You, J. J. 2023. An Overview of Organizational Resilience in Research and Strategy: Implications for the Future of Work. ***AIB Insights***, 23(3). https://doi.org/10.46697/001c.77387.

Article

An Overview of Organizational Resilience in Research and Strategy: Implications for the Future of Work

Jacqueline Jing You[1,2a]

[1] University of York, UK, [2] Durham University, UK

Keywords: organizational resilience, complexity theory, permeating boundaryless capability, everyday resilience, future of work

https://doi.org/10.46697/001c.77387

AIB Insights

Vol. 23, Issue 3, 2023

Prior literature on organizational resilience has been predominantly rooted in the perspective of "bouncing back," in which scholars across different disciplines have explored resilience resources and capabilities in isolation. However, when faced with persistent threats, bringing a system back to its prior equilibrium can make it more vulnerable as each successive threat possibly weakens the efficiency of the resilience mechanisms identified concerning a previous threat. This insight provides an overview of the state-of-the-art research on organizational resilience and suggests that resilience in organizations demonstrates a Permeating Boundaryless Capability (PBC), enabling organizations to reflect, re-energize and re-organize multiple response paths across space and time from micro to macro levels. Furthermore, this insight argues that Complexity Theory, as the emerging paradigm, offers an alternative view for understanding complex causes and interactions that contribute to organizational resilience. Implications for the future of work in research and practice are discussed.

RESILIENCE IN BUSINESS AND MANAGEMENT RESEARCH

Organizations operating in complex and dynamic environments inevitably face adversity that challenges performance or even threatens their survival (Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017). A wide variety of sources generate heterogenous adversity, ranging from natural events (e.g., earthquakes, wildfires, tsunami) to man-made events (e.g., regulatory changes, terrorism, civil wars, disruptive innovation) (Williams & You, 2018). Consequently, these discrete events cause various forms of disruption to organizations, thus leading to potential major crises. For example, extreme climate events (e.g., heatwave, storms) can have a direct impact on the airline industry, resulting in weather-related flight cancellations and delays, which may result in other forms of adversity to other actors, such as a liability risk to insurance companies and demand disruption to hotels, amongst others. According to a recent report from the Institute for Crisis Management, crisis news stories in 2020 exceeded almost one million more than in 2019, reaching 1,709,419, of which 614,944 were associated with Covid-19 (Hileman, 2021).

Organizations, as open systems, operate in a nexus with other actors (e.g., organizations, individuals) with which they conduct essential activities for their survival or improved efficiency (e.g., supplier-buyer activities, R&D alliances, co-marketing). This implies that all organizations are embedded in an environment of other organizations and a complex of societal norms, values, and collectives. Any small changes occurring in the environment may affect the entire ecosystem (e.g., the butterfly effect). The 2020 McKinsey Global Institute Report states that greater frequency and severity of climate hazards create more disruptions to global supply chains, including interrupting production, raising costs and prices, and having a negative impact on corporate revenues. The potential magnitude of organizational disruption can be influenced by how well members of organizations work together in preparing for and responding to adverse situations (You, 2022). This includes cognition (how people understand the nature of disruption), behavior (how people act in the face of disruption), and emotion (how people feel about disruption). These factors can often be interconnected and interact with each other in a nonlinear fashion, thus leading to complex organizations.

To understand such complex interactions, the interest of organization scientists in Complexity Theory (CT) has grown in recent decades (Anderson, 1999). CT is not a single theory, rather, it is a new paradigm encompassing various theoretical frameworks rooted in five intellectual traditions: Dynamical Systems Theory, Systems Science, Complex Systems Theory, Cybernetics, and Artificial Intel-

