



SHOCK LEADERSHIP DEVELOPMENT FOR THE MODERN ERA OF PANDEMIC MANAGEMENT AND PREPAREDNESS

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Abstract

Scenarios that disrupt and jolt entire systems, such as the 2019 novel coronavirus (COVID-19) pandemic, place organizations, communities, and populations in volatile, uncertain, complex, and ambiguous (VUCA) environments that can affect all sectors of societies and can have disastrous effects ranging from high morbidity and mortality, political upheaval, and extensive economic damage that can last for weeks, months, or even years. Effective leaders are considered one of the most pivotal resources for organizations both in times of normalcy and crisis, yet international criticism has flared pertaining to national, state, local, corporate, and policy leadership in this COVID-19 environment of discontinuous change. We posit that these challenges arise as a result of historically rare allocation of sufficient resources to crisis and disaster preparedness. This paper explores the leadership challenges associated with highly chaotic environments and makes a theoretical argument that leadership effectiveness in these scenarios can best be realized

through advanced, comprehensive, and preparedness-based model of leadership development—*Shock Leadership Development*.

Key words: COVID-19, Leadership Development, Surge Leadership, Crisis Leadership.

Introduction

Imagine that it is 2:45 AM, you are sound asleep, and you are suddenly awakened by a blaring bell, and an intercom blasting in your room like a loudspeaker, the voice clearly shouting, “general quarters, general quarters, all hands man your battle stations...” As the intercom voice continues, you slide out of your bed, quickly throw on your coveralls and boots, and rush up six flights of steep, narrow stairs to get to your position, ready to launch missiles, launch countermeasures, fight off enemy aircraft, or fight a large engine room fuel-oil fire. Whatever the emergency may be, you are at your assigned station to perform any one of myriads of duties that you have been highly and continually trained for. Now imagine doing this several times per week, at all different times of the day, and not because you are necessarily in a combat scenario, but because there is the real possibility that you may be, at any given time, so you train repeatedly, continually, through real-time scenarios, with live equipment, as though it is actually occurring. This is preparedness in a military posture. The idea behind this training model is to prepare military crew and Officers, to the best degree possible, to be able to react and respond effectively in austere, complex, and changing environments and to be able to make rapid yet informed decisions and increase surge ca-

capacity where necessary. The U.S. Armed Forces understand the importance of leadership development, especially the ability for this *surge* style of leadership that is necessary in scenarios that disrupt and jolt the system, even in environments that may already have volatile, uncertain, complex, or ambiguous (VUCA) conditions to begin with (Bennett & Lemoine, 2014).

Scenarios that disrupt and jolt entire systems are often categorized as disasters or crises, and these crises are not endemic only to militaries or governments, but can affect all sectors of societies including government agencies, communities, and private sector organizations, among others, and can range from natural disasters to political and economic collapse, lasting for days to weeks or even months (Dayton, 2015).

Warren Bennis (2007) hypothesized that two of the primary threats to world stability were leadership in the context of increased globalization and pandemics. Pandemics provide high potential for placing organizations, communities, and populations in those aforementioned jolted VUCA environments. In light of the recent global spread of the 2019 novel coronavirus (COVID-19) and the varied responses to the outbreak, it is apparent that Bennis’ hypotheses regarding these two threats are not mutually exclusive. In fact, in-

ternational criticism has flared pertaining to the handling and management of the pandemic by national, state, local, corporate, and medical leaders as they scramble to respond (Shear et al., 2020; Walker, 2020). This paper presents an overview of the context wherein discontinuous change is globally evident during the COVID-19 pandemic, and an exploration of the leadership challenges associated with the highly chaotic, VUCA environment. We posit that the increased instability, disorder, and non-linear circumstances of pandemic and similar crises requires a particular type of advanced leadership that can be realized through an advanced, comprehensive, and preparedness-based model of leadership development—*Shock Leadership Development*.

Pandemics, Preparedness, and Discontinuous Change

Among many types of crisis situations, pandemics have the capability of creating widespread, extremely complex disruption. A pandemic is a global outbreak of a disease that spreads simultaneously throughout the globe. The World Health Organization (WHO) defines these epidemics as those that cause community-level outbreaks in at least two regions of the world, with a potential for wider global dissemination regardless of clinical severity (Doshi, 2011, Fineberg, 2014; Skolnik, 2008). The COVID-19 pandemic falls within this definition. Although this mass-scale pandemic has affected our collective lives more than any other in the past century, it is not the first that has spread globally, nor is it the first coronavirus to

have done so. The previous severe acute respiratory syndrome (SARS) spread to more than 20 countries and caused thousands of cases and many deaths, albeit not to the COVID-19 level of distribution, incidence, morbidity, and mortality (Fineberg, 2014).

