Original Paper

Natural Disaster Preparedness Planning: Synchronizing Artificial Intelligence with a New Set of Leadership Skills for Generating an Inclusive Strategy in a Remote Workplace

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Abstract

An increasing number of major hurricanes, flooding, and wildfires has introduced an unusual amount of uncertainty and thus changes in our daily lives. However, one positive outcome is that they have also resulted in new opportunities to re-examine past approaches for planning to survive a natural disaster. A critical behavior practiced by inclusive leaders is to seek new ideas and perspectives from co-workers who have different values, expectations, and goals. Being receptive to different views enables organizational leaders to challenge the way they personally perceive how future practices and policies can be designed when planning to survive a natural disaster. However, particularly in the private sector, one sobering account has been the social cost of not convening face-to-face in our daily working environments whereby a free exchange of ideas is less likely to occur. This purpose of this theoretical paper is to propose a new skill set for those leaders working with remote co-workers when designing a plan for natural disaster preparedness for their organizations.

Keywords

1. Introduction

With remote working now more commonplace among those employed in the private sector, it is becoming apparent that planning for natural disasters is now more complex (Goldshalk et al., 1998). Higher levels of vulnerability in a distributed workforce where members are more isolated from one

another raises the stakes in planning to survive a natural disaster. As an outcome of this occurrence, an interest in preserving social capital and community structure is greaowing in relevancy among organizational leaders (Volini et al., 2020).

In terms of natural disaster preparedness whether it be a tornado, hurricane, flood or wild fires, they are becoming increasingly severe, posing a major threat to business operations and human livelihood around the world. According to Statista.com, natural disasters worldwide have killed some 11,000 people in 2019 (National Data Statistics in US, 2020). Of all the types of natural disasters, floods, hurricanes and tornadoes have had the largest effect on the quality of life in 2019. In this regard, the cost of recovery from natural disasters from 1980 to 2017 has exceeded $1.5 trillion. In addition, the recent COVID 19 virus has generated a complementary disaster for todays' leaders in organizations in the private sector. The outcome has been the emergence of the remote workspace where employees find themselves somewhat isolated from centralized leadership, as well as co-workers. The opportunity to maintain an active role in the discourse among managers and operational staff when solving problems is now quite constrained. This places additional stress on senior business executives around the world when attempting to build trust, loyalty and transparency among co-workers (Schooley, 2020).

The workplace appears to be at a crossroad. This is a theoretical paper in that the purpose is to suggest a new skill set among organizational leaders to bring the remote worker into a planning process that can result in more ideas and perhaps innovative approaches for surviving a natural disaster. What is intriguing in this theoretical piece is the matching of the potential of the science of artificial intelligence with that of human ingenuity when designing an inclusive leadership model that results in a trust of planning outcomes. To the research community, how organizational leaders go about using technology (data science) when justifying natural disaster preparedness strategies to those generated by today's workers adds a new dimension for feiture study—and a relationship that needs to be clarified in a remote workplace. As a research interest, where should the line be drawn between relying primarily upon artificial intelligence for answers to that of including human emotions and sensitivity in the decision-making process? Perhaps, as discussed here, a first step in addressing this issue is the emergence of a new skill set on the part of organizational leaders to expand our thought and perspective on problem-solving.

2. Method

For many, the transition from conventional to alternative workplaces is often not easily accepted. Co-workers who are familiar with a structured office environment often find it hard to adjust to a self-directed work schedule. Those who are accustomed to working within eyesight of their colleagues can easily become lonely in a remote setting (Volini et al., 2020). Thus, organizational leaders who lose their physical proximity to co-workers have to significantly change the way in which they relate to their subordinates. This is also true when building strategies to prepare for a natural disaster. Moreover, loneliness often results in enhanced health risks and additional stress. In other words, staying connected

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while working remotely and feeling that we have not lost our stature in an organization calls for a different kind of leader who places the interests of others above their own (The Future of Work Study, 2020).

2.1 Revisiting Natural Disaster Planning as a Mental Health Issue

While natural disasters have been devastating to local communities, infrastructure and the economy, these disasters can also lead to severe emotional distress and anxiety for those living through one. Based on a study of suicide rates during a 12-year span, Jennifer Horney (2020) concluded that suicides increased by 23% when comparing rates before and after the disaster. Thus, by focusing on the social vulnerabilities of those isolated in a remote working environment, more effective business practices and policies could be put in place to counter such reality. Being in an era where we appear to be challenging past practices and in the manner we go about in addressing societal issues, Horney (2020) suggests that our organizational leaders cannot continue to undergo planning with a goal of just to recover to the pre-disaster status quo. Research findings by Horney (2020) suggest that business leaders may want to view the process of designing strategies to survive a natural disaster to be more considerate of both the short-term and long-term mental health impacts upon human welfare.