a Contact author: jacqueline.jing.you@york.ac.uk

ligence (Castellani & Gerrits, 2021). The emerging paradigm has shifted from normal sciences focusing on simple laws (e.g., binary divides) for understanding complex interactions to complexity sciences concerning complex causes that can produce simple effects. The premise is built on the assumption that some events cannot be anticipated before they occur (Schneider & Somers, 2006). This notion is similar to Wildavsky's (1988) definition of organizational resilience, which describes the capacity of an organization to manage disruptions as they manifest. Thus, resilience is viewed as the emergent property of organizational systems related to the inherent and adaptive qualities and capabilities that enable an organization's adaptive capacity during turbulent periods (Burnard & Bhamra, 2011). The emergent property is "a unique blend of cognitive, behavioral, and contextual properties that increase a firm's ability to understand its current situation and to develop customized responses that reflect that understanding" (Lengnick-Hall & Beck, 2005: 750).

Resilience in the business context refers to the capacity of an enterprise to survive, adapt, and grow in the face of turbulent change (Fiksel, 2006). Capacity enhancement involves an interactive process of relational adaptation amongst actors (e.g., individual, organization, or community), utilizing their capabilities (e.g., knowledge, skills, abilities, and processes) to interact with the environment positively before, during, and after adversity (Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017; You & Williams, 2023). Depending on the severity of the adversity emerging from disruptions, resilience can manifest in a wide variety of forms: "avoidance," "absorption," "elasticity," "learning," and "rejuvenation" (Mithani, 2020), of which the first three are commonly referred to as "risk management," "bouncing back," or "static resilience," while the last two are seen as "dynamic resilience" or "bouncing forward" (You & Williams, 2023). For example, organizational disruption may reveal a situation in which existing norms and practices may not adequately respond to the changing environment. Thus, managers should pay attention to the need to challenge any predetermined beliefs, assumptions, and behaviors (You & Williams, 2023) and quickly develop new workarounds by cultivating new collaborations and cooperation within and outside organizations.

Despite this, there is a lack of a commonly agreed definition of organizational resilience, which highlights some important issues in the existing resilience research. First, the existing literature on resilience in organizations seems to have been developed separately at different levels. For instance, at the individual employee level, resilience has been conceptualized as psychological capital built through developmental processes. At the organizational level, resilience is defined as the ability of an organization to positively adjust to adverse situations while maintaining desirable functions (Sutcliffe & Vogus, 2003). At the system level, resilience is viewed as certain features (e.g., culture, social connections) of an organizational system that can enhance its capacity to collectively respond to challenges (Williams et al., 2017). To date, conceptual similarities and differences in organizational resilience developed across different research streams have not been explored (Linnenluecke, 2017).

Second, extant theorizing on organizational resilience focuses on the internal resources and capabilities of an organization to sustain its performance in the face of adversity (Kahn et al., 2018; Lengnick-Hall, Beck, & Lengnick-Hall, 2011), while neglecting the external environment that organizations intensely and constantly interact with to acquire various inputs (e.g., material, labor, capital, and information) and sell their products and services (You & Williams, 2023). For example, commercial organizations primarily focus on utilizing raw materials and labor to generate new products or services for monetary gain, which can then be used to secure new raw materials, maintain labor forces, and perpetuate the activity pattern. In contrast, some non-profit organizations follow different methods because the source of energy renewal is directly generated by the organizational activity itself, such as providing expressed satisfaction to its members.

Third, the importance of relational connections within and outside of an organization provides the contextual conditions in which resilience-related resources and capabilities can be activated (Lengnick-Hall et al., 2011; Williams et al., 2017; You & Williams, 2023). Powley's empirical study (2009) shows that "resilience is a latent capacity…banked in the social relationships and ties of organization members" (p. 1294). In the face of adversity, "organizations can tap into their networks when responding to adverse events" (Sutcliffe & Vogus, 2003: 105). You and Williams (2023) uncovered a complex interplay of relational attributes between an organization and its external partners, thus shaping organizational resilience.