Nevertheless, pandemics that result in overwhelming numbers of critically ill people are not a new phenomenon, and nations, governments, institutions of higher learning, and militaries have debated and called for the necessity to make preparations to meet these threats in the event that they occur (Gomersall et al., 2007). Despite being a function of emergency management and disaster preparedness plans in many organizations, pandemic preparedness is often overlooked or addressed in policy only. Organizations rarely allocate sufficient resources to crisis management and disaster preparedness (Bowers et al., 2017). A 2005 survey exhibited that, despite the disaster of 9/11, nearly 50% of organizations did not develop or revise their emergency response or disaster preparedness plans (Lockwood, 2005). Also, there is a pervasive attitude in some corporate settings regarding preparedness work, with leaders often dismissing the work as not being a corporate duty and avoiding the work, regarding emergency preparedness and training, as an expense without tangible return on investment. Such attitudes, and failure to accept corporate social responsibility for crises, can have considerable consequences, including increases in loss of property and lives (Ha, 2019; McMenamin, 2009; Shrivastava, 1995). Additionally, even when pandemic pre-

paredness plans do exist, they tend to ignore critical community and local level operational challenges (Burkle, 2010).

Many natural weather, geological, and man-made disasters cause disruption to business operations, leading to problems that are generally equipment or facility-related. In contrast, pandemics severely impact human resources, potentially resulting in mass-absenteeism and business closures due to employee infection, family illness, and mandated isolation and quarantine. During the COVID-19 pandemic, we have experienced closures of schools, malls, child-care centers, restaurants, and many other facilities, including entire organization sites. Additionally, pandemics are disruptors of social dynamics—dynamics that shift depending on regional cultures, needs, and social cues. These community, organizational, and social dynamics evolve rapidly and continually in such environments, and change in these environments is often unpredictable (Mariner et al., 2009). Where organizational leaders in their routine environment concentrate on fostering innovation, driving corporate revenues, maintaining budgets, and gaining market shares, today's COVID-19 environment has forced transitions of focus on supply chain issues, team shortages, operational challenges, and maintaining liquidity, exemplifying just the type of differences of leadership challenges that crises bring (Nichols et al., 2020).

As portrayed above, societies have, and will in the future experience non-linear, paradigmatic, unpredictable states characterized herein as discon-

tinuous change. Discontinuous change is change that accompanies large scale disruptions, or disequilibrium in environments (Nadler & Tushman, 1995), impacting a system's fundamental elements and urgently requiring an accelerated response to changing conditions, often in order for organizations to survive. Even previously successful, resilient, and adaptive organizations often fail to effectively respond to this kind of disruptive change (Birkenshaw et al., 2016), as they find themselves and their leaders' abilities overwhelmed in the rapidly shifting environment (Lant and Mezias, 1990). This may be partially explained by the fact that organizations facing discontinuous change no longer have the luxury of making incremental changes but must instead pursue a comprehensive redevelopment of many aspects of the organization, including norms, strategy, and work processes, among other elements (Nadler and Shaw, 1994; Lant and Mezias, 1990), beginning with a reconceptualization of previously held fundamental assumptions (Birkenshaw et al., 2016).

When discontinuous change is spurred by unanticipated events, combined with the urgent need to react, the combination of these two conditions points to the need to move into a mindset of re-creation (Nadler & Shaw, 1994). Organizational response during crises can range greatly, driving reactions ranging from panic and pandemonium to effective, controlled resolutions, and this depends heavily on the characteristics, abilities, and capacity of organizational leadership (Bowers et al., 2017). This re-creation mindset is relatively rare as it

requires leaders who can anticipate and respond to disruptive changes, and who are able to lead their organizations into re-creation without the benefit of time or resources to mull over ideas, experiment with new tactics, and evaluate new responses to the changed and changing environments (Nadler and Tushman, 1995). After all, the job of organizational leaders during crisis is to be able to adapt rapidly and boldly to make decisions with speed and precision, responding as quickly and as effectively as possible (Bowers et al., 2017; Nichols et al., 2020).

Although complex and challenging, the ability to react and execute effectively in a state of discontinuous change can aid an organization to overcome exigent circumstances and emerge from a disastrous environment intact (Birkenshaw et al., 2016). Thus, for organizations to be prepared to respond to non-linear, disruptive, discontinuous change, such as the current environment of the COVID-19 pandemic, their leaders must be able to embrace and accept unlearning, discomfort, continuous inquiry, conflict, and to lead ongoing knowledge creation in complex and uncertain scenarios (Malhotra, 1997; Miller & Katz, 2013; Nadler & Shaw, 1995), thus supporting continuity across strategy, structure, culture and processes (Sutton, 1999). This need points to a necessity for accelerating the capacities and capabilities of leaders.

