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EMERGENT ORGANIZATIONAL CAPACITY FOR COMPASSION

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Our model of emergent organizational capacity for compassion proposes that organizations can develop the capacity for compassion without formal direction. Relying on a framework from complexity science, we describe how the system conditions of agent diversity, interdependent roles, and social interactions enhance the likelihood of self-organizing around an individual response to a pain trigger. When agents then modify their roles to incorporate compassionate responding, their interactions amplify responses, changing the system, and a new order emerges: organizational capacity for compassion. In this new order the organization's structure, culture, routines, and scanning mechanisms incorporate compassionate responding and can influence future responses to pain triggers.

We shall draw from the heart of suffering itself the means of inspiration and survival (Churchill, 1941: 275).

We all experience tragedies in our lives at some point, whether in the form of financial woes, the death of a family member, or a severe illness, among many others. Although these tragedies are personal, the suffering they cause spills over into our professional lives as well, making tragedy and suffering unavoidable realities of organizational life (Frost et al., 2006). Compassion, defined as an empathetic action undertaken to alleviate another's pain (Frost, Dutton, Worline, & Wilson, 2000; Lazarus, 1991; Miller, 2007), provides the crucial support necessary to cope with these kinds of tragedies. Compassion research has focused on the many benefits that individuals, groups, and organizations experience when employees are able to respond

to each other's pain (Frost et al., 2000; Grant, Dutton, & Rosso, 2008; Hazen, 2003; Lilius et al., 2008); however, much of this research has focused on individual and group expressions of compassion. The developing literature on collective compassion at the organizational level often considers compassion as a three-stage social process (Kanov et al., 2004), has focused on collective compassion in response to a single tragedy (Dutton, Worline, Frost, & Lilius, 2006; Powley, 2009; Powley & Cameron, 2008), and has explored the mechanisms that enable repeated acts of compassion across different instances of suffering within a single work unit (Lilius, Worline, Dutton, et al., 2011; O'Donohoe & Turley, 2006) or organization (Lilius et al., 2008). However, significant gaps in our understanding of compassionate organizations remain, which we address in this article. Specifically, how do organizations themselves become more compassionate? How can organizations develop the capacity for compassion?

We develop a theory of emergent organizational capacity for compassion, proposing that organizations can develop the capacity for compassion without direction from the formal orga-

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nization. Drawing on complexity science (Anderson, 1999; McDaniel, 2007; Stacey, 2005), we argue that pain triggers can create disequilibrium in organizations, giving rise to self-organizing behavior among agents (Chiles, Meyer, & Hench, 2004). Under a specific set of system conditions, unplanned acts of compassion by individual agents can result in self-organizing behavior, during which agents modify their roles to include compassionate actions. Through ongoing interactions among agents, these role modifications are amplified through the system, resulting in new patterns of compassionate behavior. The emergent new pattern can lead to a tipping point such that the entire system internalizes compassion as part of its value and belief structure. Thus, our model explains how the initial pain trigger of a tragedy, coupled with self-organizing interactions inherent in the compassionate responding process, can build capacity for compassion at the organizational level.

With this model we make four key contributions. First, we extend the discussion of collective compassion from organizational responses to a single tragedy (Dutton et al., 2006; Powley, 2009; Powley & Cameron, 2008) to the development of an organizational capacity, which becomes part of the fabric of the organization and is sustainable across suffering events. Second, we build on the notion that collective compassion can be enabled through work unit practices and routines (Lilius, Worline, Dutton, et al., 2011) by identifying specific system conditions that enhance the likelihood the entire organization will develop the capacity for compassion. Third, we draw on complexity science to argue that organizational capacity for compassion can emerge unplanned. Finally, we generate a set of propositions that lay the groundwork for new research questions about how organizations can become more compassionate.

STARTING ASSUMPTIONS

Our theory of emergent organizational capacity for compassion builds on several core assumptions. First, we envision compassion as an innate human motive to react to another's suffering (Lazarus, 1991; Wuthnow, 1991) that involves three stages: noticing someone else's pain, feeling a sense of anguish with the sufferer, and responding in a way that lessens the

sufferer's pain (Clark, 1997; Kanov et al., 2004). Second, in developing a theory of organizational capacity for compassion, we suggest that an act becomes organizational when multiple members incorporate the act—in this case compassionate responding—into their efforts to fulfill their roles in the organization (Katz & Kahn, 1978; Simon, 1976). Third, we define organizational capacity as the resources, knowledge, and processes used by the organization to achieve its unique mission (Aldrich & Ruef, 2006; Lichtenstein, 2000). Finally, we view organizations as complex adaptive systems (CAS), composed of interacting agents whose behaviors produce unpredictable outcomes (Anderson, 1999; Plowman, Baker, Beck, et al., 2007).

WORKPLACE COMPASSION

Compassion is the empathetic reaction to another's suffering (Clark, 1997; Lazarus, 1991), and everyone, whether or not he or she acts on it, possesses the capacity for compassion. The inclination to show compassion seems to be a defining element of what it means to be human (Frost et al., 2006). For example, Oveis, Horberg, and Keltner (2010) argue that as cooperative communities evolved, so too did the need for mechanisms that enable individuals to forgo self-interest and instead act for the benefit of others. Others suggest that compassion is rooted in an innate biological drive that all humans possess to bond and form social relationships (Lawrence & Nohria, 2002). This drive to bond draws humans into cooperation with others and is expressed through states and behaviors such as love, caring, trust, empathy, compassion, friendship, partnership, and alliance. The innate urge to respond to another's pain also finds expression at work such that employees may ignore their job assignments in order to attend to the human needs of their coworkers (McNeely & Meglino, 1994). Atkins and Parker (2012) contend that the degree of empathetic concern is the result of a series of appraisals that motivate action intended to alleviate pain.

Employees who experience compassion at work have reported feeling a deeper affective commitment to the organization and experiencing more positive emotions like pride, gratitude, and inspiration (Lilius et al., 2008). When these employee experiences are examined across work units, further benefits accrue; for example,

work units high in compassion experience lower rates of employee turnover (Lilius, Worline, Dutton, et al., 2011) and attract more new members than do work units lower in compassion (Frost et al., 2000). In their narratives of compassion, several employees have noted that their units were particularly compassionate "oases within a larger, hostile institution" (Frost et al., 2000: 38), indicating that even when compassion has not been institutionalized as an organizational value, work units high in compassion can provide positive benefits to their members. Further, virtuous behavior such as compassion seems to have a positive impact on organizational performance through both the amplified effect of roles that encourage positive spirals of prosocial behavior (Batson, 1991) and the buffering roles that protect and strengthen the organization in times of trauma (Cameron, Bright, & Caza, 2004). Overall, this research suggests that experiencing compassion within the organization can alleviate individuals' suffering and can offer indirect benefits for other employees as a result of improved affective commitment, positive emotions, and employee attraction and retention.

Compassion has also been examined as a collective phenomenon in which noticing, feeling, and responding are carried out by and directed toward an organization's members (for a review see Lilius, Kanov, Dutton, et al., 2011). Dutton et al. (2006) observed a case of compassion organizing inside one organization as a pattern of collective action that occurred when individual responses to another's pain were socially coordinated and existing structures and resources were repurposed for the alleviation of suffering. Lilius, Worline, Dutton, et al. (2011) examined collective capability for compassion inside a single work unit, observing the importance of everyday practices and routines, such as orienting, help offering, and celebrating, which develop relational conditions that can cultivate compassion as a collective capability. These studies of collective compassion make important contributions to our understanding of compassion—one identifying how compassion organizing occurred in a large organization in response to a single incident of suffering, and the other identifying how repeated acts of compassion occurred inside one work unit. We extend this work by suggesting that compassionate responding can move beyond single events and work unit practices to become an emergent

organizational capacity when the alleviation of suffering is internalized as a fundamental value and behavioral norm that agents recognize, act on, and alter their roles to include. Under certain system conditions, these role modifications amplify through the system and give rise to a new emergent order: an organization that has become more compassionate and has the capacity to be compassionate in the future.

