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Theorizing on the connection between organizational and individual mindfulness

Peter Kelemen , Eva Born  and Tomáš Ondráček 

Department of Corporate Economy, Faculty of Economics and Administration, Masaryk University
Brno, Brno, Czech Republic

ABSTRACT

This paper explores the relationship between individual mindfulness and organizational mindfulness. Many authors consider these concepts to be related and interlocked, however, the exact nature of this connection is still unclear. Therefore, we investigate the link between these two concepts using both literature review approach and theoretical reflection. The results of the literature review are classified and synthesized in a constructive way into a theoretical framework that sheds light on the main aspects of the relationship between individual and collective mindfulness. Our research shows that the existence of organizational mindfulness implies the existence of mindfulness on the individual level. Individual mindfulness is a necessary, but not sufficient condition to developing organizational mindfulness. Additional factors other than individual mindfulness must be included in order to increase organizational mindfulness. The reason for this is the difference between individual mindfulness, an intrapsychic process of individuals, and organizational mindfulness, which is a function of social procedures in an organization.

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1. Introduction

Although *mindfulness* as a concept only appeared in organizational science at the end of the 20th century, it has been known for much longer in eastern Buddhist traditions. Since its appearance, the concept of mindfulness has been steadily gaining attention, and some groundbreaking studies have been published on this topic (for details see Good et al., 2016). Still, there remain many topics and issues which need to be debated.

There is a general agreement in the scientific community that *individual mindfulness* has positive effects on a wide variety of employee performance factors, including resistance to stress (Hülshager et al., 2013), flexibility and creativity (Ie et al., 2012), problem-solving skills (Olafsen, 2017), and productivity (Langer, 2016). However,

CONTACT Eva Born  eva.born@econ.muni.cz

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authors concerned with mindfulness have described this concept in different ways (e.g. Bishop et al., 2006; Langer, 2016; Weick & Sutcliffe, 2006) and there is still a lack of consensus about the true nature of this concept.

Furthermore, the attention mindfulness has received in academic circles resulted in creation of new concepts. One of them is *organizational mindfulness* by Weick et al. (1999) and Weick and Sutcliffe (2001) respectively. This concept should capture the ability which helps an organization to detect first subtle signs of an approaching problematic event and give it the capacity to react rapidly or even to avoid it. It has gained popularity in relation to *High Reliability Organizations* (HRO).

Even though Weick was influenced by the concept of individual mindfulness, the connection between individual mindfulness and the new concept of organizational mindfulness is unclear, both in theory and in practice. Some attention has already been brought to this problem (Sutcliffe et al., 2016). We would like to add to this discussion. Hence, we are asking:

Q: *Is there a relationship between individual and organizational mindfulness?*

If the answer to this question is positive, we would like to add follow-up questions:

FQ1: *How is organizational mindfulness connected to individual mindfulness?*

FQ2: *How is individual mindfulness connected to organizational mindfulness?*

To address these questions, we proceed as follows. First, theoretical background on concepts of individual mindfulness and organizational mindfulness is presented and some general assumptions on these concepts are made. Second, relevant academic literature on effects of both organizational mindfulness and individual mindfulness is reviewed. Third, drawing on our theoretical insights we suggest general a theoretical framework of connection between organizational mindfulness and individual mindfulness. At the end, we discuss the limits of this approach and the presented framework and identify possible areas of further research.

2. Theoretical background

2.1 Individual Mindfulness

The task of defining individual mindfulness has been an arduous one, with a number of authors offering their own conceptualization. Bishop et al. (2006) describe it as a state of non-evaluative attention to the present. Langer (2016), on the other hand, argues that it is a process of noticing new things that drives people to concentrate on the present and increases their sensitivity to the context. Langer's perspective of mindfulness is somewhat unique, as it adds that mindfulness is "sensitive to context and perspective" (2016). Weick and Sutcliffe (2006) and Chandwani et al. (2016) claim that individual mindfulness is a multi-faceted construct, consisting of five components: observing, describing, acting with awareness, accepting without judgment, and non-reacting to inner experiences. On the other hand, Hülshager et al. (2013) conceptualize individual mindfulness as an inherent human capacity composed of

receptive awareness and registration of internal and external experiences, pre-conceptual information processing, and present-oriented consciousness.

Regarding these definitions, we can make some general assumptions. The concept of mindfulness covers, on the one hand, an awareness of an individual towards her environment or herself. This awareness is understood as a process of tracking one's experience (Deikman, 1996) as a primary facet of consciousness (Brown & Ryan, 2006), which is focused and qualitatively better than usual. It is unclear if, in general, this better awareness means that it is broader, covering a large field of one's experience, or narrower, focusing on what is essential. It seems that both characteristics are important, and mindfulness enables us to discover small changes or deviations regarding what is expected in the given context.

