Managing an existential threat: how a global crisis contaminates organizational decision-making

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Abstract

Purpose – The paper introduces a new model, the evolutionary-existential model of organizational decision-making. The purpose of the model is to provide an empirical framework for understanding the context for decision-making under conditions of existential threat to organizations, such as the global COVID-19 pandemic during the year 2020.

Design/methodology/approach – The model is built on an extensive interdisciplinary literature review, drawing from research in social psychology, management, behavioral economics, evolutionary psychology and consumer behavior. In general, the authors follow Bargal's (2006) call for action research in the spirit of Lewin (1951).

Findings – According to the model, organizational decision-making during the pandemic threat is influenced by (1) existential threat and (2) an unprecedented macroenvironmental context for decision-making. The authors argue that these psychological and macroenvironmental forces may lead to suboptimal decision-making, based on (1) their basic cognitive architecture and (2) specific evolutionary triggers activated by the pandemic. The authors highlight how the interaction between these inputs and the decision context manifest in various social psychological phenomena that are known to impact judgments and decisions.

Practical implications – Simply put, the magnitude and the urgency of the global pandemic call for new and integrative ways of understanding organizational decision-making.

Originality/value – The model is new. Although the authors draw on prior research and theory, the model is uniquely interdisciplinary; further, the authors are able to make specific and unique predictions about the inputs, decision context and their social–psychological consequences for decision-making.

Keywords Judgment and decision-making, Terror management theory, Pandemic, Evolutionary-existential model, Existential threat, Evolutionary psychology, Prospect theory

Paper type Conceptual paper

The first news of the novel coronavirus began to trickle out of China in early January 2020. By mid-March, 2020, it was becoming clear that the COVID-19 pandemic posed a significant threat to National Security and could quickly overcome the American health care system. Universities ordered students off campus. Schools moved to distance learning formats. State governments imposed lockdown orders. Small businesses, restaurants, parks and sports and entertainment venues shuttered. Corporations struggled to figure out how to conduct business without employees in the office.

In previous crises, organizations have often had a response template upon which to rely. Recessions occur with a relatively predictable frequency; even when severe, as in 2009–2011, most businesses have experience in navigating a recession environment. Other crises have been so unprecedented that organizations may not have always had a plan in place. However, their effects tend to be more isolated, as when the terror attacks of 9/11 devastated the airline industry. The COVID-19 pandemic has characteristics of both types of catastrophes. Like a recession, the effects have been deep, global, widespread and potentially long-lasting.

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Like 9/11, the effects have been unprecedented, unpredictable and devastating. Unlike a recession, organizations have likely had no viable plan to which to turn, no prior experience to rely on and no clear or consistent guidance from government agencies to help in navigating the crisis.

In this paper, we argue that in rare instances, a truly global crisis such as the COVID-19 pandemic alters the context for organizational decision-making in such a way as to have profound and potentially existential consequences. We further argue that the uniquely unpredictable and global nature of such events calls for a new approach to understanding managerial decision-making under existential threat. Much of the existing decision-making literature in psychology and management either (1) focuses on the role of prior knowledge, experience or intuition in decision-making (Artinger *et al.*, 2015; Bingham and Eisenhardt, 2011; Dane and Pratt, 2007; Guercini, 2012; Luan *et al.*, 2019) or (2) focuses on how to overcome the various biases that affect managerial decision-making (Kahneman *et al.*, 2011). Given the specific nature of pandemic-like events, we believe that *neither* approach is adequate nor sufficient for understanding managerial decision-making under such unprecedented circumstances. This is because:

(1) Managers will have little or no experience in any kind of similar circumstances. This experience is critical to the cultivation of intuition that is such a powerful force in expert decision-making;

(2) The various biases that affect managerial decisions exist *specifically* to respond to the kinds of threats and challenges posed by events such as the pandemic; that is, our brains have evolved a sensitivity to these threats from various sources of survival motivation, though not necessarily to produce the kinds of optimal decision outcomes that are necessitated by the global, widespread, and unprecedented nature of the crisis.

This paper will primarily focus on the second of these propositions. Decades of research in social and cognitive psychology, behavioral economics and neuroscience document not only the various influences on human judgment and decision-making that exist, but also the basic evolutionary, social and cognitive functions that they serve. When managers have no procedural response plan and no prior experience to which intuition can appeal, they must rely that much more heavily on the innate powers of reason with which we are equipped. Yet they rely on these powers of reason under extraordinary conditions that seem *almost designed* to bias their decisions in ways that can have catastrophic consequences when faced with an unprecedented global crisis that magnifies both the risk and uncertainty of every action.

In order to illustrate the impact that these decision biases might have on decision-making under the current conditions, we introduce the *evolutionary-existential model of organizational decision-making* further (Figure 1). According to the model, our judgments and decisions are biased in a number of different ways, many of which have basic evolutionary antecedents. These biases shape emotion, attention and cognition in predictable ways under different kinds of circumstances. These circumstances are best understood as resulting from a combination of social–psychological influences and macroenvironmental forces that are most relevant to the current situation. For this reason, the model is highly interdisciplinary, integrating research from social, cognitive and evolutionary psychology, with research in management and organizational behavior.

With respect to psychological influence, we focus on terror management theory (TMT) (e.g. Greenberg *et al.*, 1986), a broadly applicable theory for explaining large-scale human behavior under conditions in which human mortality is salient. With respect to macroenvironmental forces, we focus on the unprecedented and highly unpredictable nature of the environment under pandemic conditions, in combination with various internal

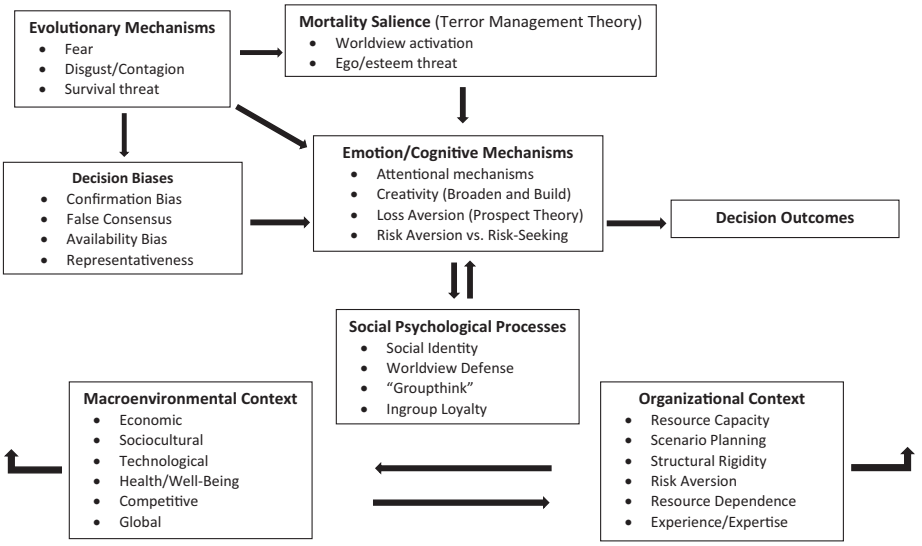

Figure 1.
The evolutionary-existential model of organizational decision-making

organizational factors that might shape the context for organizational decision-making. It is our contention that understanding the interaction of this unique and unprecedented organizational decision-making context with the powerful psychological forces of mortality salience can lead to deep insights into the nature and outcomes of human decision-making under global crisis conditions.

