

ABSTRACT

This paper discusses the latest model and theoretical understanding around the concept of organisational resilience as it relates to organisational readiness to handle and manage complex socio-technical system fluctuations. The five key principles of organisational mindfulness are discussed along with what is seen as a nexus between the five principles and modern era complex system leadership theory. Suggestions are offered on how to enhance the collective mindfulness principles through strategic leadership efforts across the workforce, with a view to enabling organisations to become more resilient.

Developing organisational resilience: organisational mindfulness and mindful organising

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Introduction

Studies into how organisation can become resilient, while operating in high-hazard environments, sprung out of the research conducted on High Reliability Organisations (HROs) (Weick, Sutcliffe & Obstfeld 1999) in the 1990s. Organisations responsible for operations such as aircraft carriers, air traffic control systems and nuclear power were examined to see how they continued to operate in safety-critical and high-hazard environments. These high-hazard organisations were found to be focused on being ready for the unexpected by strategic efforts of having a high anticipation of what might happen and a readiness to respond through both stable workforce cognitive process and variability in workforce actions (Weick, Sutcliffe & Obstfeld 1999). These two workforce strategies maintain system functioning and provide a platform to manage system fluctuations when the unexpected happens.

Today, organisations outside of the HRO status are recognising the importance of being resilient in the face of unknown and unexpected events and acknowledge that they must strive to respond effectively to complex system fluctuations. Organisational resilience is discussed here with a view to instilling some of the latest insights into this concept and to outline how strategic leadership efforts can enhance organisational resilience as part of organisational strategy.

In studying HROs it was found that a key to their effectiveness was related to the close relationship between the workforce and a repertoire of workforce actions. In particular, the workforce was required to carry out a variety of actions to maintain the stability and resilience of the organisation. This represented a movement away from the standard, ridged and prescriptive processes often valued in organisations and was necessary to enabled system fluctuations to be effectively managed by the workforce at crucial times.

At the group level, workers were expected to take notice of new or developing variables within the system in a sense, increasing the organisational adeptness to become aware of and deal with changing workplace issues as they arise. In essence, workers were found to become collectively 'mindful' of what is happening within the system in which they operate. This allows responses that can manage system and workplace instabilities with a view to preventing escalation into more serious occurrences.

The ability of organisations to be resilient is anchored in cognitive processes of the workforce whose actions need to be flexible, responsive and focused on the best possible outcomes in the face of failure, which may have severe consequences. The notion is that to be successful in managing the unexpected (being resilient) is tied to a workforce attribute of being 'collectively mindful'.

Those working in the workplace health and safety and human factors areas show an increasing interest in the research and application of individual and collective mindfulness to a gain understanding of how mindful cognitive processes effect the workplace and one's propensity towards safe work behaviour, safety occurrences and human error (Hopkins 2002, Sibinga & Wu 2010, Glomb, Duffy, Bono & Yang 2011, Klockner 2013, Klockner & Hicks 2015). A recent, extensive, cross-sectional review of mindfulness and its applications in organisations has shown many benefits (Sutcliffe, Vogus & Dane 2016).

At the group and organisational mindfulness level, five principles grounded in cognitive inquiry and interpretative capabilities for action, make up what is called 'collective mindfulness' (Weick, Sutcliffe & Obstfeld 1999, Weick & Sutcliffe 2001) with these principles identified as the necessary ingredients in organisational resilience. The principles of collective mindfulness are:

- preoccupation with failure
- reluctance to simplify
- sensitivity to operations
- commitment to resilience
- deference to expertise.

These processes are also processes of mindful organising and enable awareness, wisdom and reliability (Weick 2009).

Organisational mindfulness - five key principles

Organisational mindfulness is described as the extent to which an organisation is able to assess threats that may emerge and capture such detail so they are able to respond quickly and reliably to prevent incidents or system failures (Weick & Sutcliffe 2015). Collective mindfulness is manifest in organisations by the workforce being sensitive to changes in the environment, continuously updating the way staff think and perceive things and by appreciating the importance of context (Weick & Sutcliffe 2001).

