

DEALING WITH UNEXPECTED CRISES: ORGANIZATIONAL RESILIENCE AND ITS DISCONTENTS

Elizabeth H. Bradley and Carlos Alamo-Pastrana

ABSTRACT

The chapter summarizes key literature, including emerging ideas, that is pertinent to the question of how organizations and their leadership deal with and are resilient through crises – highlighting what works in surviving unexpected crises. The chapter presents an illustration of organizational response; it concludes with an analysis of what is missing from the literature and recommends a path forward to expanding actionable knowledge in this area. Multiple, interdependent factors that foster resilience are identified including (1) being sensitive to possible threats – even seemingly small failures, (2) not relying on simple interpretations of events but rather seeking diversity to create a complete view of the environment, (3) leadership that embraces communication, transparency, and continuous learning, (4) valuing expertise and allowing expert staff to make decisions during a crisis, and (5) a cultural commitment to a resiliency mindset that accepts failures as opportunities to learn and improve. Emerging concepts that may foster resilience but require more research include managing paradox, emotional ambivalence and diversity. Additional areas for fruitful research include: the impact of short-term versus long-term, or successive, crises; external versus internal shocks and the framing of the source of shocks; how crisis affect the pace of innovation and change; the role of diversity in organizational responses to crises; and a set of methodological opportunities to leverage natural experiments or simulations in ways that allow for longitudinal data illuminating the full cycle of crises across

**Responding to The Grand Challenges In Health Care Via Organizational Innovation
Advances in Health Care Management, Volume 21, 1–21**



Open Access with copyright assigned to respective chapter authors. Published by Emerald Publishing Limited. These works are published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of these works (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licenses/by/4.0/legalcode>.

ISSN: 1474-8231/doi:10.1108/S1474-823120220000021001

organizations from anticipation, to response, to longer-term adaptation to the new normal.

Keywords: Organizational resilience; health care innovation; higher education; organizational change; paradox; diversity

INTRODUCTION

Nearly 50 years ago, at the American Academy for the Advancement of Science (AAAS), Massachusetts Institute of Technology professor of meteorology Edward Lorenz asked his audience, “Does the flap of a butterfly’s wings in Brazil set off a tornado in Texas?” (Vernon, 2017). His line of inquiry suggested that complex, dynamic systems are sensitive to small perturbations, which can have profound and unexpected effects on the system’s outcomes. This research countered traditional theories that date back to Sir Isaac Newton. No longer conceptualizing nature as a probabilistic system in which the outcomes could be predicted, Lorenz’s work gave rise to a branch of mathematics known as chaos theory – now widely used to assist in weather forecasting, robotics, medicine, economic analyses, and other applications.

Whether a system’s outcome is unpredictable because of limited measurements needed for accurate prediction, or because the system’s outcome is inherently unpredictable, unexpected events that create crises are intrinsic to organizational life. For health services researchers and policymakers, the challenge is not how to avoid unexpected crises but rather how to deal with them. The questions are: What do we know in terms of organizational functioning during and after unexpected crises? Where are the gaps in our knowledge about dealing with unexpected crises? How might we bridge those gaps?

We borrow from [Stuart Hall and Bill Schwarz \(1988\)](#) to frame the meaning of crisis, a term commonly used but rarely defined. According to [Hall and Schwarz \(1988\)](#), “crises occur when the social formation can no longer be reproduced on the basis of the pre-existing system of social relations.” Hall and Schwarz’s definition considers how crises cut across the broader society and ultimately threaten the dominant order’s ability to reproduce itself. This comprehensive understanding entails the political, economic, and cultural capacity of a society to generate meaningful relationships, bonds, and order across space and time ([Gilmore, 2007](#)).

The experience of COVID-19 helps us to better understand the ways in which multiple crises can interact to create larger challenges for a society to regenerate itself as previously conceived. In this case, global movements such as those against racial injustice like the Black Lives Matter movement, and others around the climate emergency, have converged with the COVID-19 pandemic in a syndemic – adverse interactions between diseases and social conditions ([Singer, 2009](#)) with more substantial implications for existing social norms and systems.

While much of this chapter focuses on unexpected crises, we also recognize that many crises are not, in fact, unpredictable. Rather their unexpectedness results from systematic filtering of historical facts and realities to underplay potential upheaval to existing orders. While few expected the COVID-19

pandemic, public health officials have long predicted the possibility of a catastrophic pandemic caused by any number of infectious airborne pathogens. For decades, ongoing advocacy has called for a more robust global health governance structure and public health resources to better and more expeditiously respond to pandemic conditions, but this advocacy has met with little success.

This chapter summarizes key literature, including emerging ideas, that is pertinent to the question of how organizations and their leadership deal with and are resilient through crises – highlighting what works in surviving unexpected crises. The chapter presents an illustration of organizational response and adaptation to the COVID-19 crisis. The chapter concludes with an analysis of what is missing from the literature and recommends a path forward to expanding actionable knowledge in this area.

THEORETICAL LITERATURE ON ORGANIZATIONAL RESILIENCE

Organizational resilience, that is, the capacity for organizations to withstand unexpected crises, has been a topic of inquiry for decades in the fields of health services research and health care management. The early writings on “open systems theory” (Ashmos & Huber, 1987; Katz & Kahn, 1966; Scott, 1961) defined organizations in relation to their external environments and explain organizational behavior based on efforts to manage that environment (Katz & Kahn, 1966; Lawrence & Lorsch, 1967; Pfeffer & Salancik, 1978). To the degree that external environments generate unexpected crises (e.g., pandemic, supply chain disruption, technological change), these early theorists anticipated the centrality of resilience to organizational life. Resilience in the face of crises due to internal stresses and unexpected events (e.g., loss of key staff or key clients, disruption in organizational culture, poor financial performance) has also been the subject of inquiry.

Management theory regarding unexpected crises advanced substantially with the analysis of nuclear plant disasters in the 1970s and 1980s, particularly with the seminal work of Professor Charles B. Perrow. His book, *Normal Accidents*, has a title that signals the complex, even paradoxical, nature of organizational life – full of many moving parts that ultimately make “accidents” out to be “normal.” It suggests that initiating events can be quite trivial, part of a normal day of work; however, to use Perrow’s words, “because of the system’s complexity and tight coupling, events cascade out of control to create a catastrophic outcome” (Perrow, 1984). Perrow’s work inspired a generation of researchers who focused on the organizational systems that can confer or compromise resiliency. By systems, this literature means management and power structures, job designs, protocols or standard operating procedures, and norms of work life. This body of research removes the focus from individuals, and places it squarely on the larger systems and structures that govern interactions within the organization as well as between the organization and the larger environment in which it operates.