2.2 Exhibiting Empathy for the Remote Worker

In terms of effectiveness in working remotely, the Martec Group (2020) performed an Emotional Intelligence Survey of 1,214 individuals across variety of industries. They concluded that working remotely has not resulted in those individuals performing effectively and confidently as originally thought. For example, job satisfaction dropped 57% as to before when working in a conventional office setting. Correspondingly, job motivation also dropped 56%. The study results appear to suggest that working remotely has been perceived by many as being dis-enfranchised when it comes to participating in meaningful discourse with not only organizational leaders but suppliers and customers. In addition, a vulnerability to natural disasters and an inability to cope with such a tragedy on their own are elevated with co-workers being isolated in their homes (Masozera, Bailey, & Kerchner, 2007). The risk to remote workers for being subjected to personal injuries including financial/material losses, or even loss of life, is now more evident (Fothergill & Peek, 2004). For instance, someco-workers may reside in hazardous areas such as floodplains or locations where there are more frequent tornadoes (Parris, 2017; Godschalk et al., 1999). Exhibiting empathy for co-workers who are undergoing additional pressures in a remote setting reflects the backdrop for action in generating an inclusive workforce.

2.3 Aligning Artificial Intelligence with Human Needs

At the same time, Artificial Intelligence (AI) has emerged as a strategy to make decisions as to how to best allocate resources and design procedures for protecting communities from the effects of a natural disaster. Coming into play is the reliance upon algorithms for decision-making whereby Artificial Intelligence (AI) replaces human input. According to a new Brookings Institution Report (Muro, 2019), today's leaders and their subordinates are going to need to up skill, reskill or change jobs completely in order not to become victims of advancing technology. In terms of natural disaster preparedness, a new

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emphasis for enhancing the "soft skills" of those in leadership roles to comfort remote workers, coordinate their possible relocation, and tend to family needs is now in play (Muro, 2019). The challenge here is can the science of artificial intelligence include a degree of human sensitivity whereby a planning process can become personal, transparent, and inclusive? *Therefore, the hypothesis tested here is that a new skill set utilized by organizational leaders will likely be more effective for engaging the remote worker in a more inclusive planning process for merging the capacity of the science of artificial intelligence with that of human dignity when preparing to survive a natural disaster.*

3. Result

An emerging priority among organizational leaders is now to integrate science, technology, ad personal choice by empowering a variety of stakeholders to plan together for, as well as recover from, a natural disaster. This business operational model calls for a special interdependency among remote co-workers who now need their leaders to help them share ideas and expertise for solving problems. The result is the building of community solidarity whereby those things that bind people together for a common purpose or interest become the driving force for planning (Middlebrooks et al., 2020). Social capital is generally described as the set of relationships that have developed around shared values. Human capital comprises of applying those skills that enable an individual to achieve good personal health and wellbeing (Bandiera et al., 2009). A leader's focus on building social and human capital provides a venue for individuals to feel that they are all in this together. These forms of capital are likely to result in greater workplace sensitivity towards organizational resiliency by strengthening social networks, employee confidence and trust (Schooley, 2020).

3.1 Providing for Fairness and Equity through Capacity Building

Building an organization's capacity to be inclusive by directly engaging those most affected by a natural disaster is the basis of design thinking theory depicted in a recently published textbook, Discovering Leadership (Middlebrooks et al., 2020). In this regard, design thinking is a process that promotes problem-solving with a mindset that is explorative or curious, user-centered, and multidisciplinary (Middlebrooks et al., p. 16). In terms of curiosity, business leaders working in a remote working environment face a challenge of moving from a highly competitive world of individualism to one of collaboration, inclusiveness and transparency. In this regard, the command-and-control characteristic of the hierarchy in today's organization promotes a workplace of individualism that may no longer make sense when attempting to build collective action in an inclusive environment (Sinek, 2018).

It is suggested here that those leaders who have a more authoritarian style are likely to struggle when attempting to put together an effective plan to address specific co-worker issues related to natural disaster preparedness, especially in a remote workplace. As an alternative, those who have a strong participative leadership style may be better able to formulate collective action from a remote workforce for generating a buy-in to proposed strategies. Perceiving a planning process from different perspectives, thus

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multi-disciplinary, enables leaders to embrace lateral thinking patterns that expand the possibility of solutions to problems beyond the obvious (Middlebrooks et al., 2020). The charge is then for business leaders to take extra steps to bring the remote worker into the planning discourse where both personal and organizational needs can be met simultaneously. In such a role, the new cadre of leaders are expected to be skillful as facilitators rather than directors. Therefore, perhaps a new skill set that wreaks transparency, accountability, collaboration and collective action—as well as fairness and equity—is now in play to generate innovative solutions quite different from the past.