FROM INDIVIDUAL ROLE TO ORGANIZATIONAL CAPACITY

Organizations are collectives of people bound together for a stated common purpose (Barnard, 1938). In order to achieve this common purpose, individuals agree to fulfill different roles. Roles are the expected behavioral patterns attributed to the occupant of a specific position (Scott, 2003); thus, both the common purpose and the roles are properties of the organization, rather than properties of the individuals who populate the organization. The common purpose of an organization results from bargaining and consensus building among coalitions of actors trying to make decisions and adjust aspirations on the organization's, rather than their own, behalf (Cyert & March, 1963). Beyond coalition-building activity, everyday behavior for organizational members is also role prescribed in that role behavior expresses the demands of the entire system, not just the demands of the individuals inhabiting the roles (Katz & Kahn, 1978). In this way behaviors or acts undertaken in fulfillment of a role are organizational acts (Simon, 1976). The aggregation of organizational acts defines an organization. Hall (1991), for example, speaks to the real existence of an organizational entity by noting that organizations are more than a set of interacting and reality-constructing individuals; organizations are entities unto themselves, with properties that shape individual behavior. Organizations make policies and announcements, persist over time by replacing members, and develop behavioral expectations that help define system boundaries (Hall, 1991).

The key, then, to understanding what is "organizational" is found in role performance. Although roles represent the organization's goals and aspirations, they are also imperfectly specified and subject to change over time. Roles can be modified as agents adapt roles to their unique abilities and interests as well as their

interpretations of organizational norms. Agents shape their roles to accommodate their unique circumstances and to better fit the opportunities and demands presented by other agents with whom they interact (Cyert & March, 1963). The organization changes as the roles—and their relationship to each other—change, regardless of whether those changes are formal and intended or informal and emergent. Ongoing mutual adjustments among the agents create a series of precedents, which, in turn, define a history for all the roles within the system (Hall, 1991). As a collective sense of what the roles are and how they function together, this shared history evolves naturally as a consequence of everyday processes. Creating shared history is an informal process, but when the organization realizes it has changed, it may then formally recognize the change by officially rewriting role definitions. As Perrow notes, “Unplanned aspects of organizations are those subject to little administrative control and are often not even noticed until their effects are quite evident” (1979: 175–176). Thus, an act becomes organizational when an agent incorporates it into a role on behalf of the organization’s goals. An act of compassion can be incorporated into a role when role occupants see it as consistent with the ideological basis of the organization’s norms and values (Katz & Kahn, 1978). The organization can build capacity for compassion as multiple agents incorporate compassion into their roles.

As agents incorporate new behaviors into their roles, the understanding of the norms guiding their role behavior also transforms. Norms are an expression of the organization’s values and establish what sort of behaviors agents can expect from one another (Hatch & Cunliffe, 2006). When they interact, exchange information about suffering coworkers, and learn that extrarole behavior can include acts of compassion, agents alter their understanding of what the organization values and incorporate these new values into their roles. Lilius, Worline, Dutton, et al. (2011) observed that individual acts of compassion are sometimes seen as representing organizational values and contribute to employees’ feeling that they are not only supported by individual coworkers but by the larger organization. When this happens, the organization’s capacity for compassion has expanded.

Organizational capacity refers to the resources, knowledge, and processes used by the

organization to achieve its goals and satisfy stakeholder expectations (Aldrich & Ruef, 2006) and defines “the boundaries of its effective action” (Lichtenstein, 2000: 131). Building organizational capacity reduces the uncertainty of external demands (Thompson, 1967) by increasing the organization’s repertoire of possible responses through repurposing resources and generating synergies (Lichtenstein, 2000). Thus, when organizational members expand their roles to include compassionate responses to suffering coworkers, the organization’s response repertoire has changed, and organizational capacity for compassion has emerged. Through this new capacity acts of compassion are no longer completely dependent on idiosyncratic individual initiatives but, instead, become widely recognized as a role responsibility and duty of organizational citizenship. As role definitions expand to include compassionately responding to suffering coworkers, accepted norms also change; organizational members modify their understanding of what the organization values to include acts of compassion. Modified roles and changing norms are reciprocally reinforcing, and the organization’s capacity for recognizing and effectively dealing with personal suffering emerges.

Given that initial individual acts of compassion are often unplanned and occur without direction from the formal organization, we turn to complexity science, which features self-organization and emergence, as a theoretical framework for considering how organizations develop capacity for compassion.

COMPLEXITY SCIENCE

Complexity science focuses on the emergent outcomes of the complexity within systems (Anderson, Meyer, Eisenhardt, Carley, & Pettigrew, 1999). Despite the wealth of attention from various disciplines, including psychology, sociology, biology, economics, and political science, a unified theory of complex systems does not yet exist (Anderson, 1999; Burnes, 2005; Mitleton-Kelly, 2003). Instead, the study of complexity in natural and social sciences has resulted in varied approaches to explaining emergent behavior in systems. Some of those include chaos theory (Gleick, 1998; Lorenz, 1963), the theory of dissipative structures (Nicolis & Prigogine, 1989; Prigogine & Stengers, 1984), CAS (Kauffman,

1993, 1995), catastrophe theory (Thom, 1975), complexity leadership theory (Lichtenstein et al., 2006; Uhl-Bien, Marion, & McKelvey, 2007), and the complex responsive theory of relating (Stacey, 2001, 2003, 2005). Depending on the specific theoretical approach, scholars vary in which CAS characteristics receive emphasis (Alaa, 2009). Although the principles in these frameworks exhibit some overlap, these foundational issues illustrate the difficulty of predicting complex behavior.

Despite these challenges in achieving full theoretical convergence across models of complex behavior, complexity science theories have attracted growing interest both conceptually and empirically because they appear to provide a better, more accurate account of organizational behavior than traditional, mechanistic, linear models of human behavior (Stacey, Griffin, & Shaw, 2000). Mechanistic models of organizations are based on the assumption that the world is knowable and that effective leaders should rely on planning and carefully articulated control mechanisms in order to bring about desired organizational futures (Benbya & McKelvey, 2006; Plowman & Duchon, 2008); however, managers and researchers have found organizations to be increasingly unknowable. By relaxing assumptions of knowledge, planning, and control, organizations can be seen not as machines but as CAS (Axelrod & Cohen, 2000; Beeson & Davis, 2000).

A CAS is composed of highly interactive, interdependent agents who learn and adapt in order to produce behaviors that would not be predicted by observing the system's past (Cilliers, 1998; Stacey, 2005). Moreover, the attributes of a CAS are often expressed in a state of disequilibrium¹ (e.g., Goldstein et al., 2010) and include diversity, interdependence, interactions, and adaptation (Holland, 1998; Kauffman, 1993, 1995; Page, 2011). The disequilibrium state cre-

ates tension that causes agents in the system to interact and self-organize to seek responses to address the disequilibrium. Self-organizing refers to a system's ability to spontaneously arrange its components in a purposeful way without the direction of a higher-level coordinator (Capra, 1996; Stacey, 2005). Often, self-organizing produces emergent outcomes.²

Agents within a CAS can experiment with their behavior and, thus, generate diversity in the behavioral repertoires in the system (Stacey, 2005). Further, agents are capable of learning and adapting their behavior based on the information they receive from other experimenting agents in their local networks (Casti, 1997; Cilliers, 1998; McDaniel, 2007). Unexpected or disproportionate results can emerge from what seems initially to be a random series of interactions among the small number of people with whom agents regularly interact (Lewin, 1999; Stacey, 2005).

These interactions and relationships among agents, rather than the agents themselves, define a CAS. Although a CAS can contain structural properties, such as formal roles, lines of communication, or hierarchical specifications (Alaa, 2009; Goldstein et al., 2010; Uhl-Bien et al., 2007), the interactions among agents mean that the system also contains informal structural properties that permit spontaneous self-organizing (McDaniel, 2007). In other words, the agents possess the ability to invent new structures and rules without any plan or blueprint (Capra, 1996; Stacey, 2005). This ability to self-organize means that order is not necessarily the result of planned, intentional action. Instead, order can be spontaneously generated from agents' interactions based on their own principles of organizing (Stacey, 2005). This self-organization can lead to the emergence of new ideas, actions, and insights for the system that cannot be under-

¹ We refer to this state as disequilibrium (Anderson & McDaniel, 1999; Goldstein, Hazy, & Lichtenstein, 2010) rather than edge of chaos (Kauffman, 1995; Lewin, 1999; McKelvey, 1999; Pascale, Millemann, & Gioja, 2000), dynamic disequilibrium (Chiles, Tuggle, McMullen, Bierman, & Greening, 2010), or far from equilibrium (Anderson, 1999; Meyer, Gaba, & Colwell, 2005; Plowman, Baker, Beck, et al., 2007) to better reflect the assumptions of CAS perspectives that posit that equilibrium is not necessarily a desirable or attainable goal. We appreciate the helpful comments from a reviewer that clarified this distinction.