These systems theories were complemented by Karl Weick’s provocative analysis of the Mann Gulch fire disaster (Weick, 1993), which identified the primacy of “sensemaking” – the ongoing process of creating order and making

retrospective sense of what has happened. Sensemaking calls for interpreting (through noticing, bracketing, and labeling) what has happened and has an important role in developing shared understanding – often influenced by power dynamics and emotion – of what is happening both inside and outside the organization (Weick, Sutcliffe, & Obstfeld, 2005). In fact, sensemaking has been understood (Weick, 1993) as important to organizational survival as it shapes how people in teams understand their environment, assess risks and opportunities, and subsequently determine action in response to emerging information in both internal and external environments.

In the aftermath of multiple waves of COVID-19, several climate disasters, and successive explosive instances of racial injustice, the need to understand and promote organizational resiliency has a renewed sense of urgency. Organizational resilience generally refers to an organization's ability to adapt to internal and external disturbances while maintaining its integrity as an organization – perhaps re-shaped or evolved to better fit the environment (Witmer & Mellinger, 2016; Weick & Sutcliffe, 2007).

Resilience has been described as involving three abilities (Duckek, 2020; Weick & Sutcliffe, 2007). The first involves the organization's ability to *bounce back from crises* by returning to a normal state (Home & Orr, 2011) through strategic defense. The second involves the ability to *advance after the crisis* (Lengnick & Beck, 2005; Lengnick, Beck, & Lendnick-Hall, 2011). This approach suggests ways to not only survive but also thrive after a crisis – an approach that endorses strategic offense. This is consistent with the definition of organizational resilience put forth by Vogus and Sutcliffe in 2007 suggesting organizational resilience is the “maintenance of positive adjustment under challenging conditions such that the organization emerges from those conditions strengthened and more resourceful” (Vogus & Sutcliffe, 2007). The third is the ability to *anticipate and learn* from threats (Wildavsky, 1991; Weick & Sutcliffe, 2007). This view suggests that agile preparation and adaptive building capacities are integral to organizational resiliency in the face of shocks.

Across these perspectives, the literature on organizational resilience identifies multiple, interdependent factors that foster resilience. Some of these include (Weick & Sutcliffe, 2007): (1) being sensitive to possible threats – even seemingly small failures, (2) not relying on simple interpretations of events but rather seeking diversity to create a complete view of the environment, (3) leadership that embraces communication, transparency, and continuous learning, (4) valuing expertise and allowing expert staff to make decisions during a crisis, and (5) a cultural commitment to a resiliency mindset that accepts failures as opportunities to learn and improve. Additionally, scholars have hypothesized a set of organizational capabilities that confer resilience. These include the ability and resources to anticipate crises, coping capabilities, and adaptation capabilities such as organizational reflection and learning (Duckek, 2020). Such capabilities are believed to result from adequate knowledge bases, operational and social resources, and power distributed based on expertise and shared responsibilities (Duckek, 2020).

A relational lens has also been applied to organizational resilience (Kahn, Barton, & Fellows, 2013). In this approach, organizations are viewed as a set of relationships among people who coordinate activities to accomplish the goals and missions of the organization (Gittel, Seidner, & Wimbush, 2010). Unexpected events – particularly crises – disrupt, disturb, and can substantially damage these relationships. At the same time, researchers have identified that with adequate communication and re-shaping of boundaries among roles, crises can lead to growth and development in organizational relationships – balancing teams’ cohesiveness and individuals’ flexibility (Kahn et al., 2013). Depending their collective agreements on their purpose and shared values, such posttraumatic growth can be central to organizational transformation, ultimately causing individuals to become more attached to each other and the work.

An important insight from the relational approach to resilience is the primacy of postcrisis work. Key to postcrisis work is processing the emotions experienced during the crisis: encouraging storytelling and creating “holding environments” in which staff seek and receive support and compassion (Kahn, 2005). Without such spaces, the emotional sequelae from crises remain located within individuals, which can impede the pace of organizational recovery (Kahn, 2005). A second postcrisis process involves the construction of meaning (Kahn et al., 2013). As crises can disrupt world views, reconstructive narratives that create an adapted identity for the organization, i.e., who “we” are after the crisis, can advance collective recovery. A third process is envisioning and creating desirable futures (Kahn et al., 2013). That is, articulating hope, allowing groups to work on moving from a place of “stuckness” (Smith & Berg, 1987) to a more optimistic future. In all these processes, the actions of people in leadership roles are critical. Organizational leadership promotes recovery by convening groups to share stories and emotions (Kahn, 2011), by framing the crisis and what it means for the organization (Seeger, Ulmer, Novak, & Sellnow, 2005), for authorizing working groups to envision the future (Miller, 1993), and for imparting discourse of renewal and hope (Seeger & Ulmer, 2002). This lens is consistent with recent work arguing that psychological safety is a critical asset in organizational resilience (Rangachari & Woods, 2020). Trust and psychological safety may encourage sharing of frontline information with managers, may empower workers to try new approaches to solving problems, and may protect staff from paralyzing emotional distress, isolation, and burnout.

EMPIRICAL LITERATURE ON ORGANIZATIONAL RESILIENCE: WHAT WORKS?

The empirical literature concerning organizational resilience includes case studies as well as longitudinal studies with pre- and postquantitative measures of performance and factors that contribute to performance. Two literature reviews have also been published (Barasa, Mbau, & Gilson, 2018; Ifaifel, Lim, & Crowley, 2020), each summarizing more than 35 studies many of which have used qualitative or mixed methods.

Perhaps one of the most highly publicized case studies of resilience occurred at the Dana Farber Cancer Institute (DFCI) in the aftermath of a lethal error in 1994, which led to an overdose that resulted in the premature death of Betsy Lehman, a Boston Globe reporter of 39 years old (Conway & Weingart, 2005). After investigations by the Massachusetts Department of Public Health, the Boards of Registration for physician licensure, and the Joint Commission on Accreditation of Healthcare Organizations – DFCI underwent an in-depth organizational examination, overhaul, and renewal. Today, it remains one of the top cancer hospitals in the country with high levels of staff and patient satisfaction, and has led the path in terms of innovations in patient safety in the decades that succeeded the tragedy.

Several features emerged from the case study that has led to DFCI ongoing stability and resilience. Senior-level physicians and administrative roles as well as a Trustee-level committee were established to focus on quality and patient safety. The institution, once described as having a “cowboy” culture (Bohmer & Winslow, 1999) in which individual risk-taking was prioritized over collective safety, has since implemented practices of relentless vigilance in estimating and mitigating risk of related harm. Additionally, the hospital has redesigned systems to prevent error and invested extensively in information technology to standardize and routinize key patient safety data and worked with other institutions and coalitions to share best practice for the prevention of medical errors. The leadership of DFCI has endorsed transparency and accessibility; patients and family representatives have become part of major decision-making bodies throughout the institution. Last, the organization recognizes that creating safe patient care is not a “project” but rather a way of working and it is never done. In this case, the unexpected crisis led to improvements and growth due to the actions taken in the aftermath of the calamity.