Need for Leadership in Turbulent Times

Effective leaders are considered one of the most pivotal resources for or-

ganizations both in times of normalcy and crisis (Zhang et al., 2012). Although pandemics are not a new phenomenon, we find ourselves in the midst of a changed world; a world in which we, as a population, have begun to recognize the havoc wrought and chaos resulting from worldwide spread of a highly infectious virus and deficits in leadership, coupled with a surplus of leaders around the world who are unprepared to deal with these discontinuous events that result in rapidly and unpredictably shifting conditions. The global news media has been peppered with stories regarding leadership failures in emergency response agencies, in corporations refusing or unable to subsidize employee time off, discussions regarding failure of leaders to take precautionary protective public health measures, and examples of leaders behaving with authoritarian, dishonest, non-empathetic, greedy, and unhumanitarian conduct in a time of national and global disease and economic and social turmoil (Amante, 2020; Rasheed, 2020; Shear et al., 2020; Treverton & Jahn, 2020; Walker, 2020). Similarly, historical data shows numerous problems with leadership during pandemics and other emergencies, with unjust and race-based quarantine enactment, inequitable treatment provisions, unjustified forcible vaccinations, and other dark leadership fiascos during plague, smallpox, and other outbreaks, creating mistrust and setting a backdrop for rioting and violence (Kapucu & Van Wart, 2008; Mariner et al., 2009). Leaders that are in place at the time a crisis occurs may not be the right leaders to lead the organization through a crisis, and may provide ineffective and inadequate leadership

that yield disastrous results. Many organizations regularly operate in reactive mode, and this can be problematic in crises, where at least some form of proactive approach can make considerable strides towards managing the disruption effectively (Girboveanu & Pavel, 2010). Being unprepared, untrained, and inexperienced to lead in crisis environments, these leaders can emphasize and concentrate inappropriately on mitigation strategies that focus on distractions, media cycles, and appearances when prioritized action targeted at crisis response is what is needed (Bowers et al., 2017).

Although leadership is a key element of organizational design and critical to organizational effectiveness, an agreed-upon definition or conceptualization of leadership is lacking, as evidenced by the plethora of leadership literature that displays innumerable definitions (Bennis, 2007). This, however, is not only unsurprising, but is aligned with the fact that there are numerous leadership styles and many leadership attributes that are needed at different times and displayed differently based on environment and context (McConnell & Drennan, 2006). Leadership plays a critical role in most organizational environments, and the importance of effective leadership is not absent in disaster planning, management, and response, but in fact becomes even more evident and often takes center-stage.

Leadership Development for Pandemic Leadership

People generally tend to be resistant to change (Dent & Goldberg, 1999;

Worley et al., 1996), and often respond to unconventional challenges conventionally, addressing situations and scenarios that they are unfamiliar with in ways that they are familiar using. Because of this unfamiliarity and discomfort, leaders struggle with the challenges of crisis situations, but crises, while often unexpected and unpredictable, are an indispensable part of the organizational workplace and society (Celik, 2016). Even in the face of disruption, many leaders can adapt and modify their leadership styles and response actions from previous experience, often in order to drive the disruption back toward a state of what they perceive as normalcy (Celik et al., 2016; Hunt et al., 2007). However, a pandemic, such as the COVID-19 global outbreak that we are experiencing, is the epitome of complexity and a habitat for complex systems. It is therefore vital that leaders are capable of responding and leading effectively in this rapidly changing environment. However, using the same, habitual leadership styles and practices is often inadequate in such mass-scale disruption. This is because the extremely complex situations that arise during a pandemic, as we have seen with COVID-19, includes numerous interdependent, unpredictable, and rapidly shifting variables, creating an environment where these traditionally defined leadership styles, and traditional, straightforward leadership practices have limited effect. This is evident particularly because, with traditional practices, root and contributing causes to arising problems in such scenarios are often not recognized until after-the-fact. The literature supports that leaders who understand the value of numerous leadership

styles, and have familiarity and experience with them, are more effective in VUCA environments (Bennet & Lemoine). Thus, some of the biggest challenges around leading in a complex, pandemic era have to do with figuring out how to employ these leadership styles, adjust them for rapid and effective sensemaking and decision-making, and use them effectively, in real-time, during the VUCA environment of pandemics. Doing so will require considerable leadership development in order to make significant positive impact on organizational leadership, and thus on organizational operations, effectiveness, survival, and organizations' people.