As the groundbreaking social psychologist Lewin famously stated, "There is nothing so practical as a good theory" (1951, p. 169; Van de Ven, 1989). While highly theoretical, we have developed our model according to this maxim, by focusing on psychological theories that we believe will have the greatest applicability to an unprecedented global crisis. For this reason, we begin with a discussion of the real-world context for managerial decision-making before addressing the theoretical components of the model. While this may be unusual, we believe that the grave and immediate threat of events such as a global pandemic warrants such an analysis.

Relatedly, according to Lewin's concept of *action research* (see Bargal, 2006, for a discussion), such application of social science to real-world decision-making requires a constant stream of dialogue between researchers and practitioners. Given the unprecedented nature of a pandemic, for instance, we can only hope that our model serves as a starting point for such dialogue. As real-world outcomes become manifest over the coming months and years, new insights will emerge, and various components of the model may be adjusted and refined. We have structured the model in such a way that it is flexible and adaptive to such refinement. In turn, we hope that the model aids management practitioners in their ability to recognize, distinguish among and respond to the various decision biases that may result from the current pandemic conditions.

The paper is organized as follows: First, we provide an overview of the model, beginning with the macroenvironmental and organizational context for decision-making. We then discuss the various inputs to decision-making, highlighting the evolutionary bases of a specific set of biases and judgment mechanisms most relevant to decision-making in the current context. We provide a rich discussion of TMT and review research on how the consequences of mortality salience might interact with the macroenvironment to shape

attention, judgment and memory in concert with our evolved mechanisms for decision-making. Finally, we discuss the implications for decision-making that follow from the model utilizing our case-based approach for the higher education context.

We believe the model is flexible enough to apply in a variety of truly catastrophic global situations. Nevertheless, our thinking was undeniably influenced by the COVID-19 pandemic over the course of 2020. Given the unpredictability and unique nature of such "black swan" events, there are admittedly few data points that exist in order to examine the model's applicability. For this reason, we utilize the pandemic as our context for application of the model. Though we hope such an event never again occur, we trust that the model's flexibility will prove beneficial in cases where it is applicable.

1. The existential-evolutionary model of organizational decision-making

1.1 Macroenvironmental context

Strategic planning begins with macroenvironmental scanning. This is because an organization's strengths are maximized when it capitalizes on macroenvironmental opportunities. By definition, macroenvironmental forces are those external to the organization and largely (if not entirely) beyond their control. Changes in the environment might sometimes have far-reaching global effects, posing near-universal threats to a wide range of organizations. In the economic domain, for instance, a drop in consumer spending during a recession will potentially negatively impact any company that sells products to consumers. Rarely, though, will all organizations be equally affected by macroenvironmental change. During a recession, automobile, furniture and television manufacturers will likely suffer more than companies that sell convenience goods. Companies that sell so-called inferior goods (e.g. soup) or hedonic goods such as candy and alcohol may even benefit from a recession. In fact, companies can gain competitive advantage even under macroenvironmental threat by considering other macroenvironmental domains, such as how competitors are responding.

Likewise, rarely does an event happen of such magnitude so as to ripple across the entire macroenvironment, causing changes not just in the economy (as during a recession), but rather causing drastic changes in many domains simultaneously. In this case it could be extraordinarily difficult for any company to gain competitive advantage, or mitigate threat, by more broadly considering the state of the macroenvironment.

The pandemic is just this kind of event. For one, it is a truly global phenomenon. Recessions are increasingly global phenomena, but they take some time to move across the global economy and have a variable degree of impact on different places at various times. Seldom in history has the entire world had to adapt so quickly to such threatening conditions. As rapidly as governments across the world began to lockdown, the economy turned to recession faster than at any time in history (Roubini, 2020). Just as fast and far-reaching were the consequences for sociocultural attitudes and human behavior, for technology, and for the physical health and mental well-being of people all across the world. Rarely is the case when so many organizations and institutions find themselves instantly facing the same macroenvironmental conditions at the same time.

Businesses engage in macroenvironmental scanning in order to plan and adjust to changing external conditions. They gain competitive advantage by responding in different ways, depending on their unique market position, their competitive strengths and their competencies. For this reason, we think of the macroenvironment as something "outside" the firm that has an impact on an organization's activity – it has a meaningful impact on an organization's activity, but does not have a measureable impact on the macroenvironment in any concerted or coordinated way. Indeed, because businesses operate in different industries and contexts, for practical purposes they do not face the same macroenvironmental conditions, and they do not respond to them in the same manner.

Given the universal and widespread change in the external environment, and that so many organizations find themselves instantly facing the same challenges across a wide range of business types, industries and institutions – organizations face a monolithic set of challenges unlike anything they have faced before, with few degrees of freedom and options for responding in differential ways. In this case, as organizations respond to these challenges, they may do so in very similar ways that have a measurable impact on the state of the macroenvironment they face. As just one example, hospitals and state governments rushed to procure needed medical supplies as the virus began its exponential growth in the USA. Consumers, however, acting out of fear, also rushed to buy products such as sanitizer and masks as well. This change in the sociocultural environment of attitudes and human behavior, combined with the actions of health care and government organizations, had a massive and measurable impact on the state of macroenvironment – the global supply of health care products available to these organizations and consumers alike, not to mention the availability of these products for businesses needing them to safely reopen.

To summarize, we end the discussion of the macroenvironmental context with two propositions that follow from our earlier analysis of the model:

Proposition 1.1.1. We should expect organizations to find themselves facing a similar massive set of challenges, with few advantages to be gained by responding differently from one another.

Proposition 1.1.2. For this reason, organizations may respond more monolithically to these challenges and in turn, have a measurable, yet hard-to-predict impact on macroenvironmental conditions. This may have a compounding effect on environmental uncertainty.

1.2 Organizational context

Organizations engage in macroenvironmental scanning in order to mitigate threats and capitalize on opportunities as they arise. Well-known strategic tools such as SWOT analysis facilitate this process by matching opportunities to organizational strengths and competencies. In light of the more limited benefits of environmental scanning noted earlier, the ability of firms to capitalize on any such insights will likewise be limited.