In another qualitative examination, researchers (Witmer & Mellinger, 2016) applied Yin’s method of case study (Yin, 2014) to two behavioral health organizations facing existential financial challenges. In-depth interview and focus groups were analyzed with open and axial coding from which six themes emerged. The themes included commitment to mission, improvisation, community reciprocity and trust, transformational leadership, fiscal transparency, and hope and optimism. The authors noted that these characteristics were present together in both organizations, which were resilient through turbulent times, and thus no single indicator or set of indicators were detected as more important than others. Rather, the researchers concluded that these factors functioned together in strengthening the resiliency of the institutions.

The most robust synthesis of empirical literature regarding factors associated with organizational resilience is the literature review completed by Barasa et al. (2018), which synthesized findings from 34 high-quality papers with empirical evidence about organizational attributes associated with continued performance through unexpected crises (e.g., civil war, extreme staff shortages, economic downturns, disease outbreak). The associated factors included: material resources (financial and technical) and human capital (enough and adequately skilled and motivated employees), information management (the availability of timely,

accurate information about the environment to assist in sensemaking and to prompt wise decision-making), preparedness and planning (having standard operating procedures for crises, having conducted drills), collateral pathways and redundancy (having multiple, alternative courses of action in case one course becomes unusable), social networks (the ability to leverage networks and alliances of like organizations to share information, political voice, and best practices), governance processes (decentralized yet coordinated planning and decision-making), leadership practices (inclusive decision-making, promoting shared vision), and organizational culture (challenges are viewed as learning opportunities, creative problem-solving is rewarded).

Factors that emerged from the literature review by [Ifaifel and colleagues \(2020\)](#) in many ways echoed those found in the review by [Barasa et al. \(2018\)](#); in addition, Ifaifel identified concrete practices including effective and frequent team meetings, communication that built trust, heavy involvement of clinicians in crisis response, use of protocols and checklists, and endorsement of flexible work-arounds to manage through crises.

EMERGING IDEAS IN THE LITERATURE

Along with the well-documented factors, a thin but nascent literature has pointed to several features of organizational life that warrant further exploration and future research. These have included engaging paradox ([Carmine, Andriopoulos, & Gotso, 2021](#); [Johnson, 1992](#); [Smith & Lewis, 2011](#); [Smith & Tracey, 2016](#)), emotional ambiguity in conferring resilience ([Choflet, Packrd, & Stashower, 2021](#); [Vogus, Rothman, Sutcliffe, & Weick, 2014](#)), and last, the role of diversity in organizational resilience ([Kruk, Myers, Varpilah, & Dahn, 2015](#); [Norris, Stevens, Pfefferbaum, Wuche, & Pfefferbaum, 2008](#)).

Managing Paradox

Paradox, the simultaneous existence of apparent contradictory ideas, has been recognized in organizational life for some time, perhaps made most practical by Johnson's work on polarity management ([Johnson, 1992](#)). In this work, Johnson identified that much of organizational life is not about solving a problem but rather managing a polarity, or paradox. This approach requires recognizing and engaging apparent opposites (competition and collaboration) in a both/and rather than an either/or paradigm. The organization is thus conceived of as in constant motion, as it navigates moving toward one pole, experiencing the negative results of that pole (e.g., competition) and responding by moving back toward the other pole (e.g., collaboration). The healthiest organizations are never rigid or set in one place but in a constant, gentle back and forth between the poles – enhancing adaptability as crisis situations change. Such motion is abetted by transparent dialogue between people who represent apparently opposing views, sensitivity to when the organizational practices have swung too far in one direction, and adequate containment capabilities and structures for the inevitable

emotions that emerge when strongly felt views collide. Others, too, have identified paradox as central to managing organizational change (Bradley et al., 2006; Carmine et al., 2021; Jay, 2012; Lawrence & Lorsch, 1967; Smith & Lewis, 2011; Smith & Tracey, 2016), even calling for organizational “ambidexterity” (O’Reilly & Tushman, 2004; Smith, Lewis, & Tushman, 2012) to be able to adequately lead through changing times.

Emotional Ambivalence

Although the literature is sparse on this topic, emotional ambivalence (Vogus et al., 2014) has been linked specifically with high reliability and thus likely more resilient organizations. Emotional ambivalence is the simultaneous experience of positive and negative emotions such as hope and doubt (Vogus et al., 2014). Such a stance opens others to alternative perspectives, to anticipate failures or crises, and to have the breadth or emotional response to be effective. Although Vogus et al. (2014) focus on hope and doubt as the two opposing emotions that are often present in crisis response, other dyadic emotions may also emerge: excitement and terror, joy and sadness, relief and anxiety. Nonetheless, as Vogus et al. (2014) have argued, such emotional flexibility allows for mindful organizing and not only fosters greater receptivity to others’ experience but also enables greater organizational resilience in complex environments.

Diversity

Diversity, broadly defined, has been hypothesized to bring stability when organizations, communities, and health systems are buffeted by external shocks (Kruk et al., 2015; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008). Kruk et al. (2015) have argued that diversity allows for deeper and broader interactions around health systems, thus building trust in the community with the health system and potentially providing critical information that can allow for better responses, particularly when situations are changing quickly. Norris et al. (2008) assert that increased diversity of people and resources allows systems to benefit from their inherent interdependence, and the degree to which this matters among the top management team and the workforce remains widely debated (Gomez & Bernet, 2019; Pomonareva, Uman, Bodalica, & Wennberg, 2022). If relationships are strong between diverse components of the system, together they can weather shocks to part of the system by spreading risk and sharing shifting resources and information to better adapt as a system. These understandings of diversity recall the work of Scott Page (2008, 2017), which explored the benefits of diversity, defined broadly, and argued that a team of individuals with diverse knowledge and experience is generally more effective at complex problem-solving than a more homogeneous team.

AN ILLUSTRATION: ORGANIZATIONAL RESPONSE TO COVID-19 CRISIS

Setting

While theory and empirical research are helpful, the role of leading an organization – a hospital, a social service agency, or an institution of higher education – through the COVID-19 pandemic provided the opportunity to bridge research and practice. Beginning in March 2020 and continuing through the pandemic, the organizational question of resilience at Vassar College was: how to continue to pursue our mission while protecting the health and safety of our students, faculty, and staff. Vassar is a four-year liberal arts undergraduate college in Poughkeepsie, New York, with a 1,000-acre campus largely set apart from the City of Poughkeepsie and is self-sufficient. The college, which was founded in 1861, includes about 2,550 undergraduates, 300 faculty, and about 1,000 other employees. Although the fields differ, both higher education and health care organizations face institutional challenges of multiple objectives, often nonprofit ownership, diffuse governance, and difficult-to-measure performance outcomes. Thus, experiences and lessons from higher education, particularly in the context of a major health crisis, may be useful to health care organizations.