During pandemics, organizations, communities, and society in general require authenticity, honesty, and substantive care from their leaders (Campbell, 2015; Cavanaugh, 2006; Doe & Pumplampu, 2018; Lerbinger, 2012; Mariner et al., 2009). Leadership style matters in leading through crisis, and thus, a pandemic leadership style must have particular traits and characteristics for improved effectiveness, including flexibility, decisiveness, skilled sense-making, self-assurance, agility and adaptivity, strategic and big-picture thinking, communication, honesty, transparency, reflection, self-awareness, empathy, resilience (Bowers et al., 2017; Haddon et al., 2015; Roux-Dufort & Lalonde, 2013; Van Wart & Kapucu, 2011) and a sense of calm in the storm. These vital attributes are present in numerous highly important leadership styles, but, depending on the type and scale of the disaster, some leadership styles are considered more effective than others.

In crises, such as the COVID-19 pandemic, the detailed pre-planning by organizations and their leaders, although prudent, cannot mitigate every potential crisis element (Drabek & McEntire, 2003; Herbane, 2013). Widely used and accepted practices and measures of leadership may not adequately capture the needs of leadership in the context of crisis (Haddon et al., 2015). Thus, leaders need to have ad hoc capabilities with the ability to improvise, communicate, respond to and develop new norms, and make rapid, on-the-spot decisions (Williams et al., 2017), potentially requiring the use of numerous leadership attributes from multiple leadership styles such as authentic, transparent, transformational, communicative, mindful, situational, and adaptive leadership.

Many corporations operate in a state of imbalance between order and disorder, and that place is called the edge of chaos (Hunt et al., 2007; McDaniel, 1997). This boundary is a transition zone that nears a disorderly, imbalanced state of volatility and ambiguity, poised at the boundary of order, but requiring constant adjustment to rapidly changing systems (Hunt et al., 2007). It is argued that leaders that normally function in such environments may be closer to and better experienced with crisis situations, as their organizations generally have a portion of their elements or units undergoing a chaos-like state, although the other major units maintain stability (Hunt et al., 2007). So, although the entire system may not be simultaneously undergoing the kind of dramatic, disruptive change we see in COVID-19, these

relatively unstable situations still require consistent adaptation and agility in order to be responsive to the unpredictability in the change that is occurring (Hunt et al., 2007; Osborn et al., 2002).

Pandemics bring this level of instability, randomness, and non-linear, discontinuous change to an extreme, exacerbating the organization, whether it be a company, a university, a government agency, a community, a city, a nation, a continent, or all of the above. In the extreme scenario, there is an increasing level of units and components in the system, or across systems, undergoing continual and dramatic change, with the potential for and experiences of organizations, communities, and entire systems undergoing significant failures with serious implications for global health, global economics, and global well-being. In the midst of crises, leadership needs to go beyond the edge of chaos and take adaptive and situational leadership to a more amplified, more advanced level, potentially embroiled in a continual state of chaotic, non-linear change with the agility to bring the organization back within the boundary of order and some equilibrium of stability. This pandemic leader framework requires the ability to exercise at least some if not most of the aforementioned attributes, and to understand and to be able to shift between or combine these different leadership styles, as needed, in order to deal with the shock or jolt that has shaken and disrupted systems to an increasingly high level of complexity. Although no leader or leadership style is perfect or absolute, and it may seem that this kind of hyper-situational multi-style leadership would

require a superhuman being in order to continually and consistently be able to use and adapt all of these leadership styles, these capabilities and capacity can be developed, at least partially, through what we call *Shock Leadership Development*.

Shock Leadership Development

The need for ad hoc and non-traditional capabilities in crisis leadership, and the fact that crisis management is concerned with the before, now, and after, indicates that planning, elements of emergent leadership, and active preparedness are necessary (Herbane, 2013; James et al., 2011). Leadership cannot work from a place of reaction and expect to lead effectively through crisis (Girboveanu & Pavel, 2010). The actions that leaders take before crises can have considerable implications and be very influential in enabling them to effectively navigate the organization through crises when they occur (James & Wooten, 2010; Williams et al., 2017). Thus, leadership development and continuous preparedness is critical for leaders in disasters.