We posit that an organization's ability to respond to the unprecedented environmental challenges posed by the pandemic will further depend on internal factors that provide some flexibility in managerial decision-making. Obviously, organizations with greater resources – human, capital, financial and so on are better prepared to weather the storm (as with any threat), as are those less dependent on unpredictable resource inputs. Yet, as noted by Staples (2006), a pandemic is so unlike any other kind of threat typically posed to business activity that its consequences fall well outside the boundaries most often considered by continuity planners. The magnitude, ubiquity and inherent unpredictability of a pandemic make any kind of long-term prediction tenuous at best. At worst, the misguided application of contingency or scenario plans that provide an inadequate response could, presumably, even prove harmful.

Perhaps the greatest strength an organization could utilize in order to deal with a threat such as a pandemic is an agile structure (Nohria, 2006). An organization needs the ability to respond and adapt to challenges as they arise in real time, continually update environmental information as it changes and revise projections. This might mean more distributed leadership and a less hierarchical structure (Nohria, 2006) and a more flexible, principles-based guide to decision-making (i.e. as opposed to rules; Chagalla *et al.*, 2014).

To summarize the two previous sections, organizations often rely on SWOT analysis for strategic decision insights. This involves a careful analysis of the external environment in concert with an acute awareness of organizational strengths and weaknesses. In the global

pandemic environment, however, such environmental scanning is likely of limited value. Rather than fall back on contingency plans that may or may not be appropriate to the current pandemic conditions, they will be forced to make real-time decisions based on new and constantly changing information. Organizations with more rigid rules and structures will have a harder time adjusting to these conditions; those with less hierarchical structure and more distributed leadership may find themselves better adapted to the constantly changing and hard-to-predict consequences of the pandemic. To summarize:

Proposition 1.2.1. Organizations are unlikely to have contingency or scenario plans for dealing with the unprecedented conditions of a global crisis such as a pandemic, again compounding uncertainty.

Proposition 1.2.2. Organizations with a more agile structure and a flexible, principles-based approach to decision-making will adapt more readily than those with a more hierarchical and rules-based approach.

This leads to the main thrust of the paper: Where long-term strategic planning falls short, effective managerial decision-making becomes critical. And yet the very conditions that may make environmental insights inadequate may also make managerial decisions more error and bias-prone as well. As well-documented in the literature, rational decision-making often falls short of objective standards. Managers are subject to a wide range of biases that affect decision outcomes (Kahneman *et al.*, 2011). Under high degrees of risk and uncertainty, such biases are exacerbated (see Kahneman *et al.*, 2011, for an extensive review). The kinds of evolutionary threats and triggers that activate these biases are exactly of the kind posed by the current pandemic and would likely be similar in other truly global crisis circumstances. A large body of research demonstrates that managers are able to capitalize on simple decision rules to aid decision-making under high degrees of uncertainty (Gigerenzer and Gaissmaier, 2011). However, such reliance is predicated on practical expertise built on experience. Given the extraordinarily complex and uncertain external environment, it is unclear whether such experience can be properly applied under pandemic conditions. As such, managers must be aware of and unusually vigilant against the threats to rational decision-making.

2. Managerial decision-making under threat and uncertainty

2.1 Heuristics and biases: two decision modes

A vast body of literature exists demonstrating both the promise and pitfalls of managerial decision-making. More generally, decision-making is thought to occur via two systems: a fast, intuitive and more emotional system 1, and a slower, more deliberative, rational system 2 (see Kahneman *et al.*, 2011 for a review). Research on system 1 and system 2 decision-making follows three decades of research in social psychology on dual-process models of judgment, decision-making and attitude formation that have exhaustively demonstrated the existence of a fast, automatic processing mode and more limited capacity-conscious processing mode (e.g. Petty and Cacioppo, 1984; Chaiken and Trope, 1999; Devine and Monteith, 1999; Gawronski and Bodenhausen, 2006; Wyer and Kardes, 2020). Historically, the long-held assumption is that the application statistical reasoning and logic via system 2 is necessary in order to reach optimal decision outcomes. Over the last several decades, however, research has demonstrated that system 1 is remarkably capable; indeed, the great majority of decisions are made using simple, quick and effective decision rules known as *heuristics* (e.g. Gigerenzer and Gaissmaier, 2011). Due to the immensity of this body of literature, a thorough review is beyond the scope of this paper. Instead, we refer management researchers and practitioners to an excellent overview of the various approaches to heuristics and biases in both the psychology and management literatures provided by Artinger *et al.* (2015). As the

authors note, the original heuristics and biases literature was thought to apply to deliberative decisions under risk and uncertainty – that is, they are biases that arise from the flaws in our ability to think rationally about statistics and probability (see Kahneman and Tversky, 1979). Currently, heuristics are more generally thought of as mental shortcuts that aid decision-making with or without deliberation. Furthermore, Luan *et al.* argue that heuristics are better thought of as aiding decision-making under uncertainty, whereas the kinds of biases identified by Kahneman and Tversky are more applicable under risk. For the sake of clarity, then, we refer to *heuristics* when discussing mental shortcuts often made under uncertainty with limited deliberation and *biases* when referring to decisions under risk even with deliberation.

Decisions made via system 1 processes often arrive via intuition (Dane and Pratt, 2007). However, for intuition to operate as an effective decision heuristic, expertise is necessary, which is developed over years of experience and deliberative decision-making (Dane *et al.*, 2012; Kruglanski and Gigerenzer, 2011). In their recent review, Artinger *et al.* (2015) point to several specific foundations of so-called "fast and frugal" heuristics that aid managerial decision-making. Two of them, *recognition* and *similarity*, critically rely on prior managerial experience. While it is possible that specific characteristics of managerial decisions under pandemic conditions are recognized as similar to decisions made in other contexts, the extra degree of uncertainty created by this environment likely calls this possibility into question. And when intuition is applied without expertise or relevant experience, judgments and decisions are likely to be biased (e.g. Randolph-Seng and Norris, 2015).

According to the traditional heuristics and biases approach, system 2 also suffers from a number of limitations. In many ways, these consistent ways of thinking are adaptive and helpful more often than not, but also make us subject to predictable errors and biases. These predictable errors and biases often lead to suboptimal decision-making by an individual and to a suboptimal decision outcome. These biases form the basic inputs of our model; that is, they represent the basic decision wiring that we bring to any decision context (Figure 1). We review several of the more common biases further.