Factors from the Literature that Helped the Organization Weather the Crisis

Several factors identified in the literature helped the organization weather the crisis. These included setting a clear vision, establishing coordinating mechanisms, finding alternative ways of working, communication and storytelling, sensemaking, and having adequate resources.

Clear vision. For two years beginning in March 2020, the senior leadership articulated again and again in college-wide forums, written correspondence, and social media, the values that would guide the organizational response to COVID-19. The guiding vision was threefold: (1) protecting the most vulnerable (including health, mental health, financial, and other vulnerabilities), (2) promoting equity when possible, and (3) sustaining our mission of providing the highest quality liberal arts education in a diverse and inclusive setting. Throughout the crisis, for every major decision (e.g., vaccination, testing, hybrid classes), choices were considered in the context of the tripartite vision.

Coordinating mechanisms. The organization established two primary coordinating mechanisms: (1) the senior leadership team and (2) *VassarTogether*, a group of frontline staff, administrators, students, and faculty. *VassarTogether* developed a set of values to guide concrete plans for a return to in-person instruction in fall 2020. These values included (1) a commitment to creating and sustaining an ethical learning community; (2) prioritizing the health of the community, paying explicit attention to the inequalities that contributed to vulnerabilities during the pandemic; (3) acknowledging that the Vassar community is global and enriched by the multiplicity of experience and culture that constitute our global campus; and (4) that living and learning practices emphasize and create modes of cooperation, mutual care, and interdependence. These values

recognized the syndemic nature of COVID-19 in the context of the pandemic and varying social movements demanding justice for Black and African American communities experiencing the state sanctioned and vigilante murders of Breonna Taylor, George Floyd, Ahmaud Arbery, Tony McDade, and Dion Johnson, to name just a few. In this context, *VassarTogether* took strategic direction from the senior leadership team and then devised implementation tactics that aligned with the institution's culture and norms and in the context of the national political climate.

This institutional context shaped the ways in which *VassarTogether* and its subcommittees worked to imagine ways of keeping campus safe from the threat of COVID-19 without reinscribing practices that could lead to the unjust policing or targeting of communities of color or individuals who may face marginalization on campus or outside the campus. For instance, *VassarTogether* recommended against using additional security officers, visible badges, or identification cards as means for policing the campus community. Breaches of our COVID-19 protocols were also not treated inherently as violations of the student conduct system. Instead, students were channeled to our Community Care Team, a new organizational unit composed of staff, administrators, faculty, and students who helped sustain a "holding environment" (Kahn, 2005) in which challenging conversations could be held without disciplinary action. Instead of punitive responses to violations, the Community Care Team worked to educate students about their violations of our agreed-upon community norms, alerted them to potential dangers to more vulnerable members of the community, and facilitated restorative conversations. In these ways, the Community Care team helped members of the campus community imagine and experience alternative futures beyond the punitive models on full display in the larger world.

Alternative, nonlinear ways of working. The College's coordinating mechanisms were nonlinear in that they allowed top down, bottom up, sideways in and out ways of decision-making. These nonlinear coordinating mechanisms could be found across the organization, which helped with the delegation of a multitude of tasks required to return our campus to in-person learning.

VassarTogether was composed of various subcommittees that developed ideas that were then vetted by the larger committee and then ultimately by the senior leadership team. Sometimes the suggestions of subcommittees were accepted without revision. In other instances, the ideas of subcommittees were revised, returned for additional debate, or altogether discarded through various organizational review and feedback channels.

The senior leadership team, charged with setting the overall strategy, gathered input regularly from the Vassar Student Association, the Faculty Cabinet, the Board of Trustees, four labor unions, and *VassarTogether*. Engagement of student, staff, administrative, and faculty voices simultaneously allowed the senior leadership team to be informed by a changing set of experts. This approach may sound like garbage can decision-making (Cohen, March, & Olson, 1972) in which problems, solutions, and people interact in somewhat chaotic fashion, but it worked to implement a strategy and plan that kept people healthy and the mission on track.

Communication and storytelling. All these tasks and mechanisms for input added hours of extra work in communicating (in an all-institution forum on Zoom every two weeks for months and an online dashboard, which was updated daily). Effective planning and decision-making required telling detailed and precise stories to each other, bargaining over new organizational powers (e.g., who decides if a student is suspended from campus due to breaking COVID-19 rules), creation of new jobs and groups (e.g., contact tracer, Community Care Team), and experimenting with an endless number of possible solutions, all at heightened emotion and often through software rather than in-person.

Sensemaking. This approach to decision-making, while time-consuming and chaotic at times, allowed the institution to create meaning from thousands of disparate events. Sensemaking emerged from ongoing discourse between students and faculty and with administrators and staff, sharing problems and feelings related to the context beyond COVID-19 including the George Floyd murder, Black Lives Matter protests, concerns about carbon neutrality, and demands for prison abolition. In the end, Vassar had success in sustained dialogue about structural sources of racial inequality and also kept the campus open with mostly in-person education and limited numbers of largely unconnected COVID-19 cases.

Material resources. The organization had sufficient resources to support all students without their leaving campus, and potentially becoming exposed to COVID-19. These included a robust health and mental health center and emergency medical services, case management, quarantine and isolation spaces, and diverse food offerings. While outdoor parts of the campus remained open to the general public, all buildings were closed to the public, and, until vaccination was widespread, student travel off-campus was prohibited without prior approval. Previous literature underscores the importance of material resources for crisis response, and in this case, the deployment of these material resources drew upon highly motivated and skilled frontline staff and administrators who embraced flexibility within their roles and nimbly managed novel scenarios. The dedication of financial resources, information technology, and logistical support helped bolster accountability and learning, while minimizing punitive approaches.

Additional Factors in the Literature that Warrant More Research

Several factors that have been less thoroughly examined in the literature nonetheless emerged as central to weathering the crisis. Each of these factors provides openings to potentially fruitful research in the pursuit of evidence about “what works” for organizational response to crises.

Managing paradox as a leadership task. Central to handling the unexpected crisis was the leadership task of managing paradoxes. While the literature has described this aspect of managing paradox, missing are the needed findings around *how* one does this, what structures or practices must be in place to sustain such managing of paradox, particularly as pertaining to emotional contradictions, and what factors lead to success in the pursuit of this approach to managing through unexpected events.