² The CAS literature exhibits many competing frameworks of defining characteristics (Alaa, 2009; Benbya & McKelvey, 2006). In the absence of a clear, dominant theory that explains CAS behavior in every context (Gell-Mann, 1994), we follow Chiles et al. (2004), Plowman, Baker, Beck, et al. (2007), and Lichtenstein and Plowman (2009) in adopting those characteristics that help us understand the behavior of a CAS in our specific context—compassionate responding events. This approach is also similar to that of Plowman, Baker, Beck, et al. (2007), who used complexity theory to explain how radical change emerges from small, unplanned changes.

stood or predicted from either the formal properties of the organization or the characteristics of the agents inside it (Casti, 1997; Holland, 1998). The resulting behavioral patterns, which are both novel and coherent, emerge from, and then become part of, the dynamic system that generated them (Goldstein, 1999). Thus, the CAS features of *self-organization* and *emergence* form the theoretical basis for our model of emergent organizational capacity for compassion.

A MODEL OF EMERGENT ORGANIZATIONAL CAPACITY FOR COMPASSION

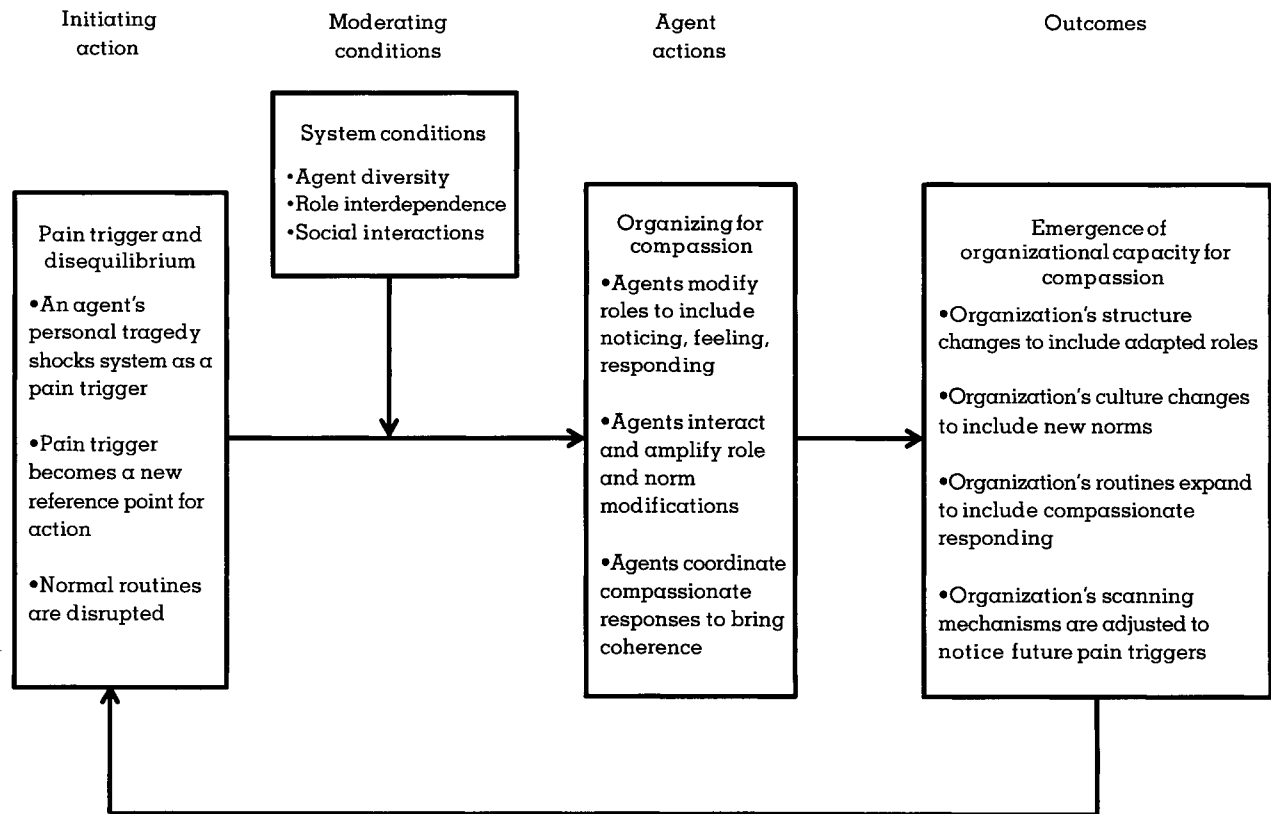
The compassion literature relates numerous narratives of interpersonal moments (Lilius, Worline, Dutton, et al., 2011; Wrzesniewski, Dutton, & Debebe, 2003), as well as descriptions of larger responses, such as collective actions following the terrorist attacks of September 11, 2001 (Dutton, Frost, Worline, Lilius, & Kanov, 2002; Quinn & Worline, 2008). This literature reveals that personal tragedies can act as jolts, pushing

a system of interdependent agents into a disequilibrium state from which organizational capacity for compassion can emerge. In Figure 1 we present a model of emergent organizational capacity for compassion. This model offers an explanation of the conditions under which compassion that begins as isolated, individual responses to a pain trigger can become the focus of coherent, self-organized action and can emerge as organizational capacity for compassion.

Pain Trigger and Disequilibrium

Organizations are complex systems of interactions through which spontaneous self-organizing can shape present and future behavior (Burnes, 2005; Stacey, 2003). These systems and the agents within the systems are sensitive to destabilizing conditions or critical periods, which are marked by shocks to and disruptions of current operating models (Anderson & McDaniel, 1999; Goldstein et al., 2010). Because

FIGURE 1
Emergent Capacity Creation for Organizational Compassion



agents are interdependent and continuously interacting, these shocks can divert the energy and attention inside organizations away from stable operating models and toward the shock itself, which can serve as a new focus or attractor (Anderson, 1999; Goldstein et al., 2010) around which agents can begin to self-organize. As Wheatley describes, "Once inside the network, this small disturbance circulates and feeds back on itself. As different parts of the system get hold of it, interpret it and change it, the disturbance grows" (2010: 95). In other words, a trigger or shock can become the catalyst for the emergence of coherent patterns of changed behavior that are initially local but can spread through the system.

In the compassion literature this new focus is called the "pain trigger" (Dutton et al., 2006: 71). The unexpected suffering of one agent in the system, when noticed and felt by another agent, can trigger a compassionate response that disrupts everyday practices at work (McNeely & Meglino, 1994). In CAS, agents continuously interact and exchange information, increasing the potential for the pain trigger to be noticed, felt, and responded to by multiple agents. The chance that a noticed pain trigger will become a disruption that moves the system into disequilibrium increases as the degree of interdependence and interaction among agents increases.³ The disequilibrium occurs because numerous organizational members become distracted from their normal role requirements and direct their attention to the pain trigger and to compassionate responding.

Dutton et al. (2006) describe an example of a pain trigger that created disequilibrium in their narrative of a fire near the Big Ten University Business School (BTUBS). The fire broke out in the early morning at an apartment complex where several BTUBS students lived. Although the students escaped the building unharmed, all of their belongings were destroyed. The first person to respond to the students' suffering was a teacher who recognized one of the students from her class. The pain trigger of seeing her student standing in the snow in pajamas outside a damaged apartment building disrupted the teach-

er's normal routine of driving to work to begin her day. In stopping to check on the student, she noticed and felt the student's suffering, then responded by driving on to work and notifying others of the pain trigger. As news of the fire spread through BTUBS, the pain trigger attracted the attention of other organizational members, who were then energized (Meyer et al., 2005) and interrupted their daily schedules to begin crafting compassionate responses. In this case we see a pain trigger that disrupted the normal routine of a single organizational member, but as news of the fire spread and others began to notice and feel the suffering, the pain trigger became a new reference point that created disequilibrium for others, an impetus for a self-organized compassionate response.