2.2 Common decision biases

Confirmation bias. Confirmation biases refers to the tendency to search for, understand and develop information that validates the initial belief a person already possessed. In other words, we see what we expect to see. More problematically, we neglect information to the contrary when exposed to it. Under high degrees of uncertainty, such biases may be exacerbated. Such neglect of information is thought to be an advantage of fast and frugal heuristics (Gigerenzer and Gaissmaier, 2011) When applied under deliberative decision-making, however, confirmation bias can prove additionally problematic. A manager that recognizes a situation as similar to another may ignore and distort any evidence to the contrary, compounding the misapplication of a given decision context.

Availability bias. The availability bias occurs when we use the ease of retrieving a thought to determine how likely we think the event is to occur (Tversky and Kahneman, 1973). If it is easy to recall an event, you are likely to overestimate its probability of occurrence. If it is difficult to recall an event, you are likely to underestimate its probability of occurrence. This can lead to the false-consensus effect, where a person overestimates the likelihood that others share their opinions, traits and behaviors (e.g. Marks and Miller, 1987). This is particularly challenging for organizational leaders to overcome when making decisions about the future under uncertain and high-risk circumstances. False consensus has been posited to play an important role in managerial decision-making (Randolph-Seng and Norris, 2011). With so many unknowns regarding the market, many decisions are made based on how easily a good outcome is imagined by the leader.

Base-rate fallacy. The base-rate fallacy occurs when people are often more influenced by an emotionally charged, visually vivid event than numerical data and real probabilities. Thus, people tend to ignore data and base their probability estimates on the ease of retrieval. Paired with the availability bias, leaders who create the most easily retrievable, highly vivid, emotionally charged outcomes for their executive team will likely have their selection implemented, regardless of how it fits with the data. However, given that this is an uncertain time where good predictive data can be hard to find, this could be a useful tool for a leader with good intuition. Still, it is better to have good data from which to make decisions when such data are available.

Representativeness. Representativeness is used when we classify something based on how similar it is to a typical instance of that category. In uncertain times where data are not predictive of the future, an intuitive leader may fall victim to "this seems like that old situation" thinking when the outcome is less likely given the overall instability of the market contexts.

To summarize the implications of the heuristics and biases approach to managerial decision-making for our model, we offer the following propositions:

Proposition 2.2.1. Availability and representativeness may lead to biased *recognition* and *similarity* of decision contexts and the misapplication of heuristic decision rules.

Proposition 2.2.2. The application of heuristic decision rules may be ineffective without relevant prior knowledge and experience.

Proposition 2.2.3. Confirmation bias and false consensus may exacerbate the misapplication of heuristic decision rules, facilitating the neglect and misinterpretation of any disconfirming evidence of their applicability.

The heuristics and biases reviewed earlier represent a small subset of those that have been identified as affecting human judgment and decisions. As we demonstrate further, these are a set of heuristics and biases that may be most relevant to decision-making under global crisis conditions such as a pandemic. They are thought to have some sort of an adaptive basis – that is, while not always accurate, they may have provided our ancestors a selective advantage under some conditions. Indeed, a great deal of research has demonstrated that human behavior is more generally influenced by a wide range of adaptive mechanisms. Although we have built our model to be flexible, for illustrative purposes we focus on those mechanisms likely to be triggered by a global pandemic. We then address how their activation will be consequential for organizational decision-making in global crisis circumstances.

3. The social and psychological context for decision-making

3.1 Evolutionary mechanisms

Evolutionary psychologists examine human behavior from the perspective that natural selection shaped cognitive mechanisms to produce adaptive behaviors under ancestral conditions (Crawford, 1999). These mechanisms may or may not function well in current societal contexts, however.

Fear. Fear is an important emotion that orients people to threats. Seeing a person with a fearful look leads others to attend more vigilantly to the fearful face than to faces with many other emotions (Hansen and Hansen, 1988; Öhman *et al.*, 2001). People are predisposed to attend to stimuli, such as a snake, that have posed generations of biological threat to humans (Carlson *et al.*, 2009). As a result of cognitive and evolutionary mechanisms for empathy, fear can also be contagious. Such as with infectious disease, fear can spread rapidly through the

population. Fears of contamination and a crashing economy spread through social media during stay-at-home orders. Our virtual connections may have allowed for emotional contagion to occur even though people were physically isolated.

Disgust/contagion. The emotion of disgust orients a person away from infectious disease by alerting the person to a situation where pathogens may be present (Rottman, 2014). This is part of what is called the behavioral immune system, which refers to adaptive behaviors that help keep us from pathogens that could make us sick. As one example, disgust can lead to treating mental illness as a contagious illness, resulting in stigma (Lund and Boggero, 2014), as well as to changes in perceptions and behavior toward out-group members (Hamamura and Park, 2010; Ji *et al.*, 2019). Disgust has been shown to account for many aspects of human behavior, such as moral judgment (e.g. Pizarro *et al.*, 2011). Given the original evolutionary function of disgust, masks, hand sanitizers, cleaning protocols and six feet of social distancing designed to minimize the transmission of SARS-CoV-D may exacerbate the psychological and behavioral consequences of disgust by calling attention to the risk of infection. Furthermore, individuals have responded very differently to mask-wearing protocols. In some instances, this has even led to violence (Mervosh *et al.*, 2020). Mask wearing has come to be seen as a visible marker of tribal belonging. One consequence of this may be outgroup social stigma between mask-wearing and non-mask-wearing individuals.

To sum, our brains are wired by evolution to respond to survival-related cues with a set of adaptive psychological and behavioral responses based on their original adaptive functions. However, they may not always facilitate adaptive decision-making in the complex, global, modern era. Pandemic conditions activate fear, which spreads by contagion, and the disgust module that evolved for the purpose of contamination avoidance. Thus, the consequences of these mechanisms for decision-making in the current context are critical to our model of organizational decision-making.

Armed with a basic understand of our evolutionary wiring for decision-making under pandemic conditions, we turn now to the larger social–psychological context for decision-making. Perhaps no fear that might be activated by the pandemic is greater than the fear of death. A large body of literature on *TMT* demonstrates that the activation of this fear, known in the social psychological literature as mortality salience, has a wide range of social–psychological consequences that will likely shape the decision context under the current pandemic conditions. We begin the next section with an overview of the theory and then examine the basic social–psychological context for decision-making in a group context as relevant to the current conditions.

3.2 Terror management theory

TMT (Greenberg *et al.*, 1986; Solomon *et al.*, 1991) is based on humans' awareness of the inevitability of death and is an explanation of some of the motivational underpinnings of human behavior. According to TMT, humans' natural instinct for self-preservation, combined with the knowledge of their mortality, creates the potential for existential anxiety and terror. Unlike other living beings, humans possess the cognitive capacity to understand that they are alive and that ultimately they will die (Hirschberger *et al.*, 2002). To attenuate thoughts of death, humans have devised various symbolic, unconscious defense mechanisms comprising a dual-process model that consists of both proximal and distal defenses (Hirschberger *et al.*, 2002). The proximal defenses attempt to suppress concerns about death by shifting the problem of death into the distant future. The distal defenses include attempts to modify people's perceptions of themselves and of the world in which they live (Smieja *et al.*, 2006).