Principle 1: Preoccupation with failure

Preoccupation with failure relates to the way that the organisation and its workforce notice and deal with failures. Failures are not necessarily large safety events but cover issues including deviations, risks, bad news items, surprises, things out of context, near misses and errors (Weick & Sutcliffe 2015). A preoccupation with

failure 'is a pre-occupation with maintaining reliable performance... and reliable performance is a system issue' (Weick & Sutcliffe 2015 p. 55).

Principle 2: Reluctance to simplify

Reluctance to simplify focuses on the organisation's capacity to manage variation and identify signs that the unexpected is unfolding (Weick & Sutcliffe 2015). Successful HROs display a belief that work tasks and the environment are complex systems and they are reluctant to simplify practices, procedures and interpretations (Weick, Sutcliffe & Obstfeld 1999). Simplifications of the way in which interpretations are made of situations are considered high risk and workers are encouraged not to just keep going ahead with tasks when their interpretation and intuition identify anomalies that may lead to dangerous situations (Weick, Sutcliffe & Obstfeld 1999).

Principle 3: Sensitivity to operations

Sensitivity to operations is a defining feature of a collectively mindful organisation, where the front-line operators display high levels of situational awareness and strive to understand what is happening in the present as well as looking for what may happen in the future (Hopkins 2002). These front-line operators develop an overall big picture of the organisation's operations to prevent accidents and failures through anticipation of future events (Weick & Sutcliffe 2015).

Principle 4: Commitment to resilience

Mindful organisations demonstrate a commitment to resilience by dealing effectively with errors and unexpected events. They are not disabled by such errors but are able to mobilise in order to deal with them (Weick, Sutcliffe & Obstfeld 1999). These organisations develop anticipation and prediction of potential dangers before they occur. When an unanticipated danger does occur these organisations are able to initiate quick actions and responses to cope and rebound.

Principle 5: Deference to expertise

Deference to expertise is when the organisation hierarchical structure normally in place is relinquished in an emergency to enable the most experienced people to be the ones dealing with the problem (Weick, Sutcliffe & Obstfeld 1999, Weick & Sutcliffe 2015). Deference to expertise is when experience and expertise must be applied to variations in normal functioning regardless of workforce hierarchical positions.

The five principles do not operate in isolation nor are stand-alone elements. They must be enhanced through a complex systems-thinking lens focused on understanding that social-network interactions and building collective-mindful relationships is required to enable critical co-occurrences to be managed.

Collective mindfulness

The five principles represent a collective workforce effort in maintaining organisational functioning and ensuring ongoing resilience. Theory supporting collective mindfulness developed into a model put forward by Tim Vogus and Kathleen Sutcliffe in 2012, which endeavoured to answer the questions raised by researchers as to whether collective mindfulness is strategic, driven from the top-down and enduring (Ray, Baker & Plowman 2011) or focused on operations as bottom-up and fragile (Vogus & Sutcliffe 2012).

The model suggested that two actions are in play; that of 'organisational mindfulness' and 'mindful organising'. Both are required for organisations to achieve improved levels of organisational mindfulness.

It is proposed that the two mindfulness actions are undertaken within an organisation but by different levels of the workforce, based on the roles they perform. There are inherent differences between top administrators who are performing the strategic 'organisational mindfulness' role more focused on outcomes, compared to the front-line workers who undertake a 'mindful organising' role, focused on operational outcomes. Middle managers play an equally important role, translating and enabling, between the other two organisational levels, as shown in Figure 1.

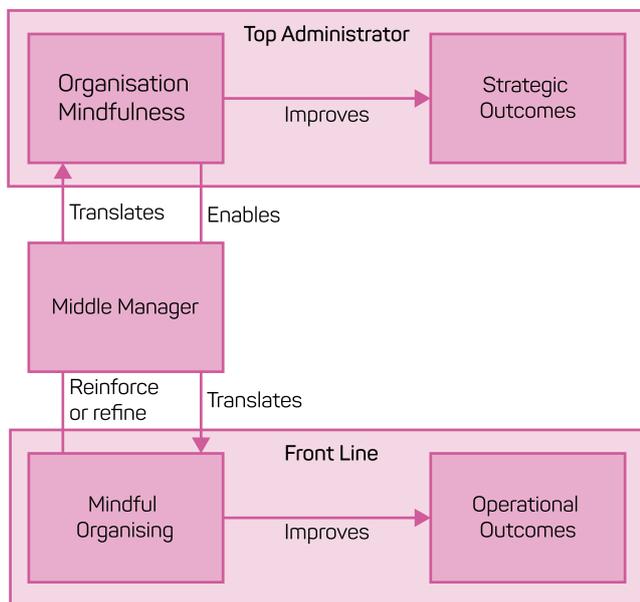


Figure 1: Reconciling organisational mindfulness and mindful organising.

