is also possible that culture, norms, and training could frame failure as a single intended object, thereby increasing stability). *Reluctance to simplify* and *sensitivity to operations* both involve replacing abstractions with current details, which again suggests an increase in vividness, but at the possible expense of stability. *Commitment to resilience* is about stability as a goal and vividness as the means to achieve it. To bounce back from a disruption involves vivid attention to whatever is at hand in an effort to ascertain how it can be cobbled together in order to resume whatever was interrupted (this is Levinthal and Rerup's 2006 notion of *recombination*). Most of the moments of awareness associated with resilience are moments of ascertaining, but again those moments of ascertaining are scattered among diverse objects and therefore potentially unstable. Finally, *deference to expertise* that is made possible by underspecified structures involves efforts to stabilize attention by routing decisions to experts who are best able to hold on to the intended object without distraction.

What is interesting in these five scenarios of reliability is that stability is weaker than vividness. This suggests that if HROs do have accidents, it may be because they act with weakened mindfulness. That weakening occurs because they expend more effort to see things clearly (vividness) than to see one thing fully (stability). In other words, when HROs work on failure, simplification, operations, and resilience, their moments of awareness may be filled with ascertaining, but that ascertaining is spread among several objects. When this happens, mindfulness suffers because it is compromised by conceptual association, forgetfulness, and attention floating away from the object. There are several ways to increase stability and thereby strengthen mindfulness. Most of them involve altering the way reliability is organized. For example, stability and mindfulness increase if people reduce the number of objects that they intend to ascertain, regroup objects into fewer meaningful clusters, or distribute responsibilities for ascertaining specific objects among people in different roles or positions who remain in close contact with one another. This reorganizing of reliability processes in order to stabilize the objects of attention differs from the more common forms of reorganizing that are associated with organizing for efficiency. In the case of efficiency, processes are organized to focus on success, simplification, strategy, anticipation, and authority (Weick et al. 1999). Such organizing increases stability, but at the expense of vividness. As a result, action becomes more routine, more mindless, and attention becomes more diffuse.

### **Mindfulness Modifies Conceptualizing**

To move beyond distinction making is to take a closer look at encoding and conceptualizing. The drama

involved in moving beyond is captured in this description by Kearney (2005, unnumbered page):

There are any number of ways we can analyze our experience; there are a potentially infinite number of categories we can invent into which we can classify our experiences. What is important is that we remember the difference between category and experience, and avoid becoming lost in the category. Our tendency is to get lost in the categories, and in doing so, lose touch with experience. When we create a system of categories we freeze the process of living experience and create a solid something in which our experience must now conform. We now divide our experience into two basic divisions: those experiences which we can fit into our system of categories, and which is therefore valid, real and useful; and those experiences which we cannot fit into our system of categories. Of course, in the act of meditating, we put more attention to our valid, real and useful experiences than we do to the other type. In brief, we become stuck in attachment and aversion, and instead of investigating our experience, we revert to manipulating it. We take the practice of freedom and turn it into a prison. This is inevitably the case when we project reality into the categories of analysis—whatever system we use—and not into the actual, living, stream of experience. Hence we must treat this system with great caution. We must learn to use it, and not be used by it.

The activities of encoding, categorizing, and assimilation play a prominent role in the Levinthal and Rerup (2006) argument. For example they observe that,

To mindfully encode a stimulus situation, actors need to consider the type of request being made, and the type of problem being faced. Actors also need to consider what role they are playing in a particular context. This sorting out process often needs to precede routinized behavior. Indeed, an important skill in the context of bureaucratic organizations is the art of manipulating the label or category with which a given request or initiative is encoded so as to elicit the desired outcome. (p. 508)

While it is true that people have no choice but to categorize (e.g., Moskowitz et al. 1999), it is also true that they don't have to be clumsy or compulsive or overzealous about it. Levinthal and Rerup (2006) make this point exceedingly well:

Treating outcomes as events that may be regarded as nonevents in a less richly developed encoding scheme is a critical basis for intelligent adaptation in settings where coarser coding schemes (for example, whether the nuclear plant goes critical (i.e. "melts down") on a given day) provide limited opportunities for learning. (p. 510)

If you're going to encode, then use a vocabulary that is up to the task.