In the case of Vassar, the organization separated the senior team from Vassar*Together* in part to support managing paradox. Based on open systems theory, leadership is a boundary management function – traversing the boundary between inside and outside the organization. At the boundary looking out – for example, as the senior team watched the climbing incidence of COVID-19 in one's region – the senior team in its leadership role expected to feel *fear* and yet transmuted that into *psychological safety* on the inside, so Vassar*Together* could learn and undertake creative problem-solving without being paralyzed by fear. Here, boundary management means endorsing both fear and safety.

Another paradox navigated was self and community. The leadership sought to create a bounded environment in which each person felt cared for as an *individual* and, at the same time, asked people to be exquisitely *prosocial* inside the institution. The institution embraced the mantra, “We precedes me,” to drive prosocial choices (e.g., staying on campus to avoid being exposed to COVID-19 and spreading it on campus, wearing masks for each other's benefit) even at a time when self-interest and self-protection was necessarily front of mind. Both “we” and “me” are important, but in the pandemic, on an insulated campus, “we” had to come first. Living with apparent contradictions (fear and safety, or self and community) required the mental openness and agility to imagine opposite paths at once.

The people in leadership roles experienced this intensively when, after three weeks of zero COVID-19 cases on campus, our surveillance testing turned up seven cases in one day. Immediately our collective thinking went to the worst – the beginning of a major outbreak, lockdown, and the fear of having to send students home. It took creative thinking to ask that we hold and check the tests for false positives. Then it took clout to get the lab to find the original samples and retest, and finally it took delicate negotiation at multiple levels of the lab and the county to allow the lab to agree they had erred and instead treat the cases as not positive.

Holding emotional ambivalence. The rollercoaster of hope and doubt experienced during the testing debacle reflected the need to hold opposing explanations and conflicting emotions within oneself. According to Vogus and colleagues (Vogus et al., 2014), this capacity, termed “emotional ambivalence,” is an affective foundation of high-performing, resilient organizations. Needed is more research on the short-term and long-term psychological effects and professional outcomes of individuals in leadership roles charged with holding emotional ambivalence. Early evidence about the “great resignation” due to COVID-19 and its impact on higher education and health care, especially in student-facing and patient-facing roles, is fertile ground for further study of emotional ambivalence and its possible connection to stress, burnout, and challenges around work-life balance. Evidence based on interventions that may mitigate negative effects of holding emotional ambivalence is much needed.

One of the ways the institution sought to address the stress of holding emotional ambivalence was through “Community Care Days.” Community Care Days were dispersed throughout the academic calendar and provided space and time for members of the campus community to rest, reflect, and express

appreciation for one another. Given the range of emotions and capacity of different campus groups, Community Care Days offered a diversity of activities to promote care for self and others. Activities ranged from local food trucks and picnics on campus lawns, arts and crafts stations, or exchanging plants and flowers. Taking part in employee appreciation efforts was encouraged including thank-you notes, appreciation posters, compilation thank-you video messages, and reading poems or singing songs for employees. Early data suggested that Community Care Days provided useful avenues for employees and students to talk publicly about and work through the forms of emotional ambivalence they might have been experiencing and channel them into gestures of compassion, appreciation, and self-care. More specifically, Community Care Days provided an intentional moment of pause where students and employees could reconnect, rebuild, and reestablish social bonds and relationships with one another during a moment of crises where such relationships were fragile and tenuous.

Full embrace of diversity. Based on the College's experience, the heart of organizational resilience requires the full embrace of diversity. Vassar found that the embrace of diversity – diversity of ideas, perspectives, levels of power, identities, and histories – was crucial sources of meanings that allow organizations to steer through danger, that is, to adapt to novel threats and opportunities while continuing to pursue the mission. Leadership in these contexts requires an endorsement of differences in approach, flexibility to throw out the old ideas and create again, and a fierce holding fast to a vision that can align disparate forces toward a collective future.

Limits to Success

While Vassar*Together* effectively implemented practices and protocols that minimized carceral practices, the group could not always help control these mechanisms for all groups of students. Relative to gaps in the literature above how organizations can respond to crises that take shape internally versus externally, Vassar*Together* was limited in the ways in which it could support international students. The institution assisted a substantial number of international students and allowed them to remain on campus during the spring and summer of 2020 when campuses across the country emptied; however, supporting international students who returned home and could not return to campus given US immigration policies and practices was more challenging. Thus, while Vassar*Together* made important strides in thinking about how to minimize the perilous effects of racism and carcerality domestically, it was less effective in confronting emergent xenoracism (Fekete, 2001; Sivanandan, 2001) experienced by some international students outside our campus boundary. Other unintended effects were also not fully addressed. As an example, moving to grab-and-go food contributed substantially to the extra plastic and food waste the organization created, which set us back slightly in our climate action goals. Similarly, the organization – having adopted remote work guidelines – has yet to see the long-term impact on both efficiency and organizational cohesion and culture.

Strategic Offense and the Future

In many ways, this illustration reflects “strategic offense” (Duckek, 2020; Weick & Sutcliffe, 2007) in responding to unexpected crises. Bouncing back or returning to a normal state does not begin to describe the experience. Rather the organization took the path of advancing through the crisis. Much was learned that will shape the future in new ways. The institution has refined its educational, harm reduction, and restorative practices – ideally to supplant disciplinary practices – to shape institutional expectations and social norms. The organization has developed and supported a set of groups and entry points for more distributed decision-making that may bolster organizational capacity in terms of sense-making and adaptation to shifting needs. These capacities are strengths that may not only make the organization more resilient through this era of pandemics but also lead to innovations and performance that exceeds what would have been without COVID-19.

The challenge for the future is sustaining posttraumatic growth in ways that cause individuals dedicated to the mission of the organization to become more attached, and feel greater belonging and inclusion with each other and as part of the institution. Based on the literature, fostering such posttraumatic growth will require the creation of “holding environments” in which employees give and receive support and compassion (Kahn, 2005), reconstructing narratives that create an adapted identity for the organization (Kahn et al., 2013), and authorizing work groups to envision the future (Miller, 1993). One cannot know now how the institution will fare in the future, and longitudinal follow-up is warranted.

GAPS IN THE LITERATURE AND DIRECTIONS FOR FUTURE RESEARCH

The literature on managing through unexpected crises and factors associated with organizational resilience is mature; nonetheless, both conceptually and methodologically, gaps exist and suggest a set of avenues for future research. These avenues might bear fruit as our health care system adapts to what might be called an era of pandemics.