Leadership development is often discussed in the context of leadership coaching and consulting, and it is critical for succession planning and for organizational success, but it is also critical for crisis preparedness. There are numerous avenues to develop leaders, but there is no “*magic box*” of tools and methods for effective leader development, especially considering leaders in different organizations or with different needs. Nonetheless, we posit that it is possible

to combine leadership development tools and methods to help develop certain skills, capabilities, and capacities that can be beneficial for leaders in the midst of whole system shock. Although leadership in highly uncertain, complex, and often chaotic environments rich with rapidly changing situations and needs, like currently being experienced with COVID-19, is unprecedented for many executives, managers, and organizational leaders, this does not mean that it is not possible to enable leaders to be prepared and even proactive towards effective reactivity.

We posit that there are numerous necessities needed to prepare leaders for effective leadership and management in crises, such as the COVID-19 pandemic, and these can be generally established through a course of three continual leadership development methods, part of the development methodology that we call *Shock Leadership Development*. First, incorporating preparedness for leadership in the complex, austere, and volatile environments of crises, such as COVID-19, requires the ongoing use of real-time, scenario-based, live-action training. Second, mindfulness and effective use-of-self is critical in crisis management and leadership, and thus mindfulness training and development is an important leadership development method to prepare leaders for action in a shocked system. Finally, leaders need to be educated about and gain experience in a diversity of leadership styles, in order to agilely adapt those styles in-the-moment, when the situational need arises in crisis.

Real-Time Scenario-Based Training

Although there is no publication that explains it, the US Armed Forces have utilized a leadership style in austere, complex, resource-poor and rapidly changing environments that focuses on quick decision-making and increasing surge capacity. It has been unofficially termed *Surge Leadership* and the consistent and continual real-time simulation training and constant operational posture that military units undergo allows military leaders to be able to respond with rapid but highly analytical decisiveness in catastrophic situations, often allowing for effective inter-unit communication, joint interoperability, force protection, and effective use of strategic and collaborative command structures with room for flexibility. This is not an abnormal way of life for military organizations, even when they are not deployed.

Military units prepare through live training drills on a regular basis. Combatant units undergo live-fire exercises in model communities with staged buildings and enemies. These are done live as well as through virtual reality/augmented reality (VR/AR) technologies (Hsu et al., 2013). Naval forces in the United States Navy undergo live-fire combatant training at-sea, as well as weekly and oft-times daily firefighting and other disaster drills at-sea and in port, both in training sites and in the environment in which they would have to respond (the ships in which they are stationed). These include mass-casualty medical drills, full-dress, full-equipment ship's engine room fire scenarios with live, charged hoses and activated self-

contained breathing apparatus (SCBA) units, among many other scenarios. Military commands achieve constant readiness through regular deployment and continual training simulations. These are even performed with live chemical warfare response training, with live agent and simulant use, depending on training site, unit, and purpose. Such training modalities enhance individual situational awareness, unit cohesion and teamwork, technical knowledge, response time, surge capacity, multi-unit interoperability, and leadership ability and flexibility. For the Armed Forces, these real-time training events are continual, advance disaster preparedness, and they exemplify that leadership preparedness is essential for disaster or crisis preparedness, including pandemics.

Non-military organizations can likewise prepare their leaders for such rapidly changing, complex, uncertain, and volatile environments. As displayed in the Shock Leadership and Preparedness Model (Figure 1), developing preparedness plans, working on them collaboratively, and designing and participating in training, simulations, response drills, and lessons learned “hotwash” sessions, organizational leaders can prepare for and gain competency in *Shock Leadership*, giving them the skills necessary in employing numerous leadership styles and attributes for leading organizations and systems to intact sustainment through future globally turbulent events, whether they are cyber-attacks, economic recessions, acts of terrorism, or catastrophic and highly disruptive pandemics.

Mindfulness Training

Leaders who are experienced practitioners of mindfulness have trained their attentions and are better able to perform real-time assessment, sense-making, and decision-making. This mindfulness in leadership has been shown to make a positive impact on the human domains of cognition, emotion, behavior, and physiology that cascade into improved relationships, well-being, and ultimately performance (Good et al., 2016). Performance is improved as a result of increased attentional breadth, including effective control and stability of attention on relevant tasks, that results from mindfulness (Dane, 2011; Reb et al., 2014). In situations of immediacy and continuous change, such as the one we are facing with the current pandemic, the ability to stay consistent in-the-moment, with minimized mind-wandering and stabilized attention to the present, is critical, and this is improved through mindfulness (Brewer et al., 2011; Lykins & Baer, 2009; MacLean et al., 2010; Smallwood & Schooler, 2015).