3.1.1 New Skill Set Now in Play

In short, the leaders of today (and tomorrow) require a different set of skills than those of yesterday. Generally, artificial intelligence has the capacity to perform simple reasoning and symbol recognition, analyze patterns in data collection to identify trends, as well as the capacity to speak and the visualize current events (Guillan, 2020). In terms of natural disaster preparedness, artificial intelligence can assist in assessing evacuations procedures as well as identifying the location of co-workers and their families that are in distress. It can also boost efforts of medical units and emergency managers via face recognition and real-time decision-making. Moreover, it should be noted that at this moment, artificial intelligence is growing exponentially in how it affects our daily lives with such examples as manufacturing robots, disease mapping, booking travel, health care monitoring, cell phone applications, telecommunications, among other (Guillen, 2020) Other examples where artificial intelligence directly affects the lives of many are Facebook, Netflix, Alexa, and Google. The challenge is how can business leaders effectively utilize artificial intelligence while at the same time include in the discourse the consideration of those emotional aspects associated with natural disasters to arrive at plans that are accepted by those to be most affected; in this case, the remote worker. To assist in that endeavor, here are 6upskills that are offered as companion skills to those capacities associated with artificial intelligence for inspiring a growing force of remote workers to actively engage in the planning process.

Upskill #1—Exhibit Empathy (Be an Active Listener).To Meg Bear, the new leadership skill for the 21st Century is that of becoming more personally sensitive to the feelings and needs of others (Bear, 2015). To Bear, this is now especially important in a more encroaching scientific workplace. Caring about others implies a respect for co-workers and thus generates a feeling of belongingness. In terms of natural disaster preparedness planning, this feeling is critical when attempting to convince others to plan collectively to address workplace issues related to protecting the interests of the remote worker and family members. Thus, feeling appreciated is the basis for forming trust, which is the foundation of a leader's credibility. By leaders placing themselves in the shoes of another, a possible side effect is that it also may reduce prejudice, bullying and inequality in the workplace (Sinek, 2018). An important aspect to demonstrating empathy is becoming an active listener. By demonstrating to others that you are interested in what they are saying, an open dialogue can be generated. In summary, listening to others enables the emergence of transparency and openness, thus creating a remote working environment rich in relationship building and inclusiveness.

Upskill #2—Differentiate Culture Cues (Be a Coach). Organizational leaders often find themselves as coaches when supporting and enhancing the skill levels of their co-workers. At times, this often involves being a cheerleader for bringing individuals together as they grow in their capacities. Coaching involves exhibiting social intelligence for getting others to collaborate and grow in self-leadership. Social intelligence is knowing how to engage others by establishing interactive social networks (Bandiera, 2009). When designing plans to survive natural disaster, the goal is to establish partnerships with a diverse remote worker. The objective is to have the remote worker possessing a variety of different values and expectations to engage for designing new innovative solutions to move beyond past practices. To ensure affiliate growth, it is critical to have each member of a multi-culture workforce feel valued, respected, and appreciated. In this regard, part to this skill set is being able to differentiate cultural cues, read subtle facial expressions and negotiate intuitively.

Upskill #3—Activate Social Media Listening (Think like a Troubleshooter).The use of mobile devices and cloud applications, as well as new forms of communications like Zoom and Parlor, etc., are now in play for the remote worker. Troubleshooting is about being people-oriented by providing a free flow of ideas where remote workers can work together more efficiently and collaboratively by sharing ideas. This also means that remote workers feel confident to either push back on proposals or offer support as needed. This skill set relates to utilizing social media "listening" to keep on top of what remote workers are discussing. It involves continuously monitoring the discourse that is occurring online (Bandiera, 2009). Being an effective troubleshooter requires getting feedback and actually using it to engage co-workers in problem-solving. Leaders need to know how to adapt social interactive platforms to ensure that co-workers can freely and systematically engage with one another without fear of intimidation. In particular with those fears that exist in regards to surviving a natural disaster, co-workers need to be trained to use the full potential of social media platforms such as Slack, Zoom, or Canvas. Having a leader who is skillful in not only the designing an organizational app but also in bringing it to fruition results in co-workers overcoming their emotions, fears, and anxieties (Sinek, 2019). The objective here is to create an inclusive environment where every employee, no matter the rank, can offer suggestions and speak freely to suggest a remedy.

Upskill #4—Promote Civic Goodwill (Act as a Liaison Between Stakeholders). This skill set focuses upon the capacity of a leader to serve as a liaison between stakeholders in a community such as employees, investors, managers, customers, suppliers, political leaders and citizens. In terms of promoting civic goodwill, it is helpful for leaders to excel in obtaining resources, clarifying expectations with outside parties (both internal and external to an organization) and building consensus for designing good faith strategies (Godschalk, 1998). Promoting organizational good will in the private sector is about having co-workers feel like their work and personal lives have meaning beyond that of making a profit selling products. In this regard, the current Gen Z want to feel like they are part of something bigger than themselves (Guillen, 2020). While making a profit is important to a business, inspiring others to a special cause (in this case, natural disaster planning) relies on co-workers to share a common interest.