Proposition 1: The disequilibrium caused by a pain trigger will facilitate a self-organization process around compassion.

System Conditions Influencing Organizing for Compassion

When a pain trigger occurs, creating disequilibrium in organizations, at least three system conditions enhance the likelihood of organizing for compassion: agent diversity, role interdependence, and social interactions. These three conditions represent interagent conditions that enhance self-organizing following a pain trigger.

Agent diversity. Agent diversity is a key feature of any CAS because it is the source of creativity and adaptability required for survival (Holland, 1995; Kauffman, 1995). We define diversity as variation in the agents in the system (Page, 2011). The more varied the agents are, the greater the diversity in the types of energy, both informational and emotional, brought into the system. When diverse agents interact, exchange information, learn, and adapt to each other's behaviors, they are self-organizing and the complexity of the system increases (Chiles et al., 2004; Kauffman, 1993, 1995). The greater the variation of agents within a system, the greater the likelihood that the system will contain one or more agents with the ability to notice, feel, and respond and the more potential opportunities there will be to organize for compassion. At least three types of agent diversity illustrate our argument: cognitive, emotional, and resource diversity.

³ We draw on the perspective of dissipative structures and CAS theory rather than NK landscape theory, which argues that a high-moderate amount of interaction allows for an edge of chaos.

Cognitive diversity, from information processing theory (Daft, Bettenhausen, & Tyler, 1993; Galbraith, 1974), refers to differences in the knowledge, beliefs, and preferences of individuals (Olson, Parayitam, & Bao, 2007), which ensures variation in the types of cues that attract agent attention. Cognitive diversity has been used to explain effective decision processes in top management teams (Hambrick & Mason, 1984), because different team members bring different observations about the cause-and-effect relationships relevant to achieving organizational goals (Miller, Burke, & Glick, 1998). We use cognitive diversity here to mean differences in what agents know and in how they process and interpret information. Cognitive diversity results in variation in both the content and amount of information agents have about their local environment. More cognitive diversity among agents in a system can increase the likelihood of system-wide or collective noticing because multiple agents pay attention to unique pain triggers in their local environments and share information about those pain triggers with others. The more cognitive diversity there is among agents within an organization, the greater the likelihood of collective or system-wide noticing and, ultimately, organizing for compassion.

A second way of characterizing diversity among agents relates to *emotional diversity*, which we define as variation in how agents experience and express their emotions. As a prerequisite for system-wide feeling during compassionate responding, emotional diversity can increase the likelihood that at least one agent will empathetically connect with another's suffering following a pain trigger. Once this newly felt emotion expresses itself in the system, other agents can begin to share it. Emotional diversity results, in part, from differences in agent personalities. In other words, people differ in their sensitivity to pain triggers—in what they feel, the intensity of their feelings, and how they express those feelings (Kanov et al., 2004; Ozer & Benet-Martinez, 2006)—all of which can be attributed to differences in personality traits. For example, variability in the presence and expression of the Big Five personality dimensions "agreeableness" and "extraversion" means the system likely contains one or more agents who will feel the suffering of others (DeYoung et al., 2010), respond to suffering by sharing those feel-

ings with other agents (John, Naumann, & Soto, 2008), and establish the potential for emotional contagion in the system (Hatfield, Cacioppo, & Rapson, 1994; Kanov et al., 2004). The more emotional diversity there is among agents within an organization, the greater the likelihood of collective or system-wide feeling and, ultimately, organizing for compassion.

Third, *resource diversity* is present in a system because agents vary in their access to resources. Agents occupy different roles, thus ensuring access to both different physical resources and different agent networks (McKelvey, 1999). Each agent is the link to a different mix of physical assets, supplies, knowledge, and time flexibility that can be used to compassionately respond to suffering. Belonging to multiple networks sets the stage for both propagating and legitimating compassionate responding throughout the system (Kanov et al., 2004). The networks can be used to spread knowledge of a pain trigger and to provide knowledge of varying attempts to respond to the pain trigger. Access to resources makes it easier for agents to respond to a pain trigger and to take action to help alleviate another's suffering. Resource diversity enables a system to move beyond noticing and feeling to actually acting in response to a pain trigger (Kanov et al., 2004). The more resource diversity there is among agents within an organization, the greater the likelihood of collective or system-wide responding and, ultimately, organizing for compassion.

Based on the arguments above, we make the following propositions.

Proposition 2a: The greater the cognitive diversity of agents within the organization, the greater the likelihood of collectively noticing a pain trigger and organizing for compassion.

Proposition 2b: The greater the emotional diversity of agents within the organization, the greater the likelihood of collectively feeling a pain trigger and organizing for compassion.

Proposition 2c: The greater the resource diversity of agents within the organization, the greater the likelihood of collectively responding to a pain trigger and organizing for compassion.

Role interdependence. A second system condition that contributes to organizing for compassion is the degree of agent interdependence within the system. By definition, CAS are made up of diverse entities who interact in a network and whose actions are interdependent (Holland, 1998; Kauffman, 1993, 1995; Page, 2011). Interdependence refers to the extent to which work processes, roles, or tasks are interrelated such that changes in one process, role, or task affect the state of the others (Scott, 2003). In systems high in interdependence, agents rely on each other to achieve organizational goals by accomplishing tasks prescribed by their roles, and they develop habits of coordination; thus, when one agent is unable to contribute to the organization's goals as a result of a personal tragedy, other interdependent agents are able to compassionately notice, feel, and respond. Interdependence makes compassionate behavior more likely because it generates behavioral and emotional familiarity among agents and requires coordination among agents.

When agents need each other to accomplish the tasks defined by their roles, they must interact. Through such interaction they learn about each other's behaviors and gain *behavioral familiarity*—that is, interdependent agents, whose roles require frequent interactions, come to know one another and become aware of each other's behaviors. Consequently, when agent roles are interdependent, agents are more likely to notice atypical behaviors, such as another's suffering, that may signal potential disruptions to each agent's role objectives. This behavioral familiarity generated among interdependent agents increases the number of cues that agents notice about each other. The greater the role/task interdependence and behavioral familiarity among agents, the more likely it is that a pain trigger will be noticed by others in the system.

The ongoing interactions made necessary by role and task interdependencies can also generate *emotional familiarity* among agents. As agents work together to accomplish organizational goals, they become more emotionally connected (Frost et al., 2000) or attuned to each other's needs (Benner, Tanner, & Chesla, 1996). Interdependent agents "unconsciously 'catch' each other's emotions" (Kanov et al., 2004: 817–818); thus, when one agent experiences a personal tragedy, other agents' emotional familiarity can guide them to share feelings collectively

and increase the likelihood of collectively feeling a pain trigger.

Role and task interdependencies necessitate *coordination* among agents. Coordination refers to the mechanisms an organization uses to link the actions of individuals or subunits into a pattern. Under situations of the greatest interdependencies, where workflows are reciprocal, coordination occurs through mutual adjustment (Thompson, 1967), in which agents exchange information while performing their tasks and adjust their work continuously according to the information exchange. Teamwork is a common form of coordination by mutual adjustment and creates a way for agents to interact, exchange information, and adjust their behaviors accordingly. As agents respond to task-related information to make role and task adjustments, they are also likely to respond to non-task-related information that presents itself in the form of a pain trigger. Thus, the greater the interdependence and associated coordination, the greater the likelihood that agents throughout the system will respond compassionately to another's suffering.

Proposition 3a: The greater the interdependence among agents within the organization, the more agents will learn about each other's behaviors, increasing the likelihood of collectively noticing a pain trigger and organizing for compassion.

Proposition 3b: The greater the interdependence among agents within the organization, the more agents will learn about each other's emotions, increasing the likelihood of collectively feeling a pain trigger and organizing for compassion.

Proposition 3c: The greater the interdependence among agents within the organization, the more agents will learn to coordinate their behaviors, increasing the likelihood of collectively responding to a pain trigger and organizing for compassion.