One significant distal defense against the anxiety facilitated by awareness of death is cultural worldview, symbolic constructions that give order and meaning to the world, provide

standards of value and behavior and the promise of transcendence (Simon *et al.*, 1998). According to TMT, a person is confronted with thoughts of death (i.e. mortality salience), is motivated to protect that cultural worldview (i.e. worldview defense), to have that worldview be positively validated and to reject those who hold an opposite view (McGregor *et al.*, 1998). Importantly, these effects appear only when thinking about death (when mortality salience is present); other traumatic events (e.g. physical pain) do not produce similar reactions (Greenberg *et al.*, 1994).

In traditional terror management research, experimenters evoke mortality salience (i.e. death awareness) by asking participants to think about death-related words, scenarios or constructs. This manipulation is thought to prime various psychological constructs, including worldview activation and the existential motivation for worldview defense (McGregor *et al.*, 1998).

The COVID-19 pandemic itself may be seen as an applied terror management experiment, although mortality concerns are likely to be aroused by any crisis event of such magnitude. Thoughts of illness and death abound, from both personal experience with the illness and media coverage of the rising numbers of those afflicted. This leads us to a key prediction of our model:

Proposition 3.2.1. Under existential threat, decision-makers should be especially likely to seek validation of their worldview and be more willing to defend it against others. For example, if a university president implicitly believes that the risk of COVID-19 to students is relatively low (worldview activation), they may be existentially motivated to return to normalcy as rapidly as possible (worldview defense).

3.3 Social identity theory

Social identity theory explains the relationship between the self-concept and various group processes (Tajfel and Turner, 1986). More specifically, the self-concept is identified as an organizing entity that helps to explain our own behaviors, as well as our interpretations of the world (Swann and Bosson, 2010; Hogg, 2018). According to social identity theory, a significant amount of self-worth originates from the groups to which people belong or the categories in which people place themselves. The potential number of social categories that exist are limitless and include political affiliations, religions, nationalities, professions, sexual orientation, ethnic groups and gender, among many others.

Human beings cognitively separate categories by their prototypical characteristics (Hogg, 2018), such as what it means to be "American," for example. Furthermore, the closer a person is to the characteristics of a given category, the more "prototypical" they become. Being a member of a particular category provides standards of acceptable group behavior, as well as the possibility of member conformity to group norms (Abrams and Hogg, 1990).

According to social identity theory, leaders of groups who most strongly embody the prototypical characteristics of the group are more persuasive in prescribing group attitudes and behaviors (Hogg, 2018). Specifically, group members endorse, trust, support and are influenced by group prototypical leaders more strongly than nonprototypical leaders, particularly if the group is a key aspect of the members' overall sense of self (Barreto and Hogg, 2017).

One of the primary motivations of social identity processes is uncertainty reduction (Hogg, 2007). Under uncertainty, we may look to our group memberships to provide clarity for our own identities and attitudes. Frequently, we look to our leaders to better gain a sense of who we are. As circumstances become ambiguous and unclear, we rely on the leaders of the groups to which we belong to give us clarity and certainty.

With COVID-19 initiating a global pandemic, the USA enters one of the most uncertain periods in its history. There is uncertainty in terms of the virus itself, how to defend against it

and how to treat it. Economic and organizational uncertainty is rampant, as institutions try to adjust to and account for a landscape that seems to change by the moment.

Perhaps most importantly, and as has been discussed elsewhere in this paper, there is no clear or prescriptive decision-making paradigm for organizations to follow. In these unprecedented historical circumstances, organizations are left to their own devices when determining the path forward. In these conditions, social identity theory would suggest that individuals will be apt to follow the directives of the leaders of their respective groups, particularly when those groups are central to their identities. One the one hand, this may be adaptive, as it allows group members to build consensus and reduce conflict. On the other hand, social identity processes may lead to false-consensus effects. When social identity is strong, group members may overperceive the extent to which information is shared, thus undermining managerial decision-making (e.g. Randolph-Seng and Norris, 2011).

Another consequence of social identification processes is increased in-group loyalty. In-group loyalty may be defined as the degree to which people favor their own group over others (Solaz *et al.*, 2019). Social identity theory describes in-group loyalty as a product of humans' need to derive high self-esteem from the groups to which they belong (Tajfel and Turner, 1986; Hogg, 2018). Interestingly, the need to maintain self-esteem is thought to be the main driver of mortality salience effects (Greenberg *et al*, 1986). Therefore, social identification processes will likely be exacerbated under current pandemic conditions. Because the denigration of out-group members is one well-known consequence of mortality salience, we predict that the pandemic conditions will highlight existing intergroup tensions, increase loyalty to in-groups and prejudice toward out-group members. Notably, the mass outbreak of protests in the wake of George Floyd's death began within two months of the initial widespread COVID-19 pandemic-related lockdowns. While the link is only speculative at this point, the scale and intensity of the protests and the "us vs. them" mentality of the protestors' attitudes toward police officers are certainly consistent with the kinds of effects that would be predicted by terror management theorists.

To summarize:

Proposition 3.3.1. A strong sense of social identity and increased in-group loyalty may lead to an uncritical overreliance on leadership under the high degrees of uncertainty.

Proposition 3.3.2. A strong sense of social identity and increased in-group loyalty may exacerbate group-level decision biases, such as false-consensus effects, discouraging information sharing under high degrees of uncertainty.

This combination of assumptions, false consensus, in-group loyalty and the tendency for group members to emulate their leaders in ambiguous situations may increase the occurrence of *groupthink,* a phenomenon known to occur in group decision contexts as a result of the various biases reviewed earlier under specific conditions of risk, uncertainty and a heightened sense of threat.

3.4 Groupthink

Groupthink describes a process by which groups make suboptimal decisions, due to a variety of factors that constrain effective processing in group decision-making (Janis, 1972). Groupthink is a ubiquitous construct that has been studied in the research domains of communications, business, psychology, political science and education.

Groupthink is generally thought to occur due to the group valuing cohesiveness over effective decision-making. A bonded group may so highly value its affiliation between group members that it fails to question assumptions, discuss difficult or controversial points or consider possible alternative solutions. Group factors that influence the likelihood of the

occurrence of groupthink include group cohesiveness, group insulation, lack of impartial leadership and lack of methodical decision-making procedures (Esser, 1998). More specifically, high group cohesion, high group insulation, biased leadership and unclear decision-making procedures should increase the occurrence of groupthink.