Fourth, despite positive sentiments in framing resilience, there is increasing attention on the dark side of resilience, including causes (e.g., identity constraints and relational asymmetry [You & Williams, 2023]) and consequences (e.g., resistance to change, escalation of commitment, poor adaptability to new norms [Williams et al., 2017]). Bouncing back to a previous equilibrium can make an organization more vulnerable because markets may differ fundamentally after crises. Consumer behavior may change in the post-Covid era because heightened sensitivity may develop in light of services and products that no longer satisfy consumer needs. Furthermore, operating as usual in the face of a frequently recurring threat increases the organization's vulnerability because the efficiency of the response mechanisms identified in the past event gradually diminishes (Mithani, 2020).

ORGANIZATIONAL RESILIENCE IN PRACTICE AS A STRATEGY

Organizational resilience in practice is often seen as a firm's strategy for dealing with uncertainty and risk (Wildavsky, 1988), surviving in the short term, and transforming in the long term. There are three strategies that organizations have widely adopted in recent decades (Lengnick-Hall & Beck, 2005), ranging from passive to proactive responses to the changing environment. The first

strategy is the defensive strategy (e.g., acquiescence, avoidance, compromise), which aims to reduce a firm's interaction with its environment to protect itself from any adverse consequences of environmental change. Such a passive strategy might be more effective when an environment changes slowly and predictably, which would otherwise lead organizations to become more vulnerable because of not keeping up with the pace of changing environments. The second strategy is the reactive strategy (e.g., manipulation), meaning organizations try to meet every environmental change with a corresponding organizational action. This strategy is constrained by its administrative arrangements, using minimum resources to effectively realign the firm with new environmental conditions. This is appropriate when faced with moderate levels of complex environments. The third strategy is the proactive strategy, which manifests through forecasting and strategic planning in supply chain management. It demonstrates a firm's ability to exploit existing resources through innovative action, which helps to effectively anticipate and capitalize on environmental changes. This is particularly helpful when faced with highly complex environments.

Despite the helpfulness and usefulness of these strategies, delving deeper into some of the underlying assumptions of these strategies raises at least two questions. First, the primary assumption is subjective or mitigable uncertainty, which concerns various knowledge problems (Packard & Clark, 2020). Not only does it include uncertainties due to a lack of understanding of cause-effect relationships but also refers to those uncertainties for which the tool needed to mitigate them may not yet be available. Consequently, this leads to an inability to assign probabilities to the likelihood of future events or to accurately predict what the outcomes of a decision may be. Thus, the trajectory of environmental change is from one stable status to another when knowledge problems are solved. The organization's adaptation primarily focuses on adjusting the firm's internal activities to accommodate the new equilibrium conditions. This may not always be true because, from the perspective of CT, environments shift in nonlinear, dynamic patterns that never establish equilibrium.

The second assumption of these traditional strategies advocates an optimal balance between exploring new opportunities and exploiting existing capabilities. Following the law of nature, this is very much desirable. Over-emphasizing the optimal balance can make it more challenging for firms to generate or implement the novel or unconventional action required in dealing with crises. As a result, this may lead to a major crisis because of the accumulation of these adverse effects.

AN ALTERNATIVE VIEW ON ORGANIZATIONAL RESILIENCE

When organizations experience disruptions, what is common is to begin with the experience of environmental uncertainty and then move to the implementation of organizational routines or other mechanisms (e.g., tools and techniques) to cope with uncertainty and realize performance consequences (success vs. failure). Thus, managing disruptions emerging from uncertainty is central to resilience study. According to You et al. (2021), there are two common attributes of organizational disruption: creeping development (e.g., complexity, emerging state, interactivity) and sudden shock (e.g., novelty, indiscernible situations). The former views disruption as the gradual development of situations stretching an organization's resources to the point of impairment, whereas the latter views disruption as a discrete and unexpected issue that leads to either foreseeable or unforeseeable issues.