Thanks to the ability to obtain a greater richness of observations, one may unlock details that would otherwise remain hidden, and which may be crucial for understanding and explaining the bigger picture or the roles of certain objects such as personal emotional states or goal-oriented behavior. This understanding itself is not covered by the concept of mindfulness; mindfulness may merely provide greater inputs into the understanding.

Individual mindfulness is also considered to be a state and/or a capacity (*cf.* Glomb et al., 2011). It is a state experienced by most people at some point in their lives and it can be trained through exercise or meditation (Sutcliffe et al., 2016).

Despite the general disagreements about the conceptualization of individual mindfulness, it has been linked to a number of positive effects on the human mind. Clinical psychology uses mindfulness-related methods to cure mental and behavioral disorders (Bishop et al., 2006; Keng et al., 2011; Teasdale et al., 2000). Since individual mindfulness allows individuals to view current events without judging them (Chandwani et al., 2016; Weick & Sutcliffe, 2006), it enables individuals to look at their situation without immediately appraising it as negative and as exceeding their capacity, which reduces stress stemming from these situations (Samuelson et al., 2007; Hülshager et al., 2013). Additionally, individual mindfulness is considered to be helpful in developing wisdom (Petchsawang & McLean, 2017), flexibility and adaptability by taking a non-linear approach to problem-solving, as well as to creativity (Ie et al., 2012), judgment (Olafsen, 2017), productivity (Langer, 2016), attention (Hales & Chakravorty, 2016; Weick & Sutcliffe, 2006).

2.2 Organizational Mindfulness

As a result of numerous positive effects of individual mindfulness, the concept attracted attention also in organizational fields (Dane, 2011). Weick et al. (1999) created the concept of organizational mindfulness. It is composed of five principles. (1) Preoccupation with failure represents a constant attention to mistakes or potential for mistakes and the understanding of mistakes as signs of greater problems looming in the background (Ray et al., 2011). (2) Reluctance to simplify means to constantly doubt received information and assumptions in operations, whereby faults are detected (Sutcliffe et al., 2016). (3) Sensitivity to operations means creating and maintaining knowledge about operations (Weick et al., 1999). (4) Commitment to

resilience includes increasing the ability of employees and the organization to adapt, improvise, and gain knowledge in order to deal with unexpected situations (Sutcliffe et al., 2016). (5) Deference to expertise represents allocating decision-making power to those persons who have the greatest expertise related to the problem at hand without regard to their formal position in the organization (Ray et al., 2011). These five principles, which together make up organizational mindfulness, help the organization detect early signs of approaching threats and enable more rapid responses (Weick & Sutcliffe, 2006; Vogus & Sutcliffe, 2012).

Hence, organizational mindfulness is also connected to awareness (principles (1), (2) and (3)) in a manner similar to individual mindfulness. In short, we can say that principle (1) is a strict direction to paying attention to anything unexpected. Principles (2) and (3) give us a hint about the context of such sensitivity, i.e. it urges us to see the operations in as many details as are needed. The benefits of principles (4) and (5) are similar to the benefits that individual mindfulness creates for wisdom and are additionally about commitments to fostering and maintaining abilities needed for organizational mindfulness.

Organizational mindfulness requires the organization and its leaders to accept that it is impossible to have perfect knowledge about a known event (Weick et al., 1999). In other words, organizational mindfulness is a way of executing every-day processes in the organization, in which gaining a detailed understanding of the context is emphasized. As such, factors that enable or prevent organizations and individuals to gain such an understanding receive great attention (Vogus & Sutcliffe, 2012). As a result, organizational mindfulness helps organizations detect anomalies and small-scale failures, before their consequences and effects accumulate into large-scale failures, economic losses, or outright catastrophes (Weick et al., 1999). In other words, organizational mindfulness enables organizations to solve problems before they become problems. Mindfulness can also help organizations innovate by supporting attempts to find new solutions and look at situations from different perspectives (Vogus & Welbourne, 2003).

Despite the fact that organizational mindfulness as a concept stemmed from individual mindfulness, the connection between them is yet unclear. Specifically, it is currently unknown in what way individual mindfulness of members of an organization influences organizational mindfulness, and in what way organizational mindfulness influences the individual mindfulness of the members of the organization. This research gap has also been recently highlighted (e.g. Sutcliffe et al., 2016). In this paper, we attempt to shed light on this relationship from a theoretical point of view.