Not only is a coarse vocabulary a problem for conceptualizing, but so is the tendency to treat concepts as if they were enduring, permanent, abstractions of things with inherent properties. Concepts can be rendered less

permanent if people can watch mindfully how a concept functions in the mind, what it highlights and ignores, how affect influences conceptualizing, and what happens when dependence on concepts decreases.

Mindfulness is not antithetical to concepts, in part because it is not focused on novelty to the degree argued by Levinthal and Rerup (2006). They describe the mindful perspective as one that "stresses the importance of novelty to respond to changing and possibly unique circumstances" (p. 510). If mindfulness is seen solely in the context of an antidote to mindlessness, then what is foregrounded is novelty and the ability of mindfulness to stir up that which is taken for granted. If mindfulness is seen instead in the context of cognition, the costs of shared perceptions, and the realities of narrow tunnel vision, then what is foregrounded is the way in which mindfulness disciplines attention and makes it a more powerful tool.

Mindfulness, viewed in the context of encoding in the interest of shared perceptions, raises important issues because shared perceptions are costly. The costs are realized in the form of fewer discriminating distinctions and a higher level of generality. Details, warnings, and adaptations are lost. Baron and Misovich (1999) suggest a mechanism by which such costs materialize. They argue that there are two basic modes of perception: direct (akin to Eastern mindfulness) and conceptual (akin to Western mindfulness). In the mode of direct perception, people develop knowledge of acquaintance through active, hands-on exploration. There is bottom-up stimulus-driven cognitive processing concurrent with acting. By contrast, when people work in the conceptual mode, they develop knowledge by description rather than acquaintance, their cognitive processing is now schema driven rather than stimulus driven, and they go beyond the information given and elaborate their direct perceptions into types, categories, stereotypes, and schemas that mobilize habitual action.

The relevance of these shifts for organizational design and mindfulness centers on what Baron and Misovich (1999, p. 587) call the *shareability constraint*. Informally, this constraint means that if people want to share their cognitive structures, those structures have to take on a particular form. More formally, as social complexity increases, people shift from perceptually based knowing to categorically based knowing in the interest of coordination. As demands for coordination increase, people begin to experience greater intellectual and emotional distance from the phenomena picked up by direct perception.

Consider the Columbia shuttle accident (STS-107) that claimed the lives of seven astronauts (Starbuck and Farjoun 2005). Categorical-based knowing contributed to the disaster. Within NASA there is a distinction between problems that are in family and those that are out of family (Gehman 2003, p. 146). An in-family



event is “a reportable problem that was previously experienced, analyzed, and understood” (Gehman 2003, p. 122). There are two key phrases in that definition: reportable problems and problems previously experienced. For something to qualify as reportable, people need to be able to report it. They need to have words and categories already in hand to do the reporting, and those very words can limit what is seen and reported. Whatever labels a group has available will color what members of the group think they see and report, which means there should be a tendency toward false positives. People should overestimate the number of ambiguous events that are in-family because, in reporting those events, they already have established their meaning. People do not first recognize something and then label it as an in-family event. Instead, they have categories of in-family events that punctuate a stream of experience into familiar events and a residual. The world is thereby rendered more stable and certain, but that rendering overlooks unnamed experiences that could be symptomatic of larger trouble. The problem here is a failure of mindfulness.

If we assume that reliable perception-based knowing is crucial for effective collective action, and that mindfulness is crucial for direct perception, then designers should moderate the demands for coordination in any organizational design. They should activate mechanisms such as pooled interdependence (Thompson 1967, Snook 2000) with its limited demands for coordination and other forms of loosely coupled systems in order to increase the number of ascertaining moments and the proportion of those moments that are directed at weak signals of developing problems.

### **Mindfulness and Scarcity of Attention**

When analysis is directed to the quality of attention it becomes clear that there is more to attention than the fact that it is limited (e.g., Ocasio 2001), scarce (March 1994), and costly to use. The argument for scarcity is well known. As March notes (1994, p. 10),

Time and capabilities for attention are limited. Not everything can be attended at once. Too many signals are received. Too many things are relevant to a decision, because of these limitations, theories of decision making are often better described as theories of attention or search than as theory of choice. They are concerned with the way in which scarce attention is allocated.

In organizational studies, the issue is not just one of the allocation of scarce attention. The more basic issue is the quality of that attention, not its quantity (Weick et al. 1999, p. 90). Attention is scarce when it is undisciplined and obstacles interfere with clear comprehension, but attention is more plentiful and sufficient when it becomes more stable and vivid.