Long-Term and Short-Term, Successive, and Interactive Crises

First, the characterizing of crises as long-term versus short-term and as isolated versus connected to other social forces is critical and rarely addressed in the literature. In the case of COVID-19, it is clear that this is a long-term crisis occurring in the context of other major global movements (e.g., political violence in Europe, calls to end global racial inequities, climate change, increased mobility, and migration). Furthermore, the virus that causes COVID-19 is far from the last pathogen that poses pandemic risk and is more likely a harbinger of times to come. With our changing climate, the melting of the Arctic and Antarctic permafrost, and the human encroachment on rainforests and other natural

boundaries, future pandemics caused by new or revived pathogens are likely or highly likely. Research undertaken by Marani and colleagues (Marani, Katulb, Panb, & Parolari, 2021) collated historic data from the year 1600; using mathematical modeling, they suggest that, with reasonable assumptions, the probability of extreme epidemics may increase as much as threefold in the coming decades.

Meanwhile, the degree to which we are prepared globally remains limited. Health policymakers have called for increased investment and coordination in data capture and communication about novel pathogens, as well as the global governance structures to coordinate prevention and treatment efforts that emerge from knowing the data. As the global response to COVID-19 demonstrates, we have not learned from previous pandemics, and the desires for national autonomy and personal freedom as well as fear of upheaval in extant power structures continue to blind us to the underlying truth that we are mutually dependent. Without global collaboration, humans are a weak match for infectious, lethal microbes.

This era may therefore be described as an era of pandemics due also to the spread of deleterious social, economic, and environmental impacts on health. Scholarship for decades has identified racism and social class as structural elements of society leading to the disproportionate premature death of certain racial, ethnic, and economically disadvantaged communities (Gilmore, 2007; Marmot, Smith, & Sensfeld, 1991; Singh, 2017; Williams, 1999). Then consider climate change, which the United Nations has called a “global emergency,” (United Nations, accessed 11/13/21) and the World Health Organization (WHO) has said “threatens essential ingredients of good health” (WHO accessed, 11/13/21). A recent analysis (Zhao et al., 2021) published in *Lancet* indicated that climate warming is now causing five million excess deaths per year.

A fertile area for future research, therefore, involves how to manage through successive crises that interact with one another. Existing work focuses on time-limited crises, but what about an ongoing state of crisis, or multiple layers of crises such as the ongoing climate emergency punctuated by an acute pandemic? Greater research attention to (1) the factors that predict duration and sustainability, (2) how organizations might effectively navigate burnout and disillusionment, and (3) which resources are most needed to continue to advance even while managing crises would be helpful. Currently, we lack adequate longitudinal data that would shed light on the phenomenon of surviving and thriving in ongoing, long-term crisis situations.

Here the literature on health care organizational resilience and crises might benefit from engaging with other disciplinary traditions with more extensive theoretical and methodological exploration of crisis as a defining feature of our social world. For example, ideas such as permanent war and permanent social dispossession within sociology, history, and interdisciplinary area studies have been studied extensively over the past decades and have gained particular currency in recent years (Dudziak, 2012; Gordon, 2006; Melman, 1986; Scahill, 2013; Singh, 2017). This literature argues that crises, even war, can become part of the normal course of life, a constituent feature of society, and that the choice to

recast them as “crises” is a political, cultural, and strategic choice. Additionally, this literature points us toward the subjects of these permanent wars and dispossession and can thus illuminate how it is that different groups make sense of, survive, and thrive under the continued presence of crisis in their everyday lives (Ould Slahi, 2015; Scahill, 2013).

External and Internal Shocks

A second area for future research is distinguishing between responses to crises borne of external shocks and crises arising from within the organization, and exploring further the consequences of how the sources of the crisis is framed as coming from inside or outside of the organization, or both. Both theoretical and empirical work would be helpful. External and internal shocks present distinct and overlapping challenges and constraints, and yet the literature largely addresses them without adequate attention to their origin or their interaction. Greater exploration of their differences and the effect of their interactions are warranted.

Impact of Crises on the Pace of Innovation

Third, the literature does not delve into understanding the extent to which crises empirically do lead to or should lead to fundamental changes in organizational mission or identity. For instance, it would be helpful to understand the conditions under which crises speed or slow the pace of innovation take-up across an industry. Perhaps the place in the innovation trajectory matters to the impact of crises on subsequent take-up rates. Based on the experience with COVID-19, we have seen an acceleration of innovation – such as telehealth, particularly for mental health care, and the use of patient portals – while we have likely seen delays in other innovations that carry more risk – such as medical tourism.

Diversity and Stability in Crises

Fourth, deeper research on how and when diversity confers stability in crises would also be helpful. In the existing literature, diversity is often treated as an overarching concept, related to any number of sources of diversity. Such an approach risks masking or erasing the varying types of diversity (e.g., racial/ethnic, gender, geographic) and, more importantly, the historical implications of various group memberships. As the workforce and clients of health care organizations become more diverse, how can the added breadth in perspectives, values, and experiences contribute to organizational resilience? Research suggests that if organizations are managed well with attention to diversity, inclusion, psychological safety, and engaged pluralism, diversity provides a tremendous asset (Lowe-Swift & Bradley, 2019; Nembhard & Edmondson, 2006; Page, 2008, 2017). Nevertheless, empirical evidence of this remains limited in the context of health care organizations. Attention to what people in management, leadership, and governance roles can do to create environments where different forms of diversity add to resilience is a topic for future research.

Deleterious Effects of Adapting to the New Normal After Crisis

Fifth, in addition to research on factors that add positively to organizational resilience, the deleterious effects of crises deserve greater attention. For instance, how do crises shift communication patterns and information credibility, and how might organizations adapt to assaults from “fake news” as part of communication campaigns? And how do crises shift the balance of power, sometimes for greater equity and other times succumbing to greater abuse and oppression? Are these patterns predictable and what can organizations do to navigate shifts and disruptions in power to promote equity rather than diminish equity?

Although learning is often a positive byproduct of weathering crises, organizations can learn both good and bad habits. How do we move past a crisis, adopting new learnings that add to the mission, but letting go of emergency practices or practices that predate the crisis no longer serve the institution and limit its ability to redefine itself? Do organizations experience a type of post-traumatic stress disorder (PTSD) that can be detected and mitigated? What facets of organizational leadership and culture are needed to sustain productive learning in the aftermath of crises?

Methodological Advances Needed

Last, methodological advances in the research literature would also be useful. To date, much of the empirical literature is based on cross-sectional surveys, descriptive changes over time in a limited set of organizations without comparison groups, and qualitative case studies of individual institutions. Mixed methods studies are relatively rare, and strong quantitative studies are extremely limited. The challenges are substantial, as researchers cannot randomize organizations to experience unexpected crises or not, and valid comparison groups are difficult to create given nuances in context and organizational culture that are unlikely to be reliably measured or replicated.