Following this, Williams and You (2021) investigated four real-world cases of sudden shocks (e.g., the MH17 air crash and the 2008 Financial crisis) and creeping developed disruption (e.g., the failure of Tesco's Fresh and Easy project in the US market and the economic system of the remote island St. Helena). They found that resilience is a Complex Adaptive System (CAS), which manifests as a *permeating boundaryless capability* (PBC), allowing a focal organization, in the face of adversity, to reflect, re-energize, and re-organize multiple response paths from micro to macro levels in order to survive and grow. The *permeating* aspect of the capability emphasizes the temporal and spatial dimensions of resilience that help an organization manage any disruption permeating across levels and creating new disruptions. The *boundaryless* aspect of the capability refers to the ability of the organization to configure internal and external connections amongst individuals and organizations across functional and organizational boundaries to make adjustments to small- or large-scale disruption. Several empirical studies on organizational resilience show complex and interactive connections among actors within and outside of the organization that activate resilience (Ashiru, Nakpodia, & You, 2022; Dentoni, Pinkse, & Lubberink, 2021; Williams, You, & Joshua, 2020; You & Williams, 2023).

We argue that the notion of PBC shares certain attributes of CT, including:

- Non-linear dynamics and emergent properties, implying that changes cannot be predicted only by the constant relationships among the actors in the system;
- Capacity for self-organization, implying that the emergence of new forms may occur;
- Path dependency;
- Diverse agents (or actors) with imperfect knowledge linked through networks, implying that the behavior of one part of the system may affect other parts in unintended or unpredictable ways;
- Openness and connectedness with a permeable and flexible boundary;
- Co-evolution and adaptation, implying that changes in one part of the environment may stimulate wider system change.

These attributes imply, for example, that we should not consider organizations as closed systems; rather, they are open to external influences, which in today's world, might

be processed at a global level, as well as at their respective societal or national levels.

EVERYDAY RESILIENCE AS A PRACTICE FOR THE FUTURE OF WORK

Resilience, as a strategy, emphasizes how an organization defines and manages its relationships with the environment in coping with uncertainty (Wildavsky, 1988). The environment constitutes a nexus of relationships with economic actors (e.g., suppliers, customers, competitors), technology (e.g., IoT, Industry 4.0), sociopolitical actors (e.g., social actors, geo-political actors, the local community), and natural environments (e.g., fresh air, water, and climate change). Due to the interconnected and interdependent nature of these relationships, uncertainty can arise from situations in which actors fail to coordinate and cooperate. Furthermore, debates concerning how to build and manage multiple relationships to achieve sustainable development have remained largely isolated across different disciplines and sectors, which, in turn, adds an extra layer of complex and dynamic environments.

Everyday resilience as a practice is essential for building organizational capacity to prepare for, respond to, and recover from crises. Three aspects can be considered to improve resilience: cognitive capability (e.g., how do you perceive and interpret the changing environment in such a way that encourages formulating a resilient strategy), behavioral capability (how do you use knowledge and skills to identify or re-configure resources needed for the implementation of the strategy), and relational capability (how do you create conditions under which your perception and action are aligned). Organizations should deliberately reflect on the nature of disruption in four areas: where, when, who, and how.

The first aspect (where) pertains to the context in which organizations struggle to operate as usual. For instance, there is a vast array of terms used to describe the degree to which the severity of the context – including threats, environmental jolts, crises, shocks, setbacks, and organizational deviance – is perceived or experienced by individuals, organizations, or societies concerning disruption triggered by a wide variety of events occurring within ("Here") or outside ("There") organizations.

The second aspect (when) is related to the role of time that facilitates the coordination between the organizational activity cycle and the changing environment, such as when and how quickly to respond to disruptions. Disruption moves from "now," occurring in the past or present, to "then," focusing on the future. Timing can be critical because the speed of response could reduce the loss per unit of time and prevent the spread of the negative impact of disruption (e.g., negative emotions).