3. Methods and data

We used the literature review approach to find answers to our research questions. Initial search of literature began in November 2017, we used the Web of Science Core Collection database as the source of literature. The following basic algorithm was used in the search:

$$TS=((organization^* \text{ AND } mindfulness) \text{ OR } (individual \text{ AND } mindfulness) \text{ OR } (performance \text{ AND } mindful^*))$$

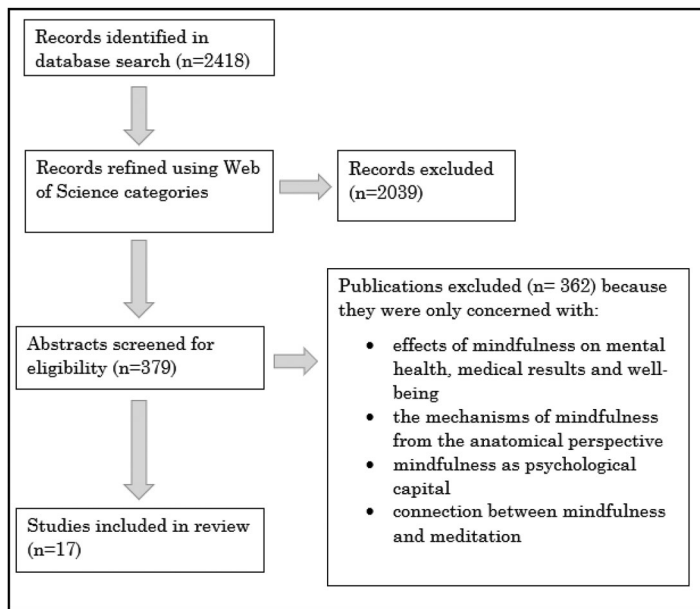


Figure 1. Literature review flow diagram. Source: Authors.

We limited the results for the Web of Science categories of management, psychology and social sciences interdisciplinary. We further restricted the search to only include sources published after the year 1990. In this way, we obtained 379 results. We did this because we wanted to focus on today's state of the conceptualizing and theorizing about mindfulness.

In the next step, we took measures to eliminate articles that were not relevant to our research. Through screening of titles and abstracts, we eliminated articles concerned only with the effects of mindfulness on mental health, medical results and well-being, the mechanisms of mindfulness from the anatomical perspective, psychological capital, and meditation. Although articles from these topics might be interesting, we were focusing specifically on the issue of mindfulness and organizations. This process of elimination resulted in 17 articles (Bishop et al., 2006; Chandwani et al., 2016; Dane, 2011; Dane & Brummel, 2014; Hales & Chakravorty, 2016; Hülshager et al., 2013; Ie et al., 2012; Jordan et al., 2009; Levinthal & Rerup, 2006; Olafsen, 2017; Ray et al., 2011; Sutcliffe et al., 2016; Vogus & Sutcliffe, 2012; Vogus & Welbourne, 2003; Weick et al., 1999; Weick & Putnam, 2006; Weick & Sutcliffe, 2006). The process of literature search and filtering, including specific criteria based on which literature was removed from the review pool, can be viewed in Figure 1 below.

4. Research results

4.1 The Effects of Organizational Mindfulness and its Connection to Individual Mindfulness

First, we look at the effects of organizational mindfulness on individual mindfulness. An overview of the used literature addressing this connection can be found in Table 1, which shows the effects of organizational mindfulness.

Table 1. Effects of organizational mindfulness.

Effects of organizational mindfulness	Source
Interception of signals of potential threats; Rapid reaction to the signals	Weick & Sutcliffe (2006) Vogus & Sutcliffe (2012) Weick, Sutcliffe & Obstfeld (1999)
Increased attention to failure, deference to expertise, signalization of expectations	Ray, Baker & Plowman (2011)
Uncovering faults on operations, boosting member competence	Sutcliffe, Vogus & Dane (2016)
Maintaining operation knowledge	Weick, Sutcliffe & Obstfeld (1999)
Creation of alternatives, improving response time	Jordan, Messner & Becker (2009) Vogus & Welbourne (2003)
Organizational mindfulness can be increased by mindful organizing	Sutcliffe, Vogus & Dane (2016) Vogus & Sutcliffe (2012)
Stimulation of individual mindfulness	Sutcliffe, Vogus & Dane (2016) Vogus & Sutcliffe (2012) Weick & Putnam (2006) Weick & Sutcliffe (2006)