In the context of COVID-19, biased leadership and unclear decision-making procedures might especially affect decision-making processes. For example, a university president with a strong public stance on opening campus as quickly as possible might implicitly influence his or her decision-making team in a similar direction and could initiate a process by which only "pro-opening" information is considered, rather than all useful data. In addition, the dramatic rate of change in response to the ever-shifting evolution of COVID-19 may make it difficult to structure decision-making methodologies in a traditional manner. To summarize the implications of our model for the potential to facilitate Groupthink:

Proposition 3.4.1. Rapid contextual changes might necessitate swift responses under highly uncertain conditions, thereby escalating groupthink potential.

Proposition 3.4.2. The likelihood of the occurrence of groupthink might increase in the absence of standard decision-making protocols, leaving the group to make isolated, expeditious decisions in a novel environmental context.

To sum, our judgments and decisions are made within a broader social–psychological context. Given the adaptive importance of social affiliation to human nature and the basic need to maintain self-esteem, social influence processes are pervasive in their effects on human behavior. Furthermore, under powerful conditions of mortality salience, TMT makes more specific predictions as to the direction and intensity of their effects on judgment and decision-making: increased in-group loyalty, prejudice toward out-group members and a tendency to defer judgment to those with power and authority. Incidentally, these are some of the same conditions that have led to the more catastrophic effects of groupthink, such as the Bay of Pigs invasion following the Cuban Missile Crisis (Janis, 1972).

Our model contends that this social–psychological context exerts its influence on decision-making under conditions such as the COVID-19 pandemic. In conjunction with the inherent biases that are characteristic of our basic decision-making abilities, and the evolutionary triggers that are likely to exacerbate these biases, we now turn our attention to the specific affective and cognitive consequences of organizational decision-making under the current global crisis conditions.

4. Affective and cognitive consequences of decision-making under pandemic conditions

Thus far, our model has focused on the various inherent biases and evolutionary triggers that affect decision-making. Having introduced the specifics of the social–psychological context for decision-making under pandemic conditions in the preceding section, we turn our attention now to the *affective and cognitive consequences* of these biases, in order to make more specific predictions about the shape and direction of organizational decision-making in the pandemic context.

4.1 Affective decision inputs

The close link between emotion and decision-making is clear. While it was once thought that cognition and affect were two separate aspects of psychological experience (a tradition going all the way back to Aristotle), we now know that decision-making is actually extraordinarily difficult without input from affective systems in the brain (see Adolphs and Damasio, 2001, for a review). Indeed, most system 1 judgments are made with a sort of "gut feeling"

(e.g. Gigerenzer and Gaissmaier, 2011) that is thought to originate from affective computations outside of conscious awareness. In the Iowa Gambling Task, participants draw from decks of cards, some of which have high payouts but even greater losses, and other decks that have small payouts but smaller losses. Over the long run, participants will lose money on the high-payout decks but gain money drawing from the low-payout decks. Participants adjust their behavior based on "bad feelings" about the high-payout decks even before they can articulate what is wrong with them, whereas those with specific types of prefrontal brain damage are unable to adjust their behavior even when they know consciously the high-payout decks will cost them (Bechara *et al.*, 1994). Such findings show the critical importance of unconscious affective input to highly consequential conscious decisions involving the careful weighting of risk and reward to optimize long-term decision-making.

Different emotions have specific effects on attention and cognitive processing. Generally speaking, positive emotions tend to broaden attentional focus and negative emotions tend to narrow attentional focus (Gable and Harmon-Jones, 2010). Fear, in particular, narrows attention and leads to the neglect of nonfocal information (Finucane, 2011). This is thought to be adaptive: when faced with threat, it would have been critical for our ancestors to ignore anything nonsurvival related and focus attention on the threat at hand (e.g. Öhman *et al.*, 2001).

In addition to these effects on attention, negative affect can have higher-level cognitive consequences as well. According to the well-known mood congruency effect, negative moods will tend to make people think about and remember negative things, whereas those in positive moods think about and remember positive things (e.g. Forgas, 1994; Singer and Salovey, 1988). Affect also has consequences for how people think about and explain their own behavior. When experiencing negative affect, people tend to explain their behavior at a more concrete, lower-level of analysis than those experiencing positive affect (e.g. Vallacher and Wegner, 2012). For instance, someone in a bad mood while drinking coffee might say things such as "I am lifting my cup," whereas someone in a good mood might be "enjoying a brief morning respite". These effects can be accounted for by the feelings-as-information framework (e.g. Schwartz, 2001): Negative affect itself is a signal that something is wrong in the environment. This has important implications for psychopathology. Individuals that suffer from anxiety – a chronic, high-arousal, low-intensity negative affect, have a narrowed attentional focus (Derryberry and Reed 1998); individuals that suffer from depression tend to perseverate on the past – particularly on negative past memories (e.g. Whitmer and Gotlib, 2013).

On the other hand, positive affect broadens attentional focus (Fredrickson and Branigan, 2005), and the experience of awe fosters creativity (Rudd *et al.*, 2018). According to the broaden-and-build model of positive affect (Fredrickson, 1998), the purpose of happiness is to facilitate learning new skills through creative endeavors and play behavior – skills that might be adaptive in some relevant survival-related context. In short, when not engaged in some kind of immediate survival-related task, instead of doing nothing, one is better off building skills for the future. This explains why we enjoy building, creating and learning.

During the early months of the pandemic lockdowns, mental illness skyrocketed (Wan, 2020). Add to this a general sense of anxiety and uncertainty felt by nearly everyone over the course of the virus, not to mention the effects of social isolation, and you have a situation designed to exacerbate the impact of negative affect on judgment and decision-making. This, at a time when creativity and flexibility are critical for innovating novel solutions to novel problems. As such:

Proposition 4.1.1. The activation of basic survival mechanisms as a result of fear and, with respect to the COVID-19 pandemic, disgust/contagion, will narrow attentional focus and focus attention on negative information.

Proposition 4.1.2. Narrowed attentional focus and a focus on negative information will limit information search and constrain creativity and flexible decision-making.

4.2 Affective decision outcomes

Emotions are not only inputs or sources of information that influence decisions. Even when coolly and rationally weighing various courses of action, we consider the emotional outcomes of our decisions as well. When it comes to assessing risk and probability, negative and positive outcomes are not created equal. According to prospect theory (Kahneman and Tversky, 1979), losses are twice as painful as gains are pleasant. That is, the subjective utility gained from winning $10 is equivalent to the subjective utility lost from losing only $5; conversely, it would take a win of $20 in order to compensate the pain of having lost $10. This increased sensitivity to negative outcomes can lead to a significant deviation from rational decision-making predicted by standard economic models. One of the best-known consequences of gain–loss asymmetry is loss aversion – a tendency to avoid losses even when it is irrational to do so. For instance, imagine that you won a bet and a friend owes you $100. Would you flip a coin for double-or-nothing – that is, a 50% chance to get $200 or to get nothing? Many people would prefer not to take this bet and settle for the sure $100. On the other hand, when the tables are turned, many more people are willing to take the 50% chance – that is, when faced with a loss of $100, people are more likely to risk owing $200 if it means a 50% chance of owing nothing. In actuality, the expected outcomes – the utility of each of gamble, is exactly identical in all cases. Yet when it comes to gains, people are often more risk-averse, and when it comes to losses, more risk-seeking. This loss aversion, as it is more widely known, is explained by our disproportionate sensitivity to negative outcomes.