The third aspect (who) pertains to various attributes and capabilities possessed by the actors (e.g., individual, collective) that facilitate interactions with the environment to make a positive adjustment to adversity. The value of these attributes and capabilities is that they help actors access resources, offering a means to positively frame and respond to new challenges in achieving resilience. The result is that resilience manifests in different forms across different levels, such as psychological capital at the individual level, emotional capital at the team level, financial capital at the organizational level, social capital at the community level, and natural capital at the system level.

The fourth aspect (how) relates to mechanisms that activate resilience at each level and orchestrate various forms of resilience across different levels harmoniously to fully realize organizational resilience. These mechanisms include leadership, processes, technology, and formal/informal contracts. During crises, leadership is put under the spotlight because of societal expectations of leaders considered as "great" or "good" at orchestrating responses and restoring order in times of chaos.

CONCLUSION

This insight synthesizes interdisciplinary research on resilience and provides an overview of the state-of-the-art research and strategy on organizational resilience. The key to building and developing organizational resilience lies in three interconnected capabilities (e.g., cognition, behavioral, and relational), which can generate or regenerate various types of capital across space and time from micro to macro levels through purposeful and meaningful interactions among actors and between actors and the environment. Therefore, we encourage firms to proactively use the integrative framework (see Figure 1) as a practical tool to visualize and deconstruct complex situations and recognize various types of capital existing within and outside the firms that can be organized in a timely and adequate manner.

ACKNOWLEDGEMENTS

The author wishes to thank AIB Insights editor Elizabeth Moore and two anonymous reviewers for their constructive guidance in developing the insight paper. The author is also grateful for RISE (Resilience, Innovation, Strategy and Ecosystems) speakers: David Denyer, Chee Yew Wong, Mathew Hughes, Ran Bhamra, Chris Williams, Chris Carr, Matthew Allen, Sherry Thatcher, Chris Golding, Jiachen Yang, Jason Miklian, Trent Williams, Folajimi Ashiru, Franklin Nakpodia, Josh Morton, Aljona Zorina, and participants for the discussion and feedback at the RISE forum, the 2022 AIB UK & I (AIB Sustainability Shared Interest Group), the 2022 EGOS Colloquium (organizational networks), and the 2022 AOM Symposium: Resilience Activation sponsored by OMT and Entrepreneurship Divisions. Finally, the author would like to thank Tyrone Pitsis, Paul Westhead, and other members of the Centre for Innovation and Technology Management, Durham University Business School, and the Economic and Social Research Council (ESRC), UKRI [ES/W005611/1] for their support.