Weick and Putnam (2006) show a connection between five points of organizational and individual mindfulness. Preoccupation with failure emphasizes the importance of paying attention to small changes and possibilities of sudden failures. Since these small changes need to first be recognized *while they are happening* before being judged regarding e.g. their relevance, we can say that the principle of preoccupation with failure supports individual mindfulness. In a similar manner, reluctance to simplify requires the ability to recognize often subtle details and inconsistencies between situations in order to judge whether they are sufficiently analogous enough to an original situation upon which a certain practice or rule is based. As such, the principle requires a certain level of individual mindfulness in order to notice whatever needs to be noticed when it occurs. Commitment to resilience is connected with concentration and mistake recognition. While individual mindfulness is present-oriented, recognizing mistakes as they are happening in the present may also be a path toward creation of knowledge for the future. Finally, deference to expertise increases concentration by reallocating decision-making power on experts, who are able to focus on the problem at hand without being distracted (Vogus & Sutcliffe, 2012). Weick and Sutcliffe (2006) argue that when people pay attention to failure, refuse to simplify and focus on reliability, their mindfulness increases. From this it seems that a mindful organization sets the stage for mindful behavior from the top down, i.e. from the level of organization to the level of group, and from the level of group to the level of individual.

Also, leadership has a profound influence on individual mindfulness. According to Sutcliffe et al. (2016), a leadership that supports social processes such as scenario planning or stakeholder involvement, and attempts to see reality from new perspectives, can stimulate individual mindfulness. They base this statement on arguments of Fiol and O'Connor (2003) that a greater occupation with both success and failure results in greater individual mindfulness. Madsen et al. (2006) observed the influence of the leadership of a pediatric intensive care unit on mindfulness in the organization. Those leaders who were trained in the principles of High Reliability Organizations implemented continuous employee education programs and event evaluations and supported autonomous decision-making of frontline employees. These practices led to improved cooperation and employees becoming better at noticing problems and potential improvements. The greater richness of observations demonstrated by the

Table 2. Effects of individual mindfulness.

Effects of individual mindfulness	Source
Objective perspective on stressful situations, increased tolerance of workloads, increased job satisfaction	Hülshager et al. (2013)
Increased flexibility and adaptability, attention span, creativity	le et al. (2012)
Improved problem-solving capabilities, judgment	Olafsen (2017)
Positive influence on mind-state	Bishop et al. (2006), Dane (2011)
Increased level of attention	Weick & Sutcliffe (2006) Hales & Chakravorty (2016)
Reduced employee turnover	Dane & Brummel (2014)
Change of perspective through experience	Levinthal & Rerup (2006)
Increased sensitivity to other members' perspectives	Chandwani, Agrawal & Kedia (2016)

employees is a possible sign of increased individual mindfulness. These examples demonstrate that when a mindfulness-focused approach based on strategy is presented to operations by middle management, it may result in increased individual mindfulness and consequently into changes in employee behavior (Vogus & Sutcliffe, 2012). These changes in employee behavior stem from the relationship between organizational mindfulness and mindful organizing.

Hence, we can see that the answer to our general research question (Q) is positive. We even have a hint on the follow-up question (FQ1), i.e. organizational mindfulness implies individual mindfulness.

4.2 The Effects of Individual Mindfulness and its Connection to Organizational Mindfulness

We shall now address the connection between individual and organizational mindfulness from the opposite direction, i.e. whether individual mindfulness of employees leads to organizational mindfulness. An overview of the relevant literature used to answer this question is summarized in Table 2, which shows effects of individual mindfulness.

Contrary to individual mindfulness, organizational mindfulness is neither an intrapsychic process nor a set of intrapsychic processes (Weick et al., 1999). It is a function of social factors in the organization as well as communication (Vogus & Sutcliffe, 2012). In other words, organizational mindfulness is a relatively stable characteristic of the organization, emerging from its structures and processes, reinforced by its leadership (Ray et al., 2011; Sutcliffe et al., 2016).

Increasing organizational mindfulness is a complicated task as organizations are held together by concepts and generalizations (Weick & Putnam, 2006). One might be under the impression after reading this description, that organizing goes against mindfulness, which is connected to improvisation and adaptation to the unexpected. However, a number of authors suggest that organizing makes organizations mindful. Weick and Sutcliffe (2006) argue that accidents are not sudden, they form gradually and provide us signs of their approach. Thus, attention must be stable, norms and routines must specify, and attention focused on certain objects and diversions must be eliminated. According to Levinthal and Rerup (2006), the existence of a wide set of routines provides a good foundation for improvising and new actions.