Social interactions. The third system condition that contributes to organizing for compassion has to do with the nature of the interactions among agents in the system. A central feature of any CAS is the ongoing interactions among

agents who share information, learn, and adapt based on what they have learned (Holland, 1995, 1998). These ongoing interactions are the basis of self-organizing behavior (Kauffman, 1993), which is more likely in systems with both a large quantity and a high quality of interactions (Goldstein et al., 2010; Pascale et al., 2000; Wheatley, 2010). Although role interdependence defines formal interactions necessary for role performance, human agents are social creatures, with a "pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (Baumeister & Leary, 1995: 497). These interpersonal relationships are the basis for social interactions, which we define as those interactions among agents that occur informally, based on friendship and personal characteristics of the agent, enabling people to satisfy needs for belonging and connection (Leary & Allen, 2011). Because of the relational nature of compassion, which occurs in and through interactions and connections among people (Kanov et al., 2004), organizing for compassion is more likely in systems characterized by both a high quantity and a high quality of social interactions (Eisenberg & Miller, 1987).

Increases in the *quantity* of social interactions come about when agents try to increase their relational value in the system. Relational value describes the extent to which other people value interacting with and having relationships with an agent (Leary, 2001). That is, an agent will make an effort at being accepted. People enhance their relational value by being likable and competent, particularly with regard to skills that others value; by supporting group goals and values; and by behaving ethically and responsibly with others (Leary & Allen, 2011). Being relationally valued by other people increases an agent's access to desired social and material outcomes, including companionship, friendship, group membership, romantic relationships, social and logistical support, financial and material resources, and social influence (Leary & Allen, 2011). When systems encourage agents to establish many connections and social interactions throughout the organization, agents gain access to emotional cues otherwise not available, thereby increasing the chances of collectively noticing a pain trigger. Additionally, when systems encourage agents not only to initiate but also to nurture

social interactions, agents come to know and trust each other (Goldstein et al., 2010), and the likelihood of collective feeling and responding increases as well (Kanov et al., 2004).

The *quality* of social interactions resembles the characteristics of high-quality connections described by Dutton and Heaphy (2003). First, a social interaction is high quality if agents can feel comfortable expressing intense emotion of all kinds. Second, a social interaction is high quality if the relationship can bend and withstand the results of openly expressing emotion. Third, high-quality social interactions are generative and open to new ideas and influences. High-quality social interactions, as characterized by these three dimensions (Dutton & Heaphy, 2003), are more likely to be found in organizations that encourage the expression of emotions, where people feel free to talk about their work as well as their personal lives. When agents interact socially and are able to share emotions and feelings in these interactions, the range of cues and information available to agents increases throughout the system, thereby increasing the likelihood of collectively noticing, feeling, and responding to a pain trigger and, ultimately, organizing for compassion.

Proposition 4a: The greater the quantity of social interactions among agents in the organization, the greater the likelihood of collectively noticing, feeling, and responding to a pain trigger and organizing for compassion.

Proposition 4b: The greater the quality of social interactions among agents in the organization, the greater the likelihood of collectively noticing, feeling, and responding to a pain trigger and organizing for compassion.

Organizing for Compassion

When these proposed system conditions exist, a bottom-up, self-organizing process for compassion is possible. Motivated, empathetic agents inside an organization characterized by diversity among agents, role interdependence, and high levels of social interactions are likely to self-organize around the pain trigger. The pain trigger is the disturbance (Plowman, Baker, Beck, et al., 2007) or fluctuation (Chiles et al., 2004) that can ultimately initiate a new order.

Thus, organizing for compassion occurs because individual agents—without the direction of their superiors—notice, feel, and respond to the suffering of others. These individual acts of noticing, feeling, and responding can result in the following actions: agents modify their roles and norms to include compassionate responding, agents interact and amplify role and norm modifications, and agents coordinate amplified compassionate responses.

Agents modify roles to include noticing, feeling, and responding. When an individual agent—without the direction of a superior—responds to an observed pain trigger, the agent engages in extra-role behavior. Empathetic employees and organizational members will alter or ignore their work duties to attend to coworkers' human needs (Dutton et al., 2006; McNeely & Meglino, 1994). An agent's spontaneous response to someone else's suffering, although not specified by role requirements, represents a change in the role occupant's behavior; in this way the agent shapes his or her role (Cyert & March, 1963). By noticing and responding to human suffering, the agent has expanded the cues and actions considered valuable to the role, thereby changing the cognitive and emotional requirements of his or her role and expanding the role to include noticing, feeling, and responding to another's suffering. By incorporating new behaviors and expectations into roles, the norms guiding role behavior also expand; specifically, the values that guide the role occupant's behavior expand to include compassion. Thus, when individual agents, in the course of fulfilling their organizational roles, also notice, feel, and respond to human suffering, they have modified their roles by modifying both the role behaviors and norms.

Agents interact and amplify role and norm modifications. In CAS, where agents interact, exchange information, learn, and adapt their behaviors to each other, initial fluctuations can escalate and contribute to the emergence of a new order (Chiles et al., 2004). During organizing for compassion, the initial fluctuation—a single agent responding to a pain trigger by modifying his or her role to include noticing, feeling, and responding to a pain trigger—can amplify when interdependent agents interact, exchange information, and adapt to each other's behavior (McKelvey, 2004). Through continuous interactions, the adaptations of a few agents can at-

tract the attention of other agents, who may respond by modifying their roles (Lichtenstein & Plowman, 2009). In this way the initial response to the pain trigger through a single role adaptation is amplified in a system of interdependent agents who engage in ongoing interactions. As Dutton et al. note, "Networks allow for the spread not only of information but of various emotions such as empathetic concern" (2006: 85).

As individual agents respond in ways that alleviate a sufferer's pain, roles are adapted to focus on responding not only to the tragedy itself but also to the emerging pattern of individual responses. As individual agents engage in their idiosyncratic responses, future responses build on these to address new issues, without duplicating the efforts of others or supplying unneeded responses. Multiple, simultaneous role adaptations result in multiple, simultaneous norm adaptations. As agents expand the definition of their roles to include compassionate responding, they also expand permission to fulfill the role. Permission morphs into obligation such that what was initially an extra-role act becomes an in-role requirement created entirely by the role incumbent's actions within a network that amplifies the importance and necessity of compassionate acts.

Agents coordinate compassionate responses to bring coherence. As agents interact and learn of others' behaviors and role adjustments, "appropriate" compassionate responses become visible. That is, as agents incorporate noticing, feeling, and responding into their roles, other agents witness what appear to be new acceptable organizational practices. These role adjustments and new patterns of behavior are visible and easily imitated, creating coherence in the system such that isolated, idiosyncratic actions take on the power and momentum of coordinated actions. As agents in the system perceive what they are collectively accomplishing, what had once been a variety of independent compassionate acts becomes a coordinated, system-wide compassionate response.

Emergence of Organizational Capacity for Compassion

Emergence is the development of novel yet coherent patterns and properties that occur as a result of self-organization (Goldstein, 1999). When agents become increasingly interdepen-

dent and interaction patterns shift (i.e., self-organization around a pain trigger), a new order is generated (Prigogine & Stengers, 1984). During emergence, compassion is expressed as a feature of actions that are larger and more powerful than the sum of the agents' individual acts. What began as idiosyncratic local acts of compassion by individual agents coheres into a system-wide coordinated response effort that simultaneously alters the system itself (Chiles et al., 2004; Plowman, Baker, Beck, et al., 2007). As a result of successful self-organized compassionate responses that amplify and spread throughout the organization, compassion reaches a critical mass in terms of the degree to which it is present in the values, beliefs, and behaviors of organizational activity. This critical mass is a tipping point around which the entire system, not just the initial agents who acted compassionately, internalizes compassion as part of its value and belief structure. This is the moment of emergence: the critical mass leads to a reorganizing of role perceptions and the emergence of new capacity that is organizational as much as agent based. The emergent new capacity for compassion is now embedded in the organization's structure, culture, routines, and scanning mechanisms.

Because roles are a key element of an organization's *structure* (Scott & Davis, 2007), when multiple agents in the system expand the requirements of their roles to include noticing, feeling, and responding to another's suffering, the organization's structure shifts. Because "behavior shapes norms and beliefs just as norms and beliefs shape behaviors" (Scott, 2003: 19), the normative structure of the organization also shifts to incorporate new norms that legitimize compassionate responding. When this happens, capacity for compassion is embedded in the organization's structure, not in the individual. The agent who first felt the pain trigger may leave the organization, but the capacity to notice, feel, and respond does not leave with him or her.