Source: Vogus T & Sutcliffe K 2012, *Organizational mindfulness and mindful organizing: A Reconciliation and path forward*, Academy of Management Learning and Education.

Leadership of complex socio-technical systems

To deal with modern complexity there have been, and continues to be, major theoretical advances in systems thinking and understanding of how work changes in today's complex socio-technical systems. Complex in this respect does not mean confusing. It means interrelated and connected. Leaders find themselves dealing with increasing volatility and uncertainty as interconnectedness becomes one of the biggest challenges facing organisational leaders (Uhl-Bien & Arena 2016).

To cope with this complexity, leaders need to 'apply complexity thinking, where leaders learn to read a system and watch for signs of emergence ... those who can apply it know how to use pressures, conflicting, linking up, and timing to anticipate, interact with, and channel emergence' (Uhl-Bien & Arena 2016, p. 17). The response to system fluctuations becomes an adaptive one that capitalises on the collective intelligence of groups and networks (Uhl-Bien & Arena 2016). The point is that there appears to be a strong nexus between the concepts of organisational mindfulness and how current leadership theory suggests that complexity should be handled.

Complex systems theory requires an understanding that managing unexpected fluctuations in organisational systems ranges from managing everyday small system fluctuations through to major events that may require a crisis management approach to re-stabilise the system. In both cases, the system, once re-stabilised, will have changed or emerged into a different version of the former. This concept of the management of emergence and system change is shown in Figure 2.

The question is how do organisation leaders, those top administrators (as per the Vogus & Sutcliffe 2012 model), responsible for organisational mindfulness endeavours and strategic outcomes instil resilient and mindful processes and practices in an attempt to ensure system resilience in the face of regular system fluctuations as a dynamic practice? The answer appears to be to enhance strategic efforts to integrate mindful concepts into routine regular work practices as a long-term strategy. This creates a consistency of actions that reduces the gaps between handling regular tasks and normal fluctuations and the response to more precarious unexpected events.

Organisational System – Managing the Unexpected

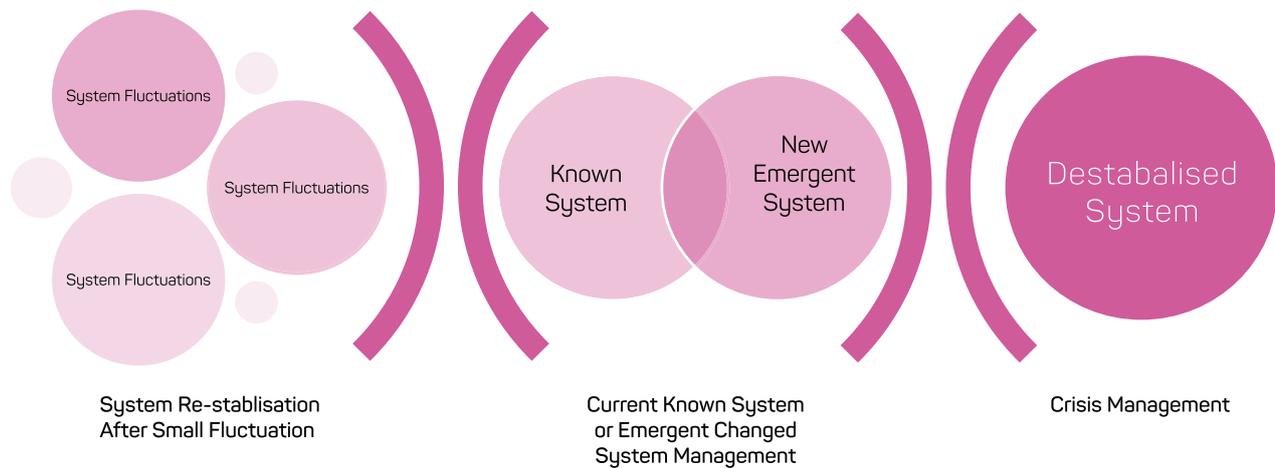


Figure 2: Organisational System Management – Managing the Unexpected.