Organizing, however, does not consist only of completely mindful actions. Mindfulness in an organization starts with the element of surprise when this element is acknowledged when organizations accept that there might be unpredictable situations. According to Jordan et al. (2009), rules and routines that support mindfulness are aimed at building a structure more than institutionalizing surprise and instability. An existing set of available initiatives enables an organization to react quickly and to execute a wider variety of actions. Another option is to recombine existing routines; this gives individuals broader options, and thus enables them to react quickly (Levinthal & Rerup, 2006).

Organizational mindfulness builds context by giving hints about what the organization expects, rewards, and supports (Ray et al., 2011). It only works if it is implemented in a top-down fashion, initiated by top management, synchronized through every level of the organization by middle management, and applied in frontline operations (Ocasio, 2011; Rerup, 2009; Vogus & Sutcliffe, 2012).

The arguments given above show us that organizational mindfulness consists of a set of well implemented and managed routines and HR practices. These include using action teams and job rotation. The outcome of these routines and practices is growth of employees' reluctance to simplify by offering multiple perspectives. Additionally, regular and frequent communication between management and employees is suggested, since it leads to an increase of sensitivity to operations and to investing in the development of the employees' ability to improvise and act in conditions of uncertainty (Levinthal & Rerup, 2006; Vogus & Welbourne, 2003). Hülshager et al. (2013) suggest that individual mindfulness helps members of organizations obtain an objective perspective even in stressful situations, which may contribute to communication between individuals in such situations, and support deference to expertise. This view seems to be supported also by Chandwani et al. (2016), who suggest that individual mindfulness makes individuals more sensitive to other members' perspectives, as well as by Levinthal and Rerup (2006), who claim that individual mindfulness contributes to changing perspectives based on experience. As such, individual mindfulness seems to make individuals more likely to become aware of and accept perspectives different than their own, such as perspectives of experts in crisis situations. There seems to be a good case for individual mindfulness contributing to the likelihood that individual members will engage in extensive communication. Additionally, being aware of and accepting new and different perspectives may result in viewing situations in a new light as opposed to viewing them as versions of modular situations with pre-existing answers. As such, the greater sensibility to new perspectives resulting from individual mindfulness may lead to rules and routines being either used in new ways, or discarded where appropriate, being later updated based on new available information.

The additional tolerance of workloads and increased job satisfaction which Hülshager et al. (2013) further suggest as a consequence of individual mindfulness may contribute to the likelihood that members will work well as teams in order to achieve success, as individuals may become more willing to work hard to learn from and prepare for crises. The notion that individual mindfulness contributes to commitment to resilience is supported by Bishop et al. (2006) and Dane (2011), who suggest that individual mindfulness has a positive influence on mind-state. This positive

influence may make employees more willing to work as a team to prevent crises in their organizations by making them more satisfied. This is supported by the finding that individual mindfulness reduces employee turnover (Dane & Brummel, 2014). Therefore, members of organizations are more likely to pay attention to small mistakes and signs of failure, communicate these mistakes and signs within their work environment to update information.

Finally, Ie et al. (2012) find that individual mindfulness leads to increased flexibility, attention span and creativity. This increase in flexibility and attention span may improve the ability of individuals to learn from and prepare for crises. Weick and Sutcliffe (2006) and Hales and Chakravorty (2016) confirm that individual mindfulness improves attention levels, while Olafsen (2017) asserts that individual mindfulness improves judgment and problem-solving capabilities. This further supports the notion that individual mindfulness contributes to innovative problem solving and learning, thus creating new knowledge which can then be communicated across the organization.

It seems that the presence of individual mindfulness in a high number of employees in the workplace can help to develop or even lead to developing *mindful organizing*. Though this concept is closely related to organizational mindfulness, they, however, should not be confused, as there are important differences between these two concepts. Mindful organizing is a dynamic social process based on extensive communication, information updating and teamwork (Vogus & Sutcliffe, 2012; Weick et al., 1999), as compared to organizational mindfulness, which is a relatively stable characteristic of the organization consisting of routines and guidelines. It is important to note, that mindful organizing is not a part of organizational mindfulness, it is, however, a useful tool for transforming principles of organizational mindfulness into action (Vogus & Sutcliffe, 2012; Weick et al., 1999).

Thus, the answer to our second question (FQ2), i.e., how is individual mindfulness connected to organizational mindfulness, is unclear and needs to be elaborated, which we will do in the next sections.

5. Theoretical framework

Based on our literature review and our understanding of organizational and individual mindfulness we can say that both of these concepts are deeply connected to specific awareness. This awareness is specific in several ways.