As aforementioned, control of attention is important for focus, and practicing mindfulness allows attention to be directed on the task at hand, and allows the mindful leader to be less distracted from competing internal and external demands (Cahn et al., 2012; Tang et al., 2007). This is corroborated by neuroscience research (Kozasa et al., 2012; Lutz et al., 2008), in addition to findings that

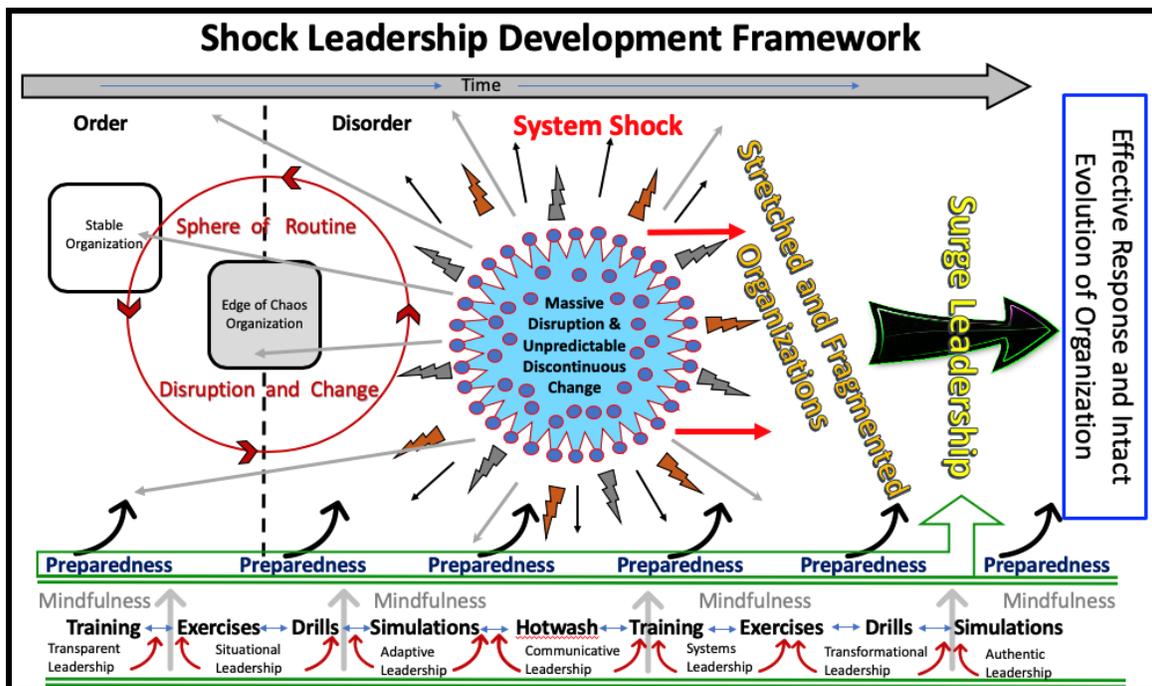


Figure 1. Shock Leadership and Preparedness Model

mindfulness dampens emotional reactivity (Brown et al., 2012; Desbordes et al., 2012; Taylor et al., 2011). With expanded cognitive capacity and resources, mindful leaders can use the resources more effectively in distracting situations and environments.

Coaching and Experiential Training with Using Different Leadership Styles

In order for the best possible sense-making and decision-making to occur, a *surge leader* must be able to evaluate the situation, lean into discomfort, maintain a high level of resilience, listen closely as an ally (Katz & Miller, 2013; Miller & Katz, 2013) to the affected and to advisors, communicate accurately, transparently, and authentically the status and intent, and observe, evalu-

ate, assess, and analyze from all possible perspectives and lenses to have a broader understanding of the situation. This is part of critical adaptation to the continual, non-linear, rapidly evolving situations of events such as the COVID-19 pandemic, and this requires understanding of, fluency with, and ability to adapt and integrate multiple styles of leadership for best use of their traits and skills, in order to lead effectively at and beyond the edge of chaos (Hunt et al., 2007; Stringham, 2012). Using multiple leadership styles, integrating and agilely adjusting them to evolving situations, the *surge leader* has the ability to react more effectively to shocking, disruptive, surprising, and destabilizing conditions that shock systems, whether these systems exist in departments, non-profit organizations, corporations, public schools,

school districts, universities, government agencies, communities, or states and provinces. This kind of knowledge, capability, and capacity comes with practice and development, and the continual practice of real-time, scenario-based training provides the opportunity for leaders to employ different leadership styles, as necessary in different training scenarios, giving them the opportunity to test, adapt, and flex leadership styles and attributes, preparing them for agility in live crises.