Risk aversion and risk-seeking behavior are further modulated by emotional experience. Fear exacerbates perceptions of risk and in turn increases risk aversion (Lerner and Keltner, 2001). Happiness dampens perceptions of risk and facilitates risk-seeking behavior. Thus, not only do we weigh the emotional impact of different decision outcomes – the likelihood of those outcomes themselves is influenced by emotional inputs. As such:

Proposition 4.2.1. Risk is not only part of the decision context – risk may provoke fear, which may lead to further biased perceptions of risk.

Proposition 4.2.2. Fear exacerbates risk aversion, discouraging creative and flexible solutions to novel problems.

In sum, given the high degree of uncertainty surrounding an event such as the COVID-19 pandemic, the ambiguous probabilities associated with various decision outcomes and the extraordinary financial and broader economic impact of these decisions, it is essential to consider the role of affect in decision-making under global crisis conditions.

5. Model application: a case study in higher education administration

In order to demonstrate the utility of our model for understanding decision-making, we focus on the COVID-19 pandemic that formed the context for our model, and we offer a case study in the organizational context with which we have the most familiarity: higher education administration. Like any organization, colleges and universities are faced with unprecedented challenges in navigating the pandemic crisis. We focus on one particular challenge with far-reaching consequences: The decision to bring students back to campus.

5.1 Macroenvironmental context

We begin with a survey of the external environment for higher education. We focus on a few elements of the environment most critical to the decision to reopen: economic, competitive,

health and well-being and technological. As for any organization, the economic environment is bleak. Nearly all colleges are heavily dependent on tuition for their operating budgets; students of modest means or from families facing economic hardship may consider taking a leave of absence or attending community colleges, particularly if they can take their courses online. Public institutions face the double threat of declining state budgets and appropriations. The competitive environment for higher education was fierce before the pandemic, with most institutions in competition for an increasingly smaller pool of applicants due to generational trends. The sociocultural environment is highly polarized; students' and their families' political affiliations may influence the extent to which they follow campus safety protocols (e.g. Mervosh *et al.*, 2020). Of course, campuses are specifically designed to encourage close interpersonal interaction, such that enforcing safety protocols represents a significant challenge. The health and well-being of staff, faculty and students are of paramount concern – making this a significant macroenvironmental consideration for higher education institutions. Physical health is of concern, considering that on-campus individuals may possibly contract the virus off-campus as well. Student mental health is increasingly a concern on college campuses (Henriques, 2018); given the historic rise in mental illness since the pandemic began, this becomes a more critical concern than ever before. Is student physical and mental health at greater risk off-campus or on-campus? The answer might be different for different kinds of institutions. Clearly, the technology exists to conduct courses fully online, but different institutions will have varying ranges of technological capabilities. Those with fewer resources expose themselves to greater competition from institutions that have better developed this competency.

5.2 Internal analysis

The state of the macroenvironment facing each institution is largely the same, though its implications for decision-making will depend on internal characteristics of the institution. As stated earlier, most institutions are highly resource-dependent: They depend heavily on tuition dollars; public institutions further depend on state appropriations. When institutions face significant melt – the term for committed students that do not ultimately enroll, the financial consequences can be devastating. We predict that institutions with significantly lower resources that are in turn more resource-dependent will face significantly greater loss aversion in their decision process, thus leading to potentially riskier decisions.

Organizations that are less hierarchical, with distributed leadership and flexible structure, are more adaptive and able to adjust to significant challenges. In general, this does not describe the typical institution of higher education. Colleges and universities are highly structured, with significantly centralized decision-making authority resting with the presidents and boards of trustees. We predict that the traditionally rigid and hierarchical structure of these institutions will make them less flexible and adaptable to the current pandemic situation.

With this more traditional structure comes a significant degree of risk aversion. Even before this crisis began, higher education faced a number of crises from a variety of different challenges – budgetary, as previously discussed, but also increased competition from online education, declining public trust in the value of college and a fierce debate about the traditional aims of a liberal arts education versus the career-readiness function of higher education. At the same time, the tradition of faculty tenure is under increased scrutiny. Many institutions may have already been fearing for their very existence and faculty for their livelihoods. Rather than making these organizations open to change in dealing with rapidly evolving macroenvironmental conditions, we predict that the pandemic will exacerbate the tendency for institutions to become more risk-averse and resort to traditional practices.

Institutions vary significantly in their resource capacity. Those that can weather the storm financially can afford to be more flexible and will not feel pressured to make decisions

based on existential threat to their survival or their heavy resource dependency. For instance, institutions that have the resources to rapidly train faculty in online teaching and to retrofit classrooms with hybrid teaching technology will have greater flexibility in deciding whether to bring students back to campus. Given the bleak landscape of higher education at present, these institutions are more likely the exception.

Many organizations have pandemic response plans. Few – particularly higher education institutions – are likely to have drafted scenario plans capable of dealing with a long-term global economic shutdown of this magnitude. Few administrative leaders in higher education have served in leadership positions in an environment quite like this before. That means that higher education institutions may lack the knowledge, expertise and experience to navigate the specific challenges posed by COVID-19. Without existing response plans, and lacking the resource of external expertise in navigating similar challenges, institutions will be faced with enormous information-gathering demands and a large number of critical decisions to make in a very short period of time.

In light of the dire macroenvironmental circumstances, the traditionally rigid structure and risk-averse culture of higher education, the lack of significant resources and the threat of resource dependency and the extraordinarily high stakes of various decision outcomes in an uncertain and ambiguous environment, higher education administrators are at particularly great risk for falling prey to the various biases that plague organizational decision-making.

5.3 Cognitive biases and evolutionary triggers

During the COVID-19 pandemic, evolutionary triggers may influence many decisions. For example, fear drives many decision-making processes. One is the fear of the disease spreading through a university community. Another is the fear of alienating potential students and decreasing enrollment by allowing unsafe face-to-face courses or pushing students into low-quality, hastily created versions of online education. Given the limitations of six feet of social distance and a mask, disgust may surface regularly in classrooms when someone does not wear a mask, coughs or sneezes. Administrators will need to communicate messages to keep disgust/contagion events that occur in classrooms from turning into physical altercations or cyberbullying of students and/or faculty.