According to Langer (2016), mindfulness includes drawing distinctions based on a specific frame of reference or meaning. This is in accordance with Tsoukas (2005), who argues that drawing distinctions is dependent on the frame of reference, context, or theory adopted by the person drawing the distinctions. As such, awareness is contextually dependent; it needs to be meaningful concerning our aim. If you notice the color of your coworker's shirt, you are perceptive, but if you cannot put it in the frame of your aims, you are not mindful. This notice is not necessarily judgmental, it is not about right or wrong, but it is about taking one's perception in their context and not as non-connected impressions.

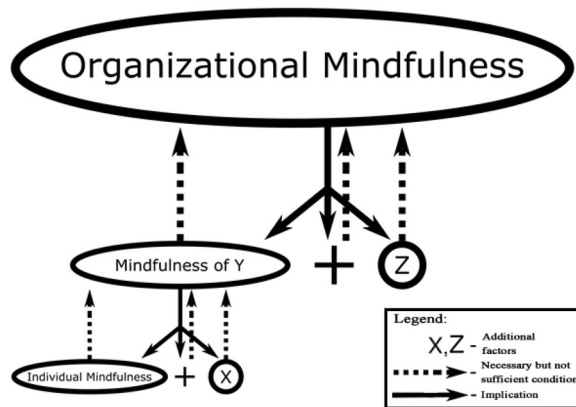


Figure 2. Theoretical framework – connection between organizational and individual mindfulness.

Second, this awareness is thus qualitatively better than usual “blind” awareness. This means that what we are aware of has meaning. Third, the amount of details which can be perceived depends on the depth of knowledge of the aims. Fourth, with regard to practice, there is always a limitation of information which can be processed. Hence, mindfulness protects the system from being overrun by information.

If we look at the connection between organizational and individual mindfulness, we see that organizational mindfulness implies individual mindfulness. We generalize this to say that whatever the level of organizing (organization usually being the top/macro level, group the middle/meso level, and individual the bottom/micro level of organizing), or even collective mindfulness as described by e.g. Butler and Gray (2006), the mindfulness on a higher level of organizing always presupposes that there is at least one unit on the level of organizing below it which is also mindful. This relationship, however, only works in a top-to-bottom (organization to groups to individuals) direction, not bottom-to-top. If a unit on the lower level of organizing is mindful, it does not necessarily mean the higher level will also be mindful. Mindfulness on the lower level of organizing is thus only a necessary condition for the mindfulness on the higher level but not a sufficient one.

This connection is due to the emergent nature of mindfulness. Something more than mere attention is needed on the higher level of organizing. Having perfect eyes and seeing everything is not enough, one must be able to place what one sees into a frame of reference. In a similar way, the higher level of organizing needs to be able to put what the units on the lower level see into a frame of reference, otherwise it will be unable to make use of those inputs. This also points to the necessity of appropriate leadership with respect to mindfulness of an organization or, to be more specific, there is a need for an executive unit to take into account mindful insights.

Another important point from this theory is that a mere training of individual mindfulness can be beneficial, yet it can also backfire if inappropriate context is taken as a source of sensemaking. The context knowledge of the organization’s aims is necessary. In order to successfully create and maintain new routines, procedures and rules associated with organizational mindfulness, a training of individual mindfulness usually also takes place. This training is usually focused on specific abilities, i.e. we

train the individual in order to focus her attention on details important to her tasks. This may, however, lead to incorrect, or perhaps overly narrow frames of reference if the individual is mindful but her aims are not in accordance with aims of the organization or if the individual does not have a good knowledge of the aims of the organization. In such cases, she can overload communication with information.

In conclusion, organizational mindfulness implies individual mindfulness but not vice versa. The connection from individual mindfulness to organizational mindfulness is ambiguous in the present literature. The major role in this direction of influence is played by context, i.e. knowledge of the organization's aims.

Figure 2 depicts three levels of organizing, but there can be as many levels as necessary. Organizational mindfulness is the top level here, but we do not rule out the possibility of an even higher level (meta-organization). Organizational mindfulness is connected to mindfulness on a lower level of organizing Y (mindfulness of Y) in such a way that for organizational mindfulness to occur there has to be some mindfulness of Y, and respectively, for mindfulness of Y to occur, there must be mindfulness on the level of organizing below Y, and by analogy the same is true for all levels all the way to the bottom level. However, there is no guarantee that mindfulness will occur on a higher level of organizing if we know only about the occurrence of mindfulness on the lower level. In other words, mindfulness of Y does not guarantee organizational mindfulness. Hence, we can say that for mindfulness on a higher level of organizing to occur, the existence of mindfulness on every lower level is a necessary condition.