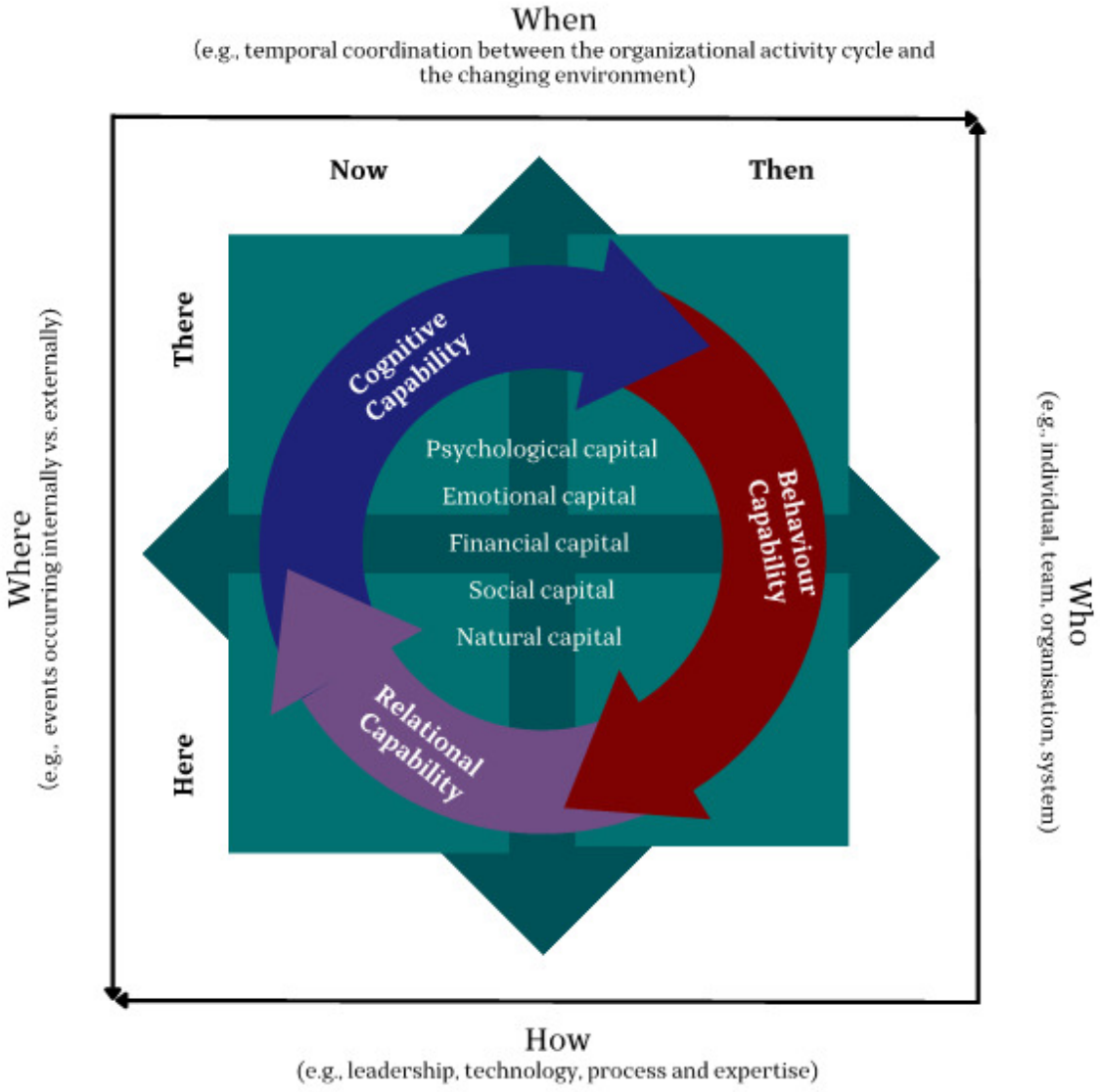

Figure 1. An Integrative Framework: Strategic Resilience for the Future of Work

ABOUT THE AUTHOR

Jacqueline Jing You (jacqueline.jingyou@york.ac.uk) is an acknowledged expert on organizational resilience and disruption with over 20 years of experience gained in global supply chains, industry, consultancy and academia. This experience has been spread across countries: China, the US, Canada, France, the UK and Africa. She is a lecturer (Assistant Professor) at the School for Business and Society, University of York, UK and a fellow of the Wolfson Research Institute for Health and Wellbeing, Durham University, UK. Her research focuses on resilience, innovation, strategy and ecosystems (RISE) in organizations and networks.

Submitted: January 16, 2023 EDT, Accepted: May 20, 2023 EDT

REFERENCES

Anderson, P. 1999. Perspective: Complexity theory and organization science. ***Organization Science***, 10(3): 216–232.

Ashiru, F., Nakpodia, F., & You, J. J. 2022. Adapting Emerging Digital Communication Technologies for Resilience: Evidence from Nigerian SMEs. ***Annals of Operations Research***. https://doi.org/10.1007/s10479-022-05049-9.

Burnard, K., & Bhamra, R. 2011. Organisational resilience: development of a conceptual framework for organisational responses. ***International Journal of Production Research***, 49(18): 5581–5599.

Castellani, B., & Gerrits, L. 2021. Map of the Complexity Sciences. ***Durham, Durham University***. https://www.art-sciencefactory.com/complexity-map_feb09.html.