The idea that attention can be sufficient sounds implausible, “Every individual and organizational sub-unit cannot be mindful about all issues” (Levinthal and Rerup 2006, p. 507). What Levinthal and Rerup’s assertion overlooks is the possibility that one reason people cannot be mindful of all issues is that the issues are saturated with associations, concepts, beliefs, judgments, and feelings. When people watch events that are loaded with surplus meaning, their seeing tends to be distracted, not focused on the here and now, deprived of details that would give a clearer picture, and confused by normalizing that leaves too many details unexplained. It is the presence of these distractions and puzzling details that makes seeing all issues seem impossible.

The good news here is that even though surplus meanings may be seductive, they are neither permanent nor natural. Mindfulness is

designed to lead the mind back from its theories and preoccupations, back from the abstract attitude, to the situation of one’s experience itself... [Mindfulness] is the natural state of mind that has been temporarily obscured by habitual patterns of grasping and delusion. The untamed [i.e., undisciplined] mind constantly tries to grasp some stable point in its unending movement and to cling to thoughts, feelings, and concepts as if they were a solid ground. As all of these habits are cut through and one learns an attitude of letting go, the mind’s natural characteristic of knowing itself and reflecting its own experience can shine forth. This is the beginning of wisdom or maturity. (Varela et al. 1993, pp. 24, 26)

### **The Apparent Chasm**

Levinthal and Rerup’s (2006) goal was to interrelate two distinct phenomena and suggest how they complement one another. They portray the interrelating as elements that underlie. Elements of routine underlie mindfulness in the form of a need to sustain the sensitivity of mindfulness and to have rich routines available for novel recombination when people deal mindfully with the unexpected. Elements of mindfulness underlie routines in the form of a need to encode context to see what is appropriate and to encode outcomes for purposes of learning. Routines provide raw materials and continuity, mindfulness operationalizes logic and interprets outcomes. They also argue that a performative examination suggests interdependency between two distinct processes, but they do not rule out the possibility that what is being discussed is actually a continuum. One could argue that it’s all mindfulness, what varies is dependence on concepts or skill in multiplying perspectives. One could also argue that it’s all routine, what varies is similarity from repetition to repetition. Descriptions that focus on intelligent routines and mindfulness as repetitive pattern recognition throw doubt on a clear duality of mindful versus routine.

It seems crucial to take a closer look at the issue of duality versus continuum. When the discussions of routines and mindfulness are placed side by side, do they support the idea that the two processes are truly separate and distinct and in need of bridges and linkage, or do they support the idea that there is a single continuum of process that underlies them with a somewhat arbitrary cutoff point separating routines from mindfulness? This is not a simple question. Hamilton et al. (1999) note that it is often the case that a continuum generates the appearance of a dual-process mechanism, as in the case of temperature and a thermostat. Changes in temperature are a continuum that is rendered into the dichotomy heat-cool by a thermostat. All temperatures above a cutoff activate cooling, all temperatures below the cutoff activate heating. The same complication occurs with a dual-process mechanism such as running and walking, which generates the appearance of a continuum. Walking and running are two separate processes (e.g., in walking there is always one foot on the ground, in running that is not true) but the output of speed of movement falls along a continuum. In both cases, the output doesn't tell you which process is under way. Furthermore, the same output can come from different combinations of underlying processes.

The question of whether mindfulness and routine are a continuum or dual process is significant because the answer affects whether it is conceivable that the two processes can operate simultaneously or whether they are mutually exclusive and can operate only sequentially. If both processes use the same resources, then they can only operate sequentially (e.g., run and walk are mutually exclusive, since they use the same equipment). If the two processes use different resources, then they can operate in parallel and simultaneously. In the case of mindfulness and routines, if novelty and recurrence rely on different mechanisms, then mindfulness and routine can operate simultaneously. Simultaneity seems to be the assumption behind the proposal that people need to do activities on autopilot so that simultaneously they can scan the situation attentively for discrepancies. That suggestion may mask an arbitrary cutoff imposed on a single continuum and a spurious notion that parallel processing with complementary effects is possible. That possibility takes on added credibility in the context of recent efforts to enlarge the meaning of routines. Routines now appear to be more mindful and more variable and to consume more attention than was first thought. The continuum of mindful action that had previously been masked has now become more difficult to ignore. The fascinating question now becomes: Is that emerging continuum a fiction generated by two distinct processes, or a nonfiction generated by a single process rendered into a dichotomy?