Through *Shock Leadership Development*, leaders are able to learn and train on the employment of attributes such as self-regulation, self-awareness, honesty, trust, altruism, accountability, integrity, and clarity, which are important characteristics of authentic and transparent leadership styles (Avolio et al., 2004; Boin et al., 2013; Gardner et al., 2005; George, 2003; Yukl, 2013), giving a high degree of emphasis on follower welfare, which is vital in crises. Without authenticity and transparency, leaders' behaviors and decisions are eventually impacted, creating a decline in trust, engagement, and loyalty, and potentially driving or exacerbating toxic cultures (Baum, 2005; Houser et al., 2014; Salvatico, 2006).

Additionally, mindfulness training and real-time training, scenarios, and drills help prepare for the adaptability and agility espoused in adaptive and situational leadership styles, (Hayashi & Soo, 2012; Northouse, 2016; Yukl, 2013), potentially preparing leaders for the advanced or magnified degree of leadership style flexibility and influence

arguably required to still be able to mobilize others and accomplish the mission (Heifetz, et al., 2009; Northouse, 2016) under the highly chaotic and austere conditions of crises, such as pandemics.

Furthermore, scenarios and continual real-time, high-impact disaster training affords the opportunity to test and understand leader communication. Leadership is largely based on the ability to communicate, and this ability is influenced largely by the context in which a leader finds oneself (Hamrefors, 2010). Communication, like many other aspects of behavior, are contextually situational, and can be effective in one location, time, or space, and completely ineffective in others, which is why it is important to place leaders in different situations and conditions, through simulation, in order to build the ability and experience of communicating even in the most adverse conditions, such as combat, a fire, a flood, an earthquake, a terrorist attack, and even a mass pandemic. A communicative leader "...engages employees in dialogue, actively shares and seeks feedback, practices participative decision making, and is perceived as open and involved" (Johansson et al., 2014). Communication behaviors, such as attentive listening, two-way communication, and upward influence through co-worker involvement are critical in order to achieve organizational objectives (Johansson et al., 2014; Tyssen et al., 2014), including during crisis response and management (Reynolds et al., 2008). Such communications from authoritative voices, carefully crafted for accuracy, honesty, transparency, and evidence of collaboration, provided consistently, can

calm the public, prevent panic and anger, and foster trust in turbulent times (Parsons et al., 2017). An inability to lead from this communicative approach can cause problems with the audience, create preconceptions of the topics being communicated or the communicator, cause distrust, and exacerbate system disruption (Nijkraak et al., 2015; Parsons et al., 2017). *Shock Leadership Development* implementation can provide opportunity for testing and learning effective crisis communication, because in actual crises, it is a vital element to effective group dynamics, interactions, and for motivating and transforming people (Lvina, 2014; Men, 2014a; Men, 2014b).

In times like these, effective leaders need to transform people through an exceptional form of influence. A leader must be able to tap into the motives of followers and motivate them to accomplish goals and surpass expectations (Celik, 2016; Northouse, 2016; Shadroconis, 2013). In times of discontinuous disruption, employees and community members are often in disarray, unsure, and stressed about the current situation and the future, for their work, their families, and their communities, among other worries. Thus, leaders that have strong values and are attentive to the needs of the followers, and who are concerned about their performance and well-being, can use charismatic and inspirational motivation to calm fears, influence focused attention, and provide intellectual stimulation. This capability can be critical in crisis situations for continuity of operations, and these are attributes that are seen in the transformational leadership style (Northouse, 2016;

Tyssen, Wald, & Heidenreich, 2014; Zhang et al., 2012). The ability to effectively interact with, influence, encourage, and intellectually stimulate the people in groups, teams, and organizations is a vital element to the effective function of organizational systems, and this is important learning that can, at least partially, be provided, understood, and practiced through real-time training. As often seen in armed forces contexts, when leaders are trained, educated, and developed through such real-time, high-impact, comprehensive development frameworks, team members that participate in these drills and scenarios also become aware, learned, and participative in the development of their leaders and of their own leadership skills, further fostering crisis leadership capability and preparedness in the complex system.

Complexity science exemplifies that leadership is a product of the dynamics of the interactions of all the people and elements in a system (Lichtenstein & Ploman, 2009) and no study, analysis, or response to one component of a complex adaptive system will provide an understanding of or effective change in the entire system (Uhl-Bien et al., 2007). This is why systems thinking is critical to group, organizational, national, and global function. Many have witnessed or experienced the effects of the current pandemic not just on health, but on the healthcare system, the public health infrastructure, education, employment, social discourse, elections, and economies, among other areas affected. In a system, leadership is a product of the dynamics of the interactions of all components in the system,

and context emerges from those interactions (Lichtenstein & Ploman, 2009). Effective change emerges from the inter-related factors of the entire system in civil society (Lichtenstein & Plowman, 2009; Onyx & Leonard, 2011). Engaging this systems-knowledge and experience through learning, training, and encountering systems leadership is supplementary to existing systems approaches within U.S. armed forces' high reliability organizations (Rochlin et al., 1987), and thus provide the ability for leaders that engage in systems leadership to operate from that systems-thinking lens, enhancing the capability of whole-system assessments in sense-making and decision-making during crises (Northouse, 2015; Uhl-Bien et al., 2007; Yukl, 2013).