An organization's *culture* consists of the implicit set of taken-for-granted beliefs, values, and norms that guide people's behavior (Trice & Beyer, 1993). Organizing for compassion gives way to a new order in organizations in part because multiple agents have self-organized around a new norm that encourages noticing, feeling, and responding to human suffering. The changing norms guiding role occupant behavior

reflect an organizational value for compassionate responding. When organizational practices change in response to the new norms and values, the culture of the organization changes; new shared understandings of expected behavior can shape future actions within the organization.

As the structure and culture shift in response to organizing for compassion, the *routines* that guide people's actions also change. This new emergent order—organizational capacity for compassion—has altered both explicit and tacit policies that guide people's behaviors to include noticing, feeling, and responding to suffering. The self-organized behavior has served as a coordination mechanism; the propagation and legitimization of compassionate responding occur as policies and practices begin to explicitly acknowledge compassionate responding as an organizational priority (Kanov et al., 2004). An example of an organizational policy that enables capacity for compassion can be seen at Cisco Systems, which has a policy that the CEO is to be notified within forty-eight hours if an employee or a family member of an employee becomes gravely ill or dies (Kanov et al., 2004). This policy indicates to employees that personal tragedy and pain are legitimate concerns and encourages them to share news of their pain and comfort to suffering coworkers.

Finally, the emergence of a new order—organizational capacity for compassion—suggests that as the structure, culture, and routines of the organization shift to incorporate compassionate responding, so, too, will the organization's formal *scanning mechanisms*. That is, what the organization pays attention to in the future will be different because of the emergent new order. The altered structure, culture, and routines suggest that future pain triggers are likely to be more noticeable. As Sutcliffe (2000) observed, organizations influence what their members notice and pay attention to through structures, systems, and practices. Organizing around a successful compassionate responding event makes it more likely that the organization's system for environmental scanning will be altered in a way that future pain triggers are likely to be more noticeable. The future cues that are selected for attention via the organization's scanning processes will likely now include future pain triggers.

The organizational capacity for compassion created during times of suffering is manifested in expanded role behaviors that include caring for fellow organizational members, as well as in new structures and routines that hasten future responses. By building organizational capacity for compassion through the creation of structures and policies such as student emergency funds (Dutton et al., 2006), vacation banks, or medical assistance networks (Dutton et al., 2002), organizations make explicit and formal their commitment to support employees during future tragedies. In this way organizations discover new ways to leverage their resources for compassionate responding (Lichtenstein, 2000).

Proposition 5: The self-organizing process around compassion can lead to the emergence of organizational capacity for compassion.

Organizational Capacity for Compassion and Future Pain Triggers

When the organization internalizes compassion as part of its value and belief structure, organizational capacity for compassion emerges. At this point roles have changed to incorporate compassion, the culture has incorporated compassion into its value system, new routines and policies develop, and the organization's scanning mechanisms now also pay attention to pain triggers. This new organizational capacity for compassion can affect how the organization notices, feels, and responds to future pain triggers. With this new capacity, future pain triggers may not be as disruptive to the organization as were the early pain triggers that launched the self-organizing process for compassion. As organizational members become increasingly sensitive to each other's pain and suffering, the organization's threshold for pain may actually be lowered such that members begin extending compassion to different types of disappointments and challenges, including those that are less intense than the pain and suffering that triggered the initial self-organizing response.

This emergent organizational capacity for compassion may also affect future responses along the dimensions of speed, scope, scale, and specialization identified by Dutton et al. (2006). For example, having successfully responded to

a tragedy once, organizational members will be able to respond more quickly to subsequent tragedies. The establishment of new routines and policies means that agents will spend less time searching for resources and more time compassionately responding. Additionally, the scope of the response may be broader as agents within the system recognize each other's diverse cognitive, emotional, and resource endowments and as the system is better able to match these different types of responder resources to the sufferer's needs. Furthermore, as organizational members learn more about each other and respond compassionately to their coworkers, future pain triggers may not need to reach the same scale of tragedy before being noticed, felt, and responded to. By addressing small-scale problems before they escalate into larger problems, an organization may be able to use its greater capacity for compassion to alleviate suffering sooner. Finally, as the organization finds itself responding to new and different types of pain, the development of greater capacity could result in more specialized and tailored responses for future sufferers. This emergent organizational capacity for compassion makes it more likely that future pain triggers will not go unnoticed as organizational capacity is leveraged (Lichtenstein, 2000).

Proposition 6: The greater the level of organizational capacity for compassion, the greater the likelihood that the organization will collectively notice, feel, and respond to future pain triggers.

This model demonstrates how unplanned individual acts of compassion can lead to organizing for compassion among organizational members and the emergence of a new organizational capacity for compassion.

DISCUSSION

The compassion literature has not included "exact prescriptions about creating compassionate organizations" (Dutton et al., 2006: 889), but our model begins to bridge this gap by suggesting that organizational capacity for compassion can emerge under the right set of conditions. We propose that a single pain trigger can send systems into disequilibrium states when everyday practices are disrupted by agents who notice,

feel, and respond to another's suffering. When organizations are characterized by high levels of agent diversity, interdependence, and social interactions, organizing for compassion among agents is possible. During this self-organizing process around compassion, agents modify their roles to include compassionate behavior, and, through their interactions, these role modifications are amplified throughout the system. The patterns generated by this organizing behavior become visible to others in the system, providing coherence and coordination. At this point a new order—organizational capacity for compassion—emerges as the organization internalizes a set of values and beliefs, newly realized, into its structure and culture.

This model contributes to the compassion literature in four ways. First, the focus of our article is on how organizations develop a capacity for compassion that is sustainable across tragedies. We extend earlier compassion research on an organizational response to a single tragedy (Dutton et al., 2006) or on everyday practices within a single work unit (Lilius, Worline, Dutton, et al., 2011) by considering how an entire organization can become more compassionate. Central to our argument is the idea that when multiple interacting agents organize around a pain trigger by adapting their roles and the norms guiding their roles to include acts of compassion, the organization has changed. Its capacity for responding to unexpected events has expanded to include compassionate responding. This new capacity may be manifested in the presence of new formalized structures or policies, and it may be revealed in agents who understand their role as an organizational member as requiring a different level of attentiveness to those around them. This capacity for compassion further influences the system during future times of tragedy because organizational members have new resources at their disposal, as well as new knowledge of what organizational roles and norms entail. In this regard, compassionate responses to an individual tragedy not only provide care and comfort to a suffering individual in need but also lay the foundation for future compassionate responses. Consequently, this new capacity for compassion becomes a part of the system and becomes a system condition that influences future compassionate responding events. The feedback loop shown in Figure 1 suggests that this

new capacity feeds back into the organization as a positive source of energy, making it more likely that future pain triggers will be noticed, felt, and responded to.

Second, we have proposed system conditions that foster self-organizing behavior—in this case, organizing for compassion. The diversity of the agents who make up the system serves as a source of information and creativity vital to self-organization, role interdependence creates familiarity among agents and drives habits of coordination, and social interactions create the bonding and trust through which agents establish their relational value to each other. In our propositions we suggest that collective noticing, feeling, and responding—and, ultimately, organizing for compassion—are more likely when the system has high levels of diversity, interdependence, and social interactions among agents. Under these conditions the innate human urge to comfort others that drives individual responses can grow into organized compassion, complete with system-wide role modifications and coordinated responses. High levels of diversity, interdependence, and social interactions amplify the awareness of, and motivation to address, the disruption created by an initial compassionate response and enhance the likelihood of the emergence of a new organizational capacity.

Third, we have shown that organizational capacity for compassion can emerge without managerial direction. Like Kanov et al. (2004), we view organizational compassion as something more than an aggregation of compassion among organizational members, and we agree that the capacity for organizational compassion involves a set of social processes; however, we propose that organizations can develop capacity for compassion without formal coordination because agents can self-organize around a pain trigger. Although an organizational member's compassionate response to someone else's pain is unplanned by the larger organization, it can impact others who may also respond and create momentum for change (Plowman, Baker, Beck, et al., 2007; Plowman, Solansky, Beck, et al., 2007). This emergent model stands in sharp contrast to traditional views of organizational culture and values, which suggest that top executives create the values around which organizational members bond (Finkelstein & Hambrick, 1996; Hambrick & Mason, 1984). Such a top-down focus

provides a view of organizational values as reflections of powerful leaders but overlooks how employees at all levels contribute to the organization's values. In contrast, our model reveals how the values and actions of individuals who interact and self-organize are able to effect changes to the system and generate compassion at the organizational level. This article fills an important gap in the compassion literature by showing how compassion can begin as a small interaction between as few as two employees and, through self-organization and emergence, can impact the entire organization long after the initial tragedy has passed.