Dentoni, D., Pinkse, J., & Lubberink, R. 2021. Linking sustainable business models to socio-ecological resilience through cross-sector partnerships: A complex adaptive systems view. ***Business & Society***, 60(5): 1216–1252.

Fiksel, J. 2006. Sustainability and resilience: toward a systems approach. ***Sustainability: Science, Practice and Policy***, 2(2): 14–21.

Hileman, D. 2021. ***ICM Annual Crisis Report 2020: Global News Coverage of Business Crises in 2020***. South Bend: Institute for Crisis Management. https://crisisconsultant.com/wp-content/uploads/2021/08/ICM-Annual-Crisis-Report-for-2020.Issued-August.3.2021.pdf.

Kahn, W. A., Barton, M. A., Fisher, C. M., Heaphy, E. D., Reid, E. M., et al. 2018. The geography of strain: Organizational resilience as a function of intergroup relations. ***Academy of Management Review***, 43(3): 509–529.

Lengnick-Hall, C. A., & Beck, T. E. 2005. Adaptive fit versus robust transformation: How organizations respond to environmental change. ***Journal of Management***, 31(5): 738–757.

Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. 2011. Developing a capacity for organizational resilience through strategic human resource management. ***Human Resource Management Review***, 21(3): 243–255.

Linnenluecke, M. K. 2017. Resilience in business and management research: A review of influential publications and a research agenda. ***International Journal of Management Reviews***, 19(1): 4–30.

Mithani, M. A. 2020. Adaptation in the face of the new normal. ***Academy of Management Perspectives***, 34(4): 508–530.

Packard, M. D., & Clark, B. B. 2020. On the mitigability of uncertainty and the choice between predictive and nonpredictive strategy. ***Academy of Management Review***, 45(4): 766–786.

Powley, E. H. 2009. Reclaiming resilience and safety: Resilience activation in the critical period of crisis. ***Human Relations***, 62(9): 1289–1326.

Schneider, M., & Somers, M. 2006. Organizations as complex adaptive systems: Implications of complexity theory for leadership research. ***The Leadership Quarterly***, 17(4): 351–365.

Sutcliffe, K. M., & Vogus, T. J. 2003. Organizing for resilience. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), ***Positive organizational scholarship: Foundations of a new discipline***: 94–110. San Francisco, CA: Berrett-Koehler.

Wildavsky, A. B. 1988. ***Searching for safety***. New Brunswick: USA Transaction Books.

Williams, C., & You, J. J. 2018. Building resilience in client organisations: The consultant's challenge. ***Management Consulting Journal***, 1(2): 28–37.

Williams, C., & You, J. J. 2021. ***Organizing for Resilience: Leading and Managing Risk in a Disruptive World***. Routledge. https://doi.org/10.4324/9780429298974.

Williams, C., You, J. J., & Joshua, K. 2020. Small-business resilience in a remote tourist destination: exploring close relationship capabilities on the island of St Helena. ***Journal of Sustainable Tourism***, 28(7): 937–955.

Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. 2017. Organizational response to adversity: Fusing crisis management and resilience research streams. ***Academy of Management Annals***, 11(2): 733–769.

You, J. J. 2022, March 26. Climate Feedback to Business Ecosystems: Extreme Event (s) and Disruption (s). ***RISE Talk***. https://www.jacquelineyou.com/post/climate-feedback-to-business-ecosystems-extreme-event-and-disruption.

You, J. J., Vu, M. C., & Williams, C. 2021. Building Skillful Resilience Amid Uncertainty. In S. H. Park, M. A. Gonzalez-Perez, & D. E. Floriani (Eds.), ***The Palgrave Handbook of Corporate Sustainability in the Digital Era***: 379–395. London: Palgrave Macmillan.

You, J. J., & Williams, C. 2023. Organizational resilience and interorganizational relationships: An exploration of Chinese business service firms. ***European Management Review***, 1–19.