Our line of argument suggests that there is a single continuum of distinction making anchored at one end

by single distinction made and at the other end by infinite number of distinctions made. Routines are placed toward the single distinction made end of the continuum, as illustrated in the case of normalizing events into a single interpretation or categorizing events based on their familiarity. As distinctions multiply, people become more aware of the process of distinction making itself, as well as of the variety that is present in the stimuli they perceive. Singular categories and routines become less and less adequate to preserve this variety, which means that categories are rendered less coarse and more refined, and routines are rendered more variable and flexible. As refinement becomes finer and finer, categories and routines become less and less distinguishable from simply acting here and now to what is seen. In other words, living amid an infinite number of categories and routines is indistinguishable from living nonconceptually with no categories or routines.

This line of thinking suggests an arbitrary distinction between routines and mindfulness. More important are the suggestions that they do not function in parallel, they do not occur simultaneously, and they are not interrelated other than by their common activity of distinction making.

A definition of mindfulness suggested by Brown and Ryan (2003) seems compatible with a continuum of distinction making. Mindfulness involves "enhanced attention to and awareness of current experience or present reality. . . . [A] core characteristic of mindfulness has been described as open or receptive awareness and attention. . . which may be reflected in a more regular or sustained consciousness of ongoing events and experiences" (Brown and Ryan 2003, pp. 822–823).

Interestingly, this definition blends elements of Western notions of information processing with Eastern notions of mindfulness. "Enhanced attention and awareness" in Brown and Ryan (2003) correspond to "concentration" in Eastern thought; "current experience and present reality" correspond to being attentive in the "momentary present" (Bodhi 2000, p. 137); "open and receptive awareness" corresponds to attending that is calm, quiet, undistracted, and free of self-talk; "ongoing events" correspond to the impermanence and rise and fall of events; and reference to "events *and* experience" (italics added) correspond to attention directed both outward toward the external environment, and inward toward the internal environment. When we label these similarities as points of correspondence, what we mean is that when people develop Western capabilities of information processing and when organizations are redesigned to improve information processing, these changes may also lead to greater realization that the act of conceptualizing itself is flawed. The problem is not with the content of concepts. The problem instead lies with the meta-issue of conceptualizing and the ways in

which conceptualizing can be modified toward greater mindfulness.

Given the argument as developed to this point, what happens to the tensions that worry Levinthal and Rerup (2006)? There is no question that we need outcome studies, but it seems too early to talk about costs. Tensions involving costs and normative claims are not sharp, because the objects supposedly in tension are not sharply drawn. Besides, everything is costly relative to some criterion, just as everything has unintended consequences and is never simply good or bad. Mindfulness and routines are no exception. We can't say more about costs and consequences until we get the concepts straightened out.

As a concluding observation, both papers in this package highlight an unusual moment in theorizing. In order to understand and explain more of the contingencies and range of variation that are observed in phenomena, the meanings of concepts first used to articulate the phenomena are expanded, but the original term for the concept is retained. In this paper, the original concept of mindfulness as meaning conceptual differentiation was drastically expanded such that in certain places it comes close to meaning nonconceptual differentiation. In the Levinthal and Rerup (2006) paper, the original concept of routine, following Feldman's (2000, 2003) lead, is expanded such that it has come to mean flexible action with modest continuity across occasions. Reed (1991), having demonstrated how far the concept of decision making had been stretched and how often it had been patched, wonders aloud when the retreat from a classic treatment has in fact turned into a rout. The same question might be asked in the context of these two articles. Are we on the verge of a rout for notions of mindfulness and routine given the expanded meanings of these concepts? In trying to link two concepts, have we dissolved the concepts we started with?

Regardless of the topic of inquiry, what matters is the observation of nuance preserved in words of sufficient variety to do justice to the observations. Expansion is inevitable if we are doing our job. Although the expansions represent a retreat from simplification, they do not necessarily represent a retreat from classic ideas. Instead, they represent a respect for the spirit of the classic idea and an effort to bring that spirit in line with what we experience every day on its behalf. Expansions position us to have more interesting answers to the perennial question: What's the story?

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