Fourth, we have developed a set of propositions about how system conditions create an organizational setting that is ripe for organizing for compassion and for the emergence of organizational capacity for compassion. With these propositions we focus on macrolevel issues by theorizing about how organizations—not individuals or groups—develop the capacity for compassion. Clearly, individuals and groups make up organizations, and mesolevel research on organizational compassion is needed; however, in this article we add to the existing research on compassion by focusing on the organizational level and theorizing about system-level conditions that foster organizational compassion. Our theoretical model of emergent organizational capacity for compassion and related propositions deepen our understanding of how organizations can become more compassionate and lay the groundwork for future research questions that will contribute to the growing literature on organizational compassion.

Unanswered Questions and Future Research

The model we present opens up important new questions for researchers considering compassion at the organizational level, which, as of yet, has received less attention than individual- or group-level compassionate responding. We hope that in future research scholars will consider (1) additional organizational features that may affect organizing for compassion, (2) alternative conceptualizations of agent diversity, (3) how organizational capacity for compassion affects future responses to suffering, and (4) whether compassionate organizations also de-

velop sensitivity to suffering outside the organization.

Although we offer three system conditions that foster self-organizing, other features of organizations may actually dampen self-organizing behaviors and warrant attention in future research. It would be useful to consider the degree to which the mission and structure of the organization enhance or dampen organizing for compassion. At first glance, it might appear that formalization and bureaucracy would limit self-organizing because of how highly specified roles are and how little latitude organizational members may have in role behavior. Thus, the expression of compassion could be limited by the degree of formalization of the organization. Existing studies of compassion have occurred in a university (Dutton et al., 2006), a hospital (Lilius et al., 2008), and a work unit within a health system (Lilius, Worline, Dutton, et al., 2011). In these types of organizations, which Mintzberg (1979) referred to as professional bureaucracies, role occupants likely have considerable latitude in their choice of role behavior. Further, the boundaries created by the institutional settings and unique missions in these studies call for more research on compassion in for-profit organizations, where bottom-line considerations might dampen self-organizing responses.

Second, our consideration of agent diversity focused on three types: cognitive, emotional, and resource diversity. Future research may benefit from other ways to conceptualize agent diversity. Page (2011) views diversity as including both diversity in the type of agents and diversity in agent configurations. We focused exclusively on diversity as variation in the types of agents in the system, but future research could also consider how the configurations of agents within the system contribute to emergent organizational capacity for compassion. Do differences in the patterns of interactions, the complexity of the networks to which agents belong, or the number of nodes in the network influence self-organizing? By drawing on network theory as well as complexity science, researchers could deepen our understanding of diversity and its effect on emergent organizational capacity.

Third, future research should examine how the capacity for compassion results in changes in the way organizations scan for and notice pain triggers. For example, having internalized compassion into its value and belief structure,

does an organization notice suffering more often? Does the organization look for familiar pain triggers, or does it expand its perceptual lens to notice new, different kinds of pain? Do new habits of behavior make the noticing, feeling, and responding to suffering more routine? Does it happen more quickly? If noticing becomes more routine, is the pain trigger less likely to be a disturbance to the system, and, if so, how does that impact the willingness of the organization to respond? We have not speculated about the types of pain triggers that become the focus of attention for multiple agents in a system, and "different types of pain may be less amenable to collective responses" (Dutton et al., 2006: 89). Different types of pain may explain why some types of suffering get noticed and quickly garner attention throughout a system while others go unnoticed. Future research could enhance our understanding of organizational compassion by distinguishing those initial pain triggers that are noticed and quickly escalate in importance through a system from those that are noticed, felt, and responded to by an individual but never move beyond the individual's attention.

Finally, in the discussion of our model, we focused on the expression of compassion inside the organization, but it seems likely that organizational capacity for compassion would heighten an organization's awareness to human suffering and pain outside the organization as well. By extending the concept of compassionate responses to sufferers outside the organization's boundaries, we may see that organizations that value compassion are less likely to engage in purposely harming external stakeholder groups. Other questions to consider include whether or not organizations with greater capacity for compassion pay closer attention to issues in their communities and notice, feel, and respond to those issues as well. To what extent does organizational capacity for compassion encourage more corporate social responsibility within an organization? Are compassionate organizations more attuned to instances of personal suffering within partner organizations, such as supply chain members, customers, or even competitors? In addition, in future research in this area, scholars may want to consider how organizations decide which external pain triggers to respond to and which pain triggers to ignore.

Our model of the emergent capacity for organizational compassion is not without limita-

tions. For example, organizational capacity for compassion may be more likely in an organization with a service orientation; however, such a capacity for compassion is not guaranteed. Employees of health care organizations, first responder organizations, public defense law firms, or governmental agencies with missions to serve others might be better able to notice, feel, and respond to pain felt by their coworkers (Kanov et al., 2004), but these are not necessarily compassionate organizations, just because their mission is to alleviate the pain of those they serve. Additionally, organizations with missions that do not include daily ministrations to people in pain can still be compassionate, indicating that the values and norms regarding compassion perhaps only require an occasional opportunity. For example, the U.S. Army made compassion part of its formal mission when it engaged in humanitarian relief in Haiti after the recent earthquake and in New Orleans after Hurricane Katrina. This does not mean that only a few organizations in special circumstances could develop capacity for compassion; theoretically, any organization could do so, but some organizations may be better suited than others.

Conclusion

This article offers a theoretical explanation for how compassion can spread to the organizational level, extends the interest in workplace care and compassion, and so responds to the call set forth by Frost to conduct research that recognizes "suffering as a significant aspect of organizational life" (1999: 128). Beyond the confines of academic research, real, universal opportunities exist for creating workplaces that encourage more than sporadic acts of compassion. We believe that when an organization embodies compassion, the entire system nurtures a broad range of values, beliefs, virtues, and behaviors that are about both care and caring (Kroth & Keeler, 2009; McAllister & Bigley, 2002), not just in a crisis but, rather, in everyday life and work. We have relied on models of organizations as machines for over a hundred years. It is time to articulate organizations as reflections of our best selves—as communities where compassion, support, and positive energy are expected, natural, and normal.