However, it is not a sufficient condition. In addition to mindfulness on the lower level of organizing, additional factors are needed. The specific nature of these additional factors is unique for each level of organizing. In Figure 2, the additional factors are depicted as X and Z. The existence of these factors and their connection to mindfulness on lower levels of organizing are other necessary conditions for mindfulness on a higher level to occur. The exact nature of these additional factors on specific levels of organizing is as yet unknown, but they need to be connected with mindfulness on that specific level. For that reason, Figure 2 depicts necessary conditions as continuous arrows, i.e. something that can be deduced from the existence of mindfulness on the higher level.

While training mindfulness on the individual level can have positive impact on mindfulness on the organizational level (since it is a necessary condition), additional factors are needed to instantiate organizational mindfulness. This is depicted as dashed arrows in Figure 2.

6. Discussion

We explored the relationship between individual and organizational mindfulness from two directions: whether organizational mindfulness in some particular way is connected to individual mindfulness, and whether individual mindfulness in some particular way is connected to organizational mindfulness.

Our literature review leads us to answer our research question positively. Furthermore, concerning contemporary literature dealing with the topic, we can say

that organizational mindfulness is based on individual mindfulness in employees. In practice, we can see a mindful organization sets up organizational conditions such as specific routines, rules, guidelines, or training programs, which lead to a mindful behavior of its employees (cf. High Reliability Organizations' principles by Weick et al., 1999; Weick & Sutcliffe, 2001; Vogus & Welbourne, 2003). According to Sutcliffe et al. (2016), mindfulness can be considered both a state and an ability which can be taught or stimulated by leaders through specific social processes, such as recognizing new perspectives or planning for upcoming events.

Strong positive effects of individual mindfulness on productivity and performance mentioned earlier in this paper demonstrate the importance of individual mindfulness for organizations that want to remain competitive. Therefore, organizations should look for ways to improve their employees' individual mindfulness, but it must be in accordance with their organizational aims. Incorporating individual mindfulness training programs is a part of organizational mindfulness, it is thus debatable which parts of organizational mindfulness are significantly connected to developing individual mindfulness. There are several other means by which an increase in organizational mindfulness can be achieved – so-called individual mindfulness training methods. These are already being put into practice by several large corporations, e.g., the Search Inside Yourself program developed and used by Google (Search Inside Yourself Leadership Institute, 2017). Other examples include Mindfulness-Based Stress Reduction (Kabat-Zinn, 1982, 1990), Mindfulness-Based Cognitive Therapy (Segal et al., 2002), and Acceptance and Commitment Therapy (Hayes et al., 1999). The effects of these programs have been subjected to multiple studies, which generally show that they are effective at developing individual mindfulness (cf. Shapiro et al., 1998; Grossman et al., 2004; Carmody & Baer, 2008). As such, incorporating mindfulness training programs into an organization's system of training and employee development may be an effective way of developing individual mindfulness in employees. However, it is debatable from an economic perspective whether the costs of employing these programs are outweighed by the benefits of greater individual mindfulness. This question is relevant for decision-makers in organizations and may be an adequate way forward in future research.

As for the connection between individual mindfulness and the development of organizational mindfulness, the situation is much less clear. It seems that although individual mindfulness is helpful in developing organizational mindfulness, it is not enough by itself. Individual mindfulness is an intrapsychic process, whereas organizational mindfulness is a set of social and organizational processes and structures set up by the organization's leadership to achieve certain goals.

Individual mindfulness thus does not lead directly to development of organizational mindfulness, regardless of whether one employee is mindful, or all of them. To develop organizational mindfulness as a permanent characteristic of an organization, guidelines, rules and tools need to be put in place. While individual mindfulness is a helpful tool in developing organizational mindfulness (Chandwani et al., 2016; Sutcliffe et al., 2016) a wide knowledge of processes and principles of the organization and the concept of organizational mindfulness are more important. We consider this insight and theoretical framework, which advance the debate about the relationship

between individual and organizational mindfulness, to be one of the main contributions of the paper, along with the insight that mindfulness on a higher level of organizing implies mindfulness on a lower level of organizing.

Concerning the limits of our paper, we did not take into account different methods of mindfulness measurement available to scientists at this time. Our interest at this moment is in the theory as such. The question whether notions of organizational or individual mindfulness were correctly operationalized and measured, is, though interesting and important, different from our aim at the moment.

Also, it is necessary to say that even though there might seemingly be two traditions of mindfulness (western and eastern, see e.g., Vogus & Sutcliffe, 2012: 731), it seems to us that in the end both of them end up with the same goals and are trying to describe the same problem. I.e., we do not discriminate between these two at this moment, because we are focused on today's state of theories. But as in a case with methods of measurements, we agree that this might be another interesting topic and we would welcome future research in this topic.