Decision biases also play a role in the planning of higher education administrators. Effective leaders should be on guard for confirmation bias by doing their best to search for information from a variety of perspectives. Diversity of thought is important, particularly at a time when the parameters of scientific evidence are constantly in flux and politicized. Science builds itself on refutable pieces, and necessarily that means that some pieces are refuted. Given the human stakes of COVID-19 and the novelty of SARS-CoV-2, science is forced to work quickly. Higher education administrators must make public decisions and then constantly adjust them. System 1 decision-making is well-designed for such thinking – but, as previously discussed, intuition is likely to be highly bias-prone when experience and expertise cannot be brought to bear (Randolph-Seng and Norris, 2015).

As administrators simulate in their own minds how decisions will play out, the availability bias can constrain thinking and make decision-makers more risk-averse, since they may choose an option that they believe has the certainty of a more easily envisioned outcome. Leaders are better served using actual base rates when available. There is no substitute for basing complex decisions on good data. The problem for higher education administrators is finding good data. There are no enrollment projection models that accurately incorporate pandemic trends. Extrapolating beyond the data range of a model is inappropriate. Enrollment declines during a pandemic are different than enrollment declines during a surging economy, when jobs are plentiful. During a pandemic, higher education administrators must resist the urge to fall victim to the representative heuristic and misapply old remedies to current problems.

5.4 The social psychological context

For university administrators, COVID-19 may bring about two different kinds of existential threat. First, there is the prime of mortality salience, in the fact that SARS-CoV-2 is a potentially deadly virus. Second, there is the possibility of a kind of existential threat to the organization (e.g. Kinnamon *et al.*, 2010). This could take the form of a "financial death" for one's university or institution due to economic fallout and enrollment declines, which unfortunately may be a real possibility for those institutions that were struggling financially before the pandemic. In these threatening times, university administrators could be susceptible to being particularly tethered to their implicit worldviews. In other words, if they doubt the negative impact of COVID-19 on their students, they may be especially likely to argue to bring students back to campus. If they believe that COVID-19 is a severe threat to their students, they may be more likely to argue for keeping campus closed. Existential threat is even more likely to prompt worldview defense when there is no widely agreed-upon method on how to proceed, which is the case with the current pandemic. It is also important to point out that students returning to campus may be affected by existential concerns. If students are concerned for their own health and welfare, this may prompt them to engage in worldview defense as well. This could potentially prompt divisions between those students who support mask wearing and social distancing versus those who do not, which could create conflict and be problematic for the learning environment.

According to social identity theory, people are motivated to see their own group memberships as especially positive in comparison to others, and group members should be likely to rely heavily on the judgments of their (prototypical) leaders in ambiguous situations. As a result, faculty and/or administrative groups may be more likely to clash if faced with budget shortfalls and reductions in state funding, as each group looks to maintain its current (positive) status. Also, we would expect university presidents to hold more sway over the opinions of their employees than usual regarding whether to bring students back to campus, as there is high situational ambiguity and employees may look to the opinions of their group prototypes (i.e. presidents) for guidance.

The presence of Groupthink may also undermine effective decision-making processes. A university president with a strong public stance on bringing students back to campus might influence his or her decision-making team in a similar direction and could initiate a process by which only "pro-opening" information is considered by the decision-making group, rather than all useful data. In the current pandemic context, the importance of good data is paramount, and data from all ideological perspectives should be considered if they possess validity.

How might the aforementioned decision-making pitfalls be avoided? In short, one needs awareness of his/her own worldview biases, as well as motivation to consider information in an evenhanded, open-minded manner. For instance, if leaders are aware of the effects of mortality salience on worldview defense, they may be less likely to feel the motivation to defend their own beliefs to others and may be more open to receiving contradictory information.

If group members are made aware that they rely on the judgments of their leaders more frequently in ambiguous situations, they may be more motivated to engage in information-seeking behaviors themselves, for the purpose of making informed decisions. Additionally, an awareness of in-group favoritism and its propensity to facilitate intergroup conflict in the midst of limited resources may enable the individuals within those groups to attenuate those predilections.

Finally, an effective leader must be careful to be open-minded during group deliberations, in order to avoid shifting the processing of information in any particular direction. An effective leader should avoid making declarations of preference toward a particular outcome and should review information and data in as neutral a manner as possible. Such a practice could allow the "best data" to inform a group decision, rather than an ideological heuristic.

6. Conclusion

The evolutionary-existential model of organizational decision-making integrates research from social psychology, evolutionary psychology, managerial decision-making, behavioral economics and consumer behavior. The model maintains that under existential organizational threat of the type that is likely caused by a global crisis such as a pandemic, understanding our basic cognitive decision architecture in combination with our evolved adaptive responses to fear and contagion is essential. These mechanisms have predictable effects on attention, judgment and cognition, as well as social psychological consequences for self and identity. In short, existential threat exacerbates the tendency for cognitive bias in the decision-making process, particularly in highly uncertain, ambiguous and novel circumstances. In such cases, heuristic decision-making and managerial intuition are also likely to be less effective.

Though our case study in higher education may not applicable in every organizational context, we hope to have built a model that is flexible and adaptable to many different kinds of decision contexts. Furthermore, we believe that the implications of our model for decision-making under unprecedented, novel conditions that follow from our case study may be generalizable to a number of different contexts. We summarize these conclusions here:

6.1 Managerial implications

Proposition 6.1.1. Managers must acknowledge the powerful social–psychological consequences of these biases on the need for self-esteem and social identity, in themselves and their employees.

Proposition 6.1.2. Managers can guard against the potentially damaging effects of threat-focused attention on risk perception, judgment and creativity by proactively engaging in practices that foster positive emotion and cultivate creativity.

Proposition 6.1.3. Managers must recognize the failures of managerial intuition in completely new situations to overcome availability and representativeness bias and challenge the misapplication of decision heuristics in novel circumstances.

Proposition 6.1.4. Managers can seek information from a diversity of perspectives, while validating and affirming the myriad identities of various group members.

Proposition 6.1.5. Managers can continually challenge and revisit decisions based on new data and information as it arises. Employees must be empowered to challenge managerial decisions without fear of reprisal.

SARS-Cov-2 is a novel coronavirus, which has produced a global disruption with no precedent. This calls for a multifaceted, interdisciplinary and integrative approach to understanding organizational decision-making under existential threat. It calls for action research (Bargal, 2006) and a critical dialogue between researchers and management practitioners. We have designed our model to be flexible and applicable to a wide range of organizational contexts and to unforeseeable global crises in the future. We hope that it can serve as a starting point for such a dialogue.

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