By using a combination of long-term design, development, implementation of similar scenario-based, real-time simulation training programs, mindfulness development, and the incorporation of different leadership style use in these training scenarios, organizations can prepare and enable organizational leaders to increase flexibility, adaptability, and surge capacity to deal with rapidly shifting, non-linear, discontinuous change in catastrophic situations, responding more effectively in shocks to the systems of their organizations.

Surge Leadership capability and experience can provide higher levels of individual situational awareness, improve collaboration, unit cohesion, and teamwork, reduce response and decision-making time, expand surge capacity, generate enhanced inter-organizational

interoperability, and propel leader elasticity and tractability, all of which are critical in dealing with extreme, highly complex environments with shifting unknowns and VUCA exacerbation. We posit that *this kind of leadership* is the comprehensive, although complex, leadership development model for emergencies and disasters that jolt the entire system—emergencies such as the COVID-19 outbreak. However, this is not a leadership style that any leader can simply embrace. It requires an even more comprehensive level of leadership development that can be attained through the *Shock Leadership Development framework*.

Conclusion

The current global situation of the COVID-19 pandemic outbreak, and the associated systems effects, have taken many by surprise and have shocked the global system, making many people ill, overwhelming healthcare institutions and public health infrastructures, closing schools and businesses, creating product shortages, shifting innumerable amounts of work, workers, and students into virtual modalities, reducing global travel and trade, decreasing trust in media and government communications, and in millions of cases, having the potential to exacerbate conditions of poverty, malnutrition, and sanitation, among many other disrupted systems. As threats of second and even third waves of outbreaks loom, there is a potential for the effects to linger for years rather than months. In the wake of the global effects of the pandemic, society will continue to change, and dis-

ruptions to the system are not just possible, but are expected. Despite some economic predictions, it is not known what the last few months of quarantines and lockdowns will lead to, and the lasting changes that they will have in the way that we interact, do work, communicate, socialize, entertain ourselves, and get around. Leaders of every level, across industries, in government, non-profit, or corporate ventures, in small, medium, and large organizations, have been experiencing increased conditions of VUCA, and that is likely to continue. Numerous studies will probably be conducted, examining a host of areas including why some countries or regions were considerably more affected than others, what measures by different countries to deal with the crisis worked and which did not. Other studies will explore the effects of COVID-19 on public health infrastructure, on the healthcare system, and the effects of the lockdown on mental health. Researchers will investigate urban development, city planning, the effects of media on the response and on people's behaviors, and effectiveness of virtual communication advancements. One of the areas that will continue to be explored is crisis leadership, and the levels of effectiveness leaders have had and will continue to have in this unprecedented scenario in which situational leadership is taken to extremes, and leaders must respond in an environment where no one has absolute answers on how to lead and manage, even when they have been working tirelessly to respond as effectively as possible to this ongoing, rapidly-shifting, discontinuous change, some with much more effectiveness and efficiency than others.

What is apparent is that it takes a special kind of comprehensive leadership for groups, organizations, communities, cities, and nations to effectively respond in this crisis, and during potential subsequent waves of disease outbreak, as well as in the recovery of the aftermath. This comprehensive leadership style itself demands a great degree of skill, knowledge, critical thinking, and flexibility to rapidly adapt to the environment, using numerous leadership styles and attributes, often simultaneously. Although responses in such rapidly shifting, discontinuous change environments that shock the system are highly reactive, as we have witnessed during COVID-19, it is possible to react more decisively and effectively through proactive means. Those individuals that prepare for crises can become capable of higher levels of success in leading in them. These *Surge Leaders* cannot simply become effective because they routinely lead organizations, have technical skills, or have undergone crisis management classes. This kind of leadership requires consistent preparedness through continuous training, using realistic, real-time, and disruptive live scenarios, to provide experiential knowledge for response, leadership, and management in crises. This level of preparedness can be approached using the *Shock Leadership Development* framework, and is needed not only for the expected continuation and lengthy aftermath of COVID-19, but for ensuring that organizations are not caught unaware and unprepared for future crises.

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