Additionally, this paper only considered literature from one database, the Web of Science database, which narrowed the search to some extent. However, this database contains peer reviewed research of high overall quality, thus being a decent representation of the current academic consensus in certain areas.

Another limit of our research rests on the notion of expertise. Weick et al. (1999) claim that the richness of the mindful state depends on the size of the action repertoire, action meaning, and the ability to react to current situations. In other words, the extent to which people can mindfully react to situations depends on how well they understand them, i.e., the level of their expertise. We recommend future researchers to explore what duration, intensity, breadth and structures of expertise are needed to support development of mindfulness on individual level and through skilled and knowledgeable co-workers on the collective or organizational level (*cf.* Vogus & Welbourne, 2003). Even though this is highly important in practice, we were unable to find enough of the theoretical works dealing with this specific topic. Hence it is an open question, and especially important for practice, how to use this general approach and specification of the connection between organizational and individual mindfulness.

Throughout the review, differences in opinion were apparent regarding the extent to which mindfulness should be integrated in the whole organization or concentrated into leadership, and which part of the organization is most important for organizational mindfulness to work. Vogus and Welbourne (2003) offer the idea that organizational mindfulness only needs to be present in key parts of the organization. For that reason, organizational mindfulness is omnipresent in organizations with concentrated operations, such as flight control, nuclear power plants, or the like. On the other hand, Vogus and Sutcliffe (2012) argue that as a consequence of concentrating organizational mindfulness on the upper parts of an organization can be a reduction of overall mindfulness. They offer an example with frontline firefighters who overlooked signs of a catastrophe, because they believed their respective leaders would detect and identify such signs. Ray et al. (2011) also see a limitation in concentrating organizational mindfulness and suggest that middle management is the answer,

functioning as a bridge between organizational and individual mindfulness. Weick et al. (1999) emphasize the importance of frontline workers, since they are the first ones who can encounter problems. The question of optimal concentration remains open and could be an opportunity for future research.

7. Conclusion

In this paper, we tried to shed some light on the current theoretical state of research on relationship between individual and organizational mindfulness and provide our theoretical frame for this relationship. In this endeavor, we followed up the works of Sutcliffe, Vogus, Dane, and others.

The topic of mindfulness has had the attention of authors for decades, since both individual and organizational mindfulness have great influence on a number of individual and organizational performance factors. The importance of this topic for the field of organization and management science is thus difficult to deny.

The connection between individual and organizational mindfulness was assessed from two directions, from organizational mindfulness towards individual mindfulness and vice-versa. We were led to a positive answer to our general question (Q). Research of the actual state of the theory has shown that while existence of organizational mindfulness implies existence of individual mindfulness (FQ1) the same cannot be said about the opposite direction (FQ2). The necessity of training individual mindfulness, to set conditions for such a training in organizations is thus vital and there are a few additional points which need to be addressed.

Organizational mindfulness consists of specific settings in an organization between its elements. Although we do not know all exact settings and elements the organization consists of, we do know that some of those elements have to be individuals and these must have individual mindfulness. Furthermore, because organizational mindfulness emerges from settings and elements, there is no direct way how to train it. Thus, we can only try to develop organizational mindfulness as a whole by training those aspects of the organization which we are sure are connected to organizational mindfulness. Hence the usual development of organizational mindfulness contains training of individual mindfulness. This means that by developing organizational mindfulness we usually also train individual mindfulness. Yet, simple training of individual mindfulness, if it is not connected to the specific nature of the organization (or if it is not transferable by the individual), does not lead to better organizational mindfulness.

Still, many things remain unclear and open for future research. For practical reasons, other elements of organizational mindfulness which can be trained need to be discovered. In theory, for example, the exact nature of the relationship between elements of organizational mindfulness and, more specifically, definition of mindfulness itself should be provided. To that end, the theoretical model of the mutual relationship between individual and organizational mindfulness presented in this paper should be experimentally examined in order to solidify theoretical understanding with data. Without further research, organizational mindfulness or even individual

mindfulness can become explanatory notions without any possibility for theoretical predictions and practical application.

The main contribution of this paper lies in the advancement of the debate about the relationship between individual and organizational mindfulness by presenting a new framework through which to look at these two concepts and the connection between them. Thus, we can say there can be no organizational mindfulness without individual mindfulness.

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ORCID

Peter Kelemen  <https://orcid.org/0000-0003-4094-2214>

Eva Born  <http://orcid.org/0000-0003-2242-0105>

Tomáš Ondráček  <https://orcid.org/0000-0003-3026-0455>

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