Particularly important are longitudinal studies that leverage natural experiments, perhaps to compare organizations that experience unexpected crises with a relatively matched set of organizations that are not exposed to such crises. Studies such as these could provide useful evidence about the impact of crises on performance, cost, and the pace of learning and innovation. Although not without limitations, simulation studies that use artificial intelligence and sophisticated approaches to situational analysis software may provide novel insights into how people and systems react to various crises. Research using such techniques might provide excellent training grounds as well as ample fodder for research to better understand how people in various roles and organizations react to and remain resilient in the face of unexpected crises. Such simulations could examine the roles of hard-to-observe factors that may matter to adaptation such as “robust properties” (that are beneficial regardless of crisis) and “humble leadership” (Schein & Schein, 2018; Nembhard, Burns, & Shortell, 2020), in which people in leadership roles may defer to needed experts to lead effectively through crises.

LESSONS FOR HEALTH CARE ORGANIZATIONS

Institutions of higher education share many characteristics with health care institutions, and thus, hospitals and colleges can learn from each other. Both provide deeply personal services (health care and residential education) to “clients” (e.g., patients and students) who depend on powerful, fairly autonomous professionals (e.g., physicians and faculty) to provide a difficult-to-measure service (health care and education). Additionally, a large majority of health care and education is delivered in the realm of nonprofit ownership, facing multiple objectives and often dependent not just on service revenue but also philanthropy and public legitimacy. As a result, they are complex organizations facing a dynamic environment – an environment in which crises occur and were certainly experienced with the COVID-19 pandemic.

The Vassar illustration provides concrete examples of how one institution responded to a crisis using strategic offense and was able to maintain its mission and come out of the crisis with new capacities and preparation for the future. What can be learned that is useful for health care organizations? The adage of “putting people first” was clear in the vision set from the beginning of caring for our most vulnerable people and sustained through innovations such as Community Care Days. Managing operations creatively, or finding alternative workflows, was paramount (e.g., hybrid learning) and the intensive focus on communication through biweekly all-institution forums can be useful in health care organizations as crises unfold. Last, the embrace of humble leadership rather than the leader-as-hero was critical at Vassar. Redesigned processes and procedures to adapt to the conditions of COVID-19 necessitated the development of new groups, new leadership roles, and new decision-makers (e.g., the health services director was given more cultural authority than faculty in many instances). Health care leadership facing crises would do well to demonstrate new levels of delegation, confidence in others, and flexibility to navigate changing sources of legitimacy. Such leadership is required at all levels – leadership that can help institutions undergoing crises to imagine, generate, and achieve a meaningful collective future.

REFERENCES

- Ashmos, D. P., & Huber, G. P. (1987). The systems paradigm in organization theory: Correcting the record and suggesting the future. *Academy of Management Review*, 12(4), 607–621.
- Barasa, E., Mbau, R., & Gilson, L. (2018). What is resilience and how can it be nurtured? A systematic review of empirical literature on organizational resilience. *International Journal of Health Policy and Management*, 7(6), 491–503.
- Bohmer, R., & Winslow, A. (1999). *The Dana Farber cancer institute*. Cambridge, MA: Harvard Business School Case Collection. <https://www.hbs.edu/faculty/Pages/item.aspx?num=304>
- Bradley, E. H., Curry, L. A., Webster, T. R., Mattera, J. A., Roumanis, S. A., Radford, M. J., McNamara, R. L. . . . Krumholz, H. M. (2006). Achieving rapid door-to-balloon times: How top hospitals improve complex clinical systems. *National Library of Medicine*, 113(8), 1079–1085.

- Carmine, S., Andriopoulos, C., Gotsi, M., Härtel, C. E. J., Krzeminska, A., Mafico, N., Pradies, C. . . . Keller, J. (2021). A paradox approach to organizational tensions during the pandemic crisis. *Journal of Management Inquiry*, *30*(2), 138–153.
- Choflet, A., Packard, T., & Stashower, K. (2021). Rethinking organizational change in the COVID-19 era. *Journal of Hospital Management and Health Policy*, *5*.
- Cohen, M. D., March, J. G., & Olsen, J. P. (1972). A garbage can model of organizational choice. *Administrative Science Quarterly*, *17*(1), 1–25. doi:10.2307/2392088
- Conway, J. B., & Weingart, S. N. (2005). *Organizational change in the face of highly public errors—I. The Dana-Farber Cancer Institute Experience*. Agency for Healthcare Research and Quality. Retrieved from <https://psnet.ahrq.gov/perspective/organizational-change-face-highly-public-errors-i-dana-farber-cancer-institute>
- Duckek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research*, *13*, 215–246.
- Dudziak, M. (2012). *War time*. New York, NY: University Press.
- Fekete, L. (2001). The emergence of xeno-racism. *Race & Class*, *43*(2), 23–40.
- Gilmore, R. W. (2007). *Golden Gulag*. Los Angeles, CA: University of California Press.
- Gittell, J. H., Seidner, R., & Wimbush, J. (2010). A relational model of how high-performance work systems work. *Organization Science*, *21*(2), 490–506. doi:10.1287/orsc.1090.0446
- Gomez, L. E., & Bernet, P. (2019). Diversity improves performance and outcomes. *Journal of the National Medical Association*, *111*(4), 383–392.
- Gordon, A. F. (2006). Abu Ghraib: Imprisonment and the war on terror. *Race & Class*, *48*(1), 42–59.
- Hall, S., & Schwarz, B. (1988). State and society, 1880-1930. In S. Hall (Ed.), *The hard road to renewal*. London: Verso.
- Home, J. F., III, & Orr, J. E. (2011). Assessing behaviors that create resilient organizations. *Employment Relations Today*, *29*(4), 29–39. doi:10.1002/ert.3910240405
- Iflaifel, M., Lim, R. H., Ryan, K., & Crowley, C. (2020). Resilient health care: A systematic review of conceptualization, study methods, and factors that develop resiliency. *BMC Health Services Research*, *324*. doi:10.1186/s12913-020-05208-3
- Jay, J. (2012). Navigating paradox as a mechanism of change and innovation in hybrid organizations. *Academic of Management Journal*, *56*(1), 137–159. doi:10.5465/amj.2010.0772
- Johnson, B. (1992). *Polarity management: Identifying and managing unsolvable problems*. Amherst, MA: HRD Press, Inc.
- Kahn, W. A. (2005). *Holding fast: The struggle to create resilient caregiving*. London: Psychology Press.
- Kahn, W. A. (2011). Treatment of organizational wounds. *Organizational Dynamics*, *40*(2), 75–84.
- Kahn, W. A., Barton, M. A., & Fellows, S. (2013). Organizational crises and the disturbance of relational systems. *Academy of Management Review*, *38*(3), 377–396.
- Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York, NY: Wiley.
- Kruk, M. E., Myers, M., Varpilah, S. T., & Dahn, B. T. (2015). What is a resilient health system? Lessons from Ebola. *Lancet*, *385*.
- Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly*, *12*(1), 1–47.
- 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 Review. *Human Resource Management Review*, *21*(3), 243–255.
- Lowe-Swift, C. M., & Bradley, E. H. (2019). Moving toward engaged pluralism on college campuses. Inside Higher Ed. Retrieved from <https://www.insidehighered.com/views/2019/12/03/how-one-college-has-developed-large-scale-ongoing-effort-promote-inclusion-opinion>
- Marani, M., Katul, G. G., Pan, W. K., & Parolari, A. J. (2021). Intensity and frequency of extreme novel epidemics. *Proceedings of the National Academy of Science of the United States*, *118*(35), e2105482118.