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Living free from fear (equity) and ensuring fairness in the way we interact with one another are part of civic mindedness. In other words, civic mindedness reflects leaders who perceive their organization as being responsible for the consequences of their actions beyond their own facilities and operations Sinek (2019).

Upskill #5 Take Calculated Risks to Innovate (Utilize Lateral Thinking). Working for a purpose-driven organization is a priority of millennials who are now arriving in the workplace to take on a new set of challenges (Guillen, 2020). The willingness and capacity to take on risk to innovate when proposing new approaches in natural disaster planning entails having a support system in place to investigate and test new ideas and models. This skill set consists of creating a risk-taking environment in which remote workers feel psychologically safe to try something new, see how it goes, and even perhaps fail. More importantly, remote co-workers who have a perception of being a significant part of the end product are more likely to engage in risk-taking. For organizations to keep pace in today's competitive marketplace, risk-taking needs to be an organizational priority—and this type of innovative work culture starts at the top. According to Sinek (2019), encouraging innovation is a good way for leaders to challenge the status quo by getting new ideas out there for discussion. Leaders need to cheer on remote co-workers to exceed their expectations for what they are capable of accomplishing (Parris, 2017).

Upskill #6—Exhibit a People First Mindset (Put People Emotions over Technology). In the past, the typical mindset of an executive, especially one situated in the private sector, was to perceive an organization as a machine. The philosophy typically has been that there is only one way to get things done and that is by using the scientific approach where the control of planning for natural disaster preparedness has been delegated to one person. Within this perspective, the executive leader then monitors or micro-manages the planning process with absolute authority (McQuivey, 2020). This again is the moment for a new skill set that promotes a perception that people are the most important element to the process of getting things done in an organization. The challenge here is promoting a remote workforce where individuals feel free to interrelate, interconnect, and intervene when seem appropriate (McQuivey, 2020). Those in senior leadership positions can utilize this skill set to enable individuals to think, speak, and act differently as they design unconventional strategies to survive a natural disaster. Protecting past operational models is not the objective—and in its place the emergence of a transparent model where everyone feels they are an important part of the planning process (Middlebrooks et al., 2020).

4. Discussion

This is the moment where we are being asked to challenge how we have addressed a variety of societal issues in the past. Thus, reframing how we design natural disaster plans that generate different kinds of partnerships between organizational leaders and their subordinates may provide new opportunities to arrive at more significant long-term results rather than returning to the before the event status quo. How senior leadership in the private sector goes about revisiting the past in search of a new approach to natural

disaster preparedness will likely require a new skill set. Relying upon artificial intelligence to lead our thought process may not be the most effective way to proceed. It is concluded that the respect for the feelings, emotions, and anxieties of those that are most affected by the outcomes of natural disaster planning remain key ingredients for generating buy-in, especially by those in a remote working environment.

Ensuring remote workers are not forgotten, ignored or isolated requires a unique skill set to be applied by organizational leaders. Achieving co-worker engagement means initially understanding the impact that remote work has upon the daily lives of employees who are also caring for loved ones. It is well within our reach to build organizations in which we all can be inspired to do something meaningful. To do this, we need leaders who think beyond past policies and practices by coming up with revolutionary proposals that change our mindset as to how engage a very diverse workforce. To accomplish this, it is concluded that a new cadre of leaders with a different skill set need to emerge who can generate a new version of collective responsibility. This new skill set reflects leaders who have a capacity to foster a remote working environment that is optimistic, meaningful, inclusive, and service-oriented. Feeling that personal opinions and suggestions are valued is helpful in building trust which adds to the credibility of proposed outcomes.

Finally, perceiving natural disaster planning as a mental health issue introduces a new direction for helping remote workers to endure a natural disaster. Future planners may want to consider generating a discourse whereby remote workers can be systematically engaged by encouraging the discussion of mental health issues as a significant part of the process. This strategy is somewhat different from that of the past where infrastructure, economics, and organizational sustainability dominated such a discourse. The proposal here is for a new planning process for discovering innovative ways to keep remote co-workers informed and engaged where human health and welfare become the centerpiece for action. For this to occur, it is concluded that a new skill set may now be required by organizational leaders in the private sector that includes exhibiting empathy, activating social media listening, differentiating culture cues, taking on risk-taking as a normal task, promoting civic goodwill and ensuring people come first. The charge here is for organizational leaders to think and act differently by prioritizing individual health issues and general human welfare as the central piece of the discourse surrounding the planning process.

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