Leadership: towards an adaptive management framework

While several questions on how to enhance organisational mindfulness still appear theoretically unanswered, those interested in how to increase organisational resilience can take comfort that organisational resilience theory and its practice has developed to a point of accepted inclusion in business endeavours.

The Vogus and Sutcliffe (2012) model points towards understanding that three main roles come into play within an organisation interested in enhancing organisational resilience, and include the strategic efforts by top administrators, the information transfer role of middle managers and the mindful work at the coal face undertaken by the front-line workers.

Top administrators need to move away from top-down control and isolated strategic planning to embrace the notion that 'adaptive' leadership sustains modern organisational systems. Adaptive leadership has been defined as 'leadership that occurs within the interdependent interactions of emergent collective action and that helps produce emergent outcomes such as learning and adaption' (Schreiber & Carley 2007, p. 232). Schreiber and Carley (2007) suggest two outcomes arise from an adaptive leadership style. It creates conditions that stimulate emergent collective action and it enables collective action responses to filter to managerial level to enable strategic planning and exploration. Complex system leadership theory and organisational resilience theory both point to adaptive management styles as the key for enhancing collective actions in order to maintain system functioning.

Middle managers play a critical role as they link system unity and are a channel for information exchange (Uhl-Bien & Marion 2009). They translate information

from the bottom-up and top-down and share information throughout the organisation on conditions and adaptive learning outcomes from front-line mindful organising endeavours. They can also provide connections between elements of the organisation particularly for distributed or decentralised teams. Their role is to ensure that inter-rational elements of the system can and do work in union. The role of middle managers is to minimise the gap between work as perceived (by administrators) versus work as actually done (at the front-line).

Front-line workers need to be 'mindful organising' and for this to happen top administrators need to enhance the five principles of collective mindfulness throughout the front-line workforce. Preoccupation with failure allows pre-emptive information to be shared where there is an accurate reporting system in place and a reporting culture emphasised. Reluctance to simplify is achievable where the importance of employing a systems-thinking perspective is encouraged in front-line workers. Sensitivity to operations occurs where strategic big picture messages are shared with front-line workers and where system thinking encourages the noticing of dynamic system fluctuations. Commitment to resilience is instilled where workers are encouraged and allowed to investigate, learn, make decisions and act without unnecessary control. This fosters a learning and reporting culture. Strategically the message is made clear that learning and adaptation are required to enable human capital components to make dynamic connections. Humans are valued for their thinking, insights, intuition and repertoire of actions. Deference to expertise means that all workers are acknowledged, valued and recognised for their expertise. Humans are seen as assets and encouraged to interact socially to solve problems. The flow-on is that adaptive leadership becomes distributed. Human capital appreciation accumulates in the system in the form of greater knowledge (Schreiber & Carley 2007).

Conclusion

The research, theory and modelling around the concepts of organisational mindfulness and mindful organising in relation to organisational resilience, particularly that proposed by Vogus and Sutcliffe (2012), reconciles how workforce roles within an organisation might lead to two distinct actions systems; one of 'organisational mindfulness' and one of 'mindful organising' that could be explained across three workforce domains. The intersection of these two concepts is the notion that skilled leadership and management is required for a dynamic relationship between maintaining order and growth and renewal after change. Leaders need to be complex systems thinkers who demonstrate an adaptive leadership style focused on the interactions of human capital and information sharing through social networks. This enables fluctuations in the systems to be effectively managed by workforce actions that can handle the day-to-day operational needs as well as managing the unexpected when it occurs.

For organisational mindfulness to produce strategic and operational resilience it needs to operate holistically across all organisational levels. It must be envisioned by top administrators, synchronised across levels by middle managers and translated into important workforce actions, particularly on the front-line. Front-line workers must be free to take mindful actions by refining processes and routines based on the five principles. The principles need to be espoused and supported by top administrations as part of strategic planning and enhanced by middle managers who translate them into the organisational actions.

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