- Marmot, M. G., Smith, G. D., Stansfeld, S., Patel, C., North, F., Head, J., White, I. . . . Feeney, A. (1991). Health inequalities among British civil servants: The Whitehall II Study. *Lancet*, 337(8754), 1387–1393. doi:[10.1016/0140-6736\(91\)93068-k](https://doi.org/10.1016/0140-6736(91)93068-k)
- Melman, S. (1986). Limits of military power. *International Security*, 11(1), 72–87.
- Miller, E. (1993). From dependency to autonomy: Studies in organisation. *The International Journal of Psychoanalysis*, 76, 638–641.
- Nembhard, I. M., Burns, L. R., & Shortell, S. M. (2020). Responding to COVID-19: Lessons from management research. *NEJM Catalyst*. doi:[10.1056/CAT.20.0111](https://doi.org/10.1056/CAT.20.0111)
- Nembhard, I. M., & Edmondson, A. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, 27(7), 941–996.
- Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, 41(1–2), 127–150.
- O'Reilly, C., & Tushman, M. (2004). The ambidextrous organization. *Harvard Business Review*, 82(4), 74–83.
- Ould Slahi, M. (2015). *Guantanamo diary*. New York, NY: Back Bay Books.
- Page, S. E. (2008). *The difference: How the Power of diversity creates better groups, Firms, schools, and societies*. Princeton, NJ: Princeton University Press.
- Page, S. E. (2017). *The diversity bonus: How great teams pay off in the knowledge economy*. Princeton, NJ: Princeton University Press.
- Perrow, C. (1984). *Normal accidents: Living with high risk technologies*. New York, NY: Basic Books.
- Pfeffer, J., & Salancik, G. (1978). *The external control of organizations: A resource dependence perspective*. New York, NY: Harper & Row.
- Pomonareva, Y., Uman, T., Bodolica, V., & Wennberg, K. (2022, March). Cultural diversity in top management teams: Review and agenda for future research. *Journal of World Business*, 57(4), 1–14.
- Rangachari, P., & Woods, J. L. (2020). Preserving organizational resilience, patient safety, and staff retention during COVID-19 requires a holistic consideration of the psychological safety of healthcare workers. *International Journal of Environmental Research and Public Health*, 17(12), 11–12.
- Seahill, J. (2013). *Dirty wars: The world is a battlefield*. New York, NY: Nation Books.
- Schein, E. H., & Schein, P. A. (2018). *Humble leadership: The Power of relationships, openness, and trust*. Oakland, CA: Berrett-Koehler Publishers.
- Scott, W. G. (1961). Organization theory: An overview and appraisal. *The Journal of the Academy of Management*, 4(1), 7–26.
- Seeger, M. W., & Ulmer, R. R. (2002). A post-crisis discourse of renewal: The cases of malden mills and cole hardwoods. *Journal of Applied Communication Research*, 30(2), 126–142.
- Seeger, M., Ulmer, R. R., Novak, J. M., & Sellnow, T. L. (2005). Post-crisis discourse and organizational change, failure and renewal. *Journal of Organizational Change Management*, 18(1), 78–95.
- Singer, M. (2009). *Introduction to syndemics: A critical systems approach to public and community health*. San Francisco, CA: Jossey-Bass.
- Singh, N. P. (2017). *Race and America's long war*. Oakland, CA: University of California Press.
- Sivanandan, A. (2001). Poverty is the new Black. *Race & Class*, 43(3), 1–5.
- Smith, K. K., & Berg, D. N. (1987). *Paradoxes of group life: Understanding conflict, paralysis, and Movement in group dynamics*. San Francisco, CA: Jossey-Bass.
- Smith, W. K., & Lewis, M. W. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of Management Review*, 36(2), 381–403.
- Smith, W. K., Lewis, M., & Tushman, M. L. (2012). Organizational ambidexterity: Organizational design and senior leadership to enable strategic paradox. *The Oxford handbook of positive organizational scholarship* (pp. 798–810). doi:[10.1093/oxfordhb/9780199734610.013.0061](https://doi.org/10.1093/oxfordhb/9780199734610.013.0061)
- Smith, W. K., & Tracey, P. (2016). Institutional complexities and paradox theory: Complementarities of competing demands. *Strategic Organization*, 14(4), 455–466.

- United Nations. Science, solutions, solidarity for a livable future. United Nations. <https://www.un.org/en/climatechange>. Accessed on November 13, 2021.
- Vernon, J. L. (2017). Understanding the butterfly effect. *American Scientist*, 105(3). <https://www.americanscientist.org/article/understanding-the-butterfly-effect>
- Vogus, T. J., Rothman, N. B., Sutcliffe, K. M., & Weick, K. E. (2014). The affective foundations of high-reliability organizing. *Journal of Organizational Behavior*, 35(4), 592–596.
- Vogus, T. J., & Sutcliffe, K. M. (2007, October). Organizational resilience: Towards a theory and research agenda. In *2007 IEEE international conference on systems, man and cybernetics* (pp. 3418–3422). IEEE.
- Weick, K. E. (1993). The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38(4), 628–652. doi:10.2307/2393339
- Weick, K. E., & Sutcliffe, K. M. (2007). *Managing the unexpected: Resilient performance in an age of uncertainty* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science*, 16(4), 409–421.
- Wildavsky, A. (1991). *Searching for safety*. New Brunswick, NJ: Transaction Publishers.
- Williams, D. (1999). Race, socioeconomic status, and health: The added effects of racism and discrimination. *Annals of the New York Academy of Sciences*, 896, 173–188.
- Witmer, H., & Mellinger, M. S. (2016). Organizational resilience: Nonprofit organizations' response to change. *Work*, 54(2), 255–265.
- World Health Organization. Retrieved from https://www.who.int/health-topics/climate-change#tab=tab_1. Accessed on November 13, 2021.
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Zhao, Q., Yuming, G., Ye, T., Gasparrini, A., Tong, S., Ocerenco, A., Urban, A. . . . Li, S. (2021). Global, regional, and national burden of mortality associated with non-optimal ambient temperatures from 2000 to 2019: A three-stage modelling study. *The Lancet Planetary Health*, 5(7), 41.