REFERENCES

- Alaa, G. 2009. Derivation of factors facilitating organizational emergence based on complex adaptive systems and social autopoiesis theories. *Emergence: Complexity & Organization*, 11(1): 19–34.
- Aldrich, H., & Ruef, M. 2006. *Organizations evolving* (2nd ed.). Thousand Oaks, CA: Sage.
- Anderson, P. 1999. Complexity theory and organization science. *Organization Science*, 10: 216–232.
- Anderson, P., Meyer, A., Eisenhardt, K., Carley, K., & Pettigrew, A. 1999. Introduction to the special issue: Applications of complexity theory to organization science. *Organization Science*, 10: 233–236.
- Anderson, R., & McDaniel, R. 1999. RN participation in organizational decision making and improvements in resident outcomes. *Health Care Management Review*, 24(1): 7–16.
- Atkins, P. W. B., & Parker, S. K. 2012. Understanding individual compassion in organizations: The role of appraisals and psychological flexibility. *Academy of Management Review*, 37: 524–546.
- Axelrod, R., & Cohen, M. D. 2000. *Harnessing complexity: Organizational implications of a scientific frontier*. New York: Free Press.
- Barnard, C. 1938. *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Batson, C. D. 1991. *The altruism question: Toward a social psychological answer*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Baumeister, R., & Leary, M. 1995. The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117: 497–529.
- Beeson, I., & Davis, C. 2000. Emergence and accomplishment in organizational change. *Journal of Organizational Change Management*, 13: 178–189.
- Benbya, H., & McKelvey, B. 2006. Toward a complexity theory of information systems development. *Information Technology and People*, 19: 12–34.
- Benner, P., Tanner, C. A., & Chesla, C. A. 1996. *Expertise in nursing practice: Caring, clinical judgment, and ethics*. New York: Springer.
- Burnes, B. 2005. Complexity theories and organizational change. *International Journal of Management Reviews*, 7: 73–90.
- Cameron, K. S., Bright, D., & Caza, A. 2004. Exploring the relationships between organizational virtuousness and performance. *American Behavioral Scientist*, 47: 766–790.
- Capra, F. 1996. Teaching and teacher education: Small group problem based learning as a complex adaptive system. *Problem Based Learning*, 23: 303–313.
- Casti, J. 1997. *Would-be worlds: How simulation is changing the frontiers of science*. New York: Wiley.
- Chiles, T., Meyer, A., & Hench, T. 2004. Organizational emergence: The origin and transformation of Branson, Missouri's musical theaters. *Organization Science*, 15: 499–519.
- Chiles, T. H., Tuggle, C. S., McMullen, J. S., Bierman, L., & Greening, D. W. 2010. Dynamic creation: Extending the radical Austrian approach to entrepreneurship. *Organization Studies*, 31: 7–46.
- Churchill, W. S. 1941. Every man to his post, September 11, 1940. In R. S. Churchill (Comp.), *Into battle: Speeches by the Right Hon. Winston S. Churchill*: 272–275. London: Cassell.
- Colliers, P. 1998. *Complexity and postmodernism: Understanding complex systems*. London: Routledge.
- Clark, C. 1997. *Misery and company: Sympathy in everyday life*. Chicago: University of Chicago Press.
- Cyert, R. M., & March, J. G. 1963. *A behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice-Hall.
- Daft, R. L., Bettenhausen, K. R., & Tyler, B. B. 1993. Implications of top managers' communication choices for strategic decisions. In G. P. Huber & W. Glick (Eds.), *Organizational change and redesign: Ideas and insights for improving performance*: 112–146. New York: Oxford University Press.
- DeYoung, C. G., Hirsh, J. B., Shane, M. S., Papademetris, X., Rajeevan, N., & Gray, J. R. 2010. Testing predictions from personality neuroscience. *Psychological Science*, 21: 820–828.
- Dutton, J. E., Frost, P., Worline, M. C., Lilius, J. M., & Kanov, J. M. 2002. Leading in times of trauma. *Harvard Business Review*, 80(1): 54–61.
- Dutton, J. E., & Heaphy, E. 2003. The power of high-quality connections. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline*: 263–278. San Francisco: Berrett-Koehler.
- Dutton, J. E., Worline, M. C., Frost, P., & Lilius, J. M. 2006. Explaining compassion organizing. *Administrative Science Quarterly*, 51: 59–96.
- Eisenberg, N., & Miller, P. A. 1987. The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, 101: 91–119.
- Finkelstein, S., & Hambrick, D. 1996. *Strategic leadership: Top executives and their effects on organizations*. St. Paul: West Publishing Company.
- Frost, P. 1999. Why compassion counts! *Journal of Management Inquiry*, 8: 127–133.
- Frost, P., Dutton, J. E., Maitlis, S., Lilius, J. M., Kanov, J. M., & Worline, M. C. 2006. Seeing organizations differently: Three lenses on compassion. In C. Hardy, S. Clegg, T. Lawrence, & W. Nord (Eds.), *Handbook of organization studies* (2nd ed.): 843–866. London: Sage.
- Frost, P., Dutton, J. E., Worline, M. C., & Wilson, A. 2000. Narratives of compassion in organizations. In S. Fine-man (Ed.), *Emotion in organizations*: 25–45. London: Sage.
- Galbraith, J. R. 1974. Organization design: An information processing view. *Interfaces*, 4(3): 28–36.
- Gell-Mann, M. 1994. *The quark and the jaguar*. New York: Freeman.

- Gleick, J. 1998. *Chaos: The amazing science of the unpredictable*. London: Vintage.
- Goldstein, J. 1999. Emergence as a construct: History and issues. *Emergence: Complexity & Organization*, 1(1): 49–72.
- Goldstein, J., Hazy, J. K., & Lichtenstein, B. B. 2010. *Complexity and the nexus of leadership: Leveraging nonlinear science to create ecologies of innovation*. New York: Palgrave Macmillan.
- Grant, A. M., Dutton, J. E., & Rosso, B. D. 2008. Giving commitment: Employee support programs and the prosocial sensemaking process. *Academy of Management Journal*, 51: 898–918.
- Hall, R. H. 1991. *Organizations: Structures, processes, and outcomes*. Englewood Cliffs, NJ: Prentice-Hall.
- Hambrick, D., & Mason, P. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9: 193–206.
- Hatch, M. J., & Cunliffe, A. L. 2006. *Organization theory*. Oxford: Oxford University Press.
- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. 1994. *Emotional contagion: Studies in emotion and social interaction*. New York: Cambridge University Press.
- Hazen, M. A. 2003. Societal and workplace responses to perinatal loss: Disenfranchised grief or healing connection. *Human Relations*, 56: 147–166.
- Holland, J. 1995. *Hidden order: How adaptation builds complexity*. Reading, MA: Addison-Wesley.
- Holland, J. 1998. *Emergence: From chaos to order*. Reading, MA: Addison-Wesley.
- John, O. P., Naumann, L. P., & Soto, C. J. 2008. Paradigm shift to the integrative Big Five trait taxonomy. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed.): 114–158. New York: Guilford Press.
- Kanov, J. M., Maitlis, S., Worline, M. C., Dutton, J. E., Frost, P., & Lilius, J. M. 2004. Compassion in organizational life. *American Behavioral Scientist*, 47: 808–827.
- Katz, D., & Kahn, R. L. 1978. *The social psychology of organizations*. New York: Wiley.
- Kauffman, S. 1995. *At home in the universe: The search for laws of self-organization and complexity*. New York: Oxford University Press.
- Kauffman, S. A. 1993. *The origins of order: Self-organization and selection in evolution*. Oxford: Oxford University Press.
- Kroth, M., & Keeler, C. 2009. Caring as a managerial strategy. *Human Resource Development Review*, 8: 506–531.
- Lawrence, P. R., & Nohria, N. 2002. *Driven: How human nature shapes our choices*. San Francisco: Jossey-Bass.
- Lazarus, R. S. 1991. *Emotion and adaptation*. New York: Oxford University Press.
- Leary, M., & Allen, A. 2011. Personality and persona: Personality processes in self-presentation. *Journal of Personality*, 79: 1191–1218.
- Leary, M. R. 2001. Towards a conceptualization of interpersonal rejection. In M. R. Leary (Ed.), *Interpersonal rejection*: 3–20. New York: Oxford University Press.
- Lewin, R. 1999. *Complexity: Life at the edge of chaos*. Chicago: University of Chicago Press.
- Lichtenstein, B. B. 2000. Self-organized transitions: A pattern amid the chaos of transformative change. *Academy of Management Executive*, 14(4): 128–141.
- Lichtenstein, B. B., & Plowman, D. A. 2009. The leadership of emergence: A complex systems leadership theory of emergence at successive organizational levels. *Leadership Quarterly*, 20: 617–630.
- Lichtenstein, B. B., Uhl-Bien, M., Marion, R., Seers, A., Orton, J. D., & Schreiber, C. 2006. Complexity leadership theory: An interactive perspective on leading in complex adaptive systems. *Emergence: Complexity & Organization*, 8(4): 2–12.
- Lilius, J. M., Kanov, J. M., Dutton, J. E., Worline, M. C., & Maitlis, S. 2011. Compassion revealed: What we know about compassion at work (and where we need to know more). In K. S. Cameron & G. Spreitzer (Eds.), *The handbook of positive organizational scholarship*: 273–287. Oxford: Oxford University Press.
- Lilius, J. M., Worline, M. C., Dutton, J. E., Kanov, J. M., Maitlis, S., & Frost, P. 2011. Understanding compassion capability. *Human Relations*, 64: 873–899.
- Lilius, J. M., Worline, M. C., Maitlis, S., Kanov, J. M., Dutton, J. E., & Frost, P. 2008. The contours and consequences of compassion at work. *Journal of Organizational Behavior*, 29: 193–218.
- Lorenz, E. 1963. Deterministic nonperiodic flow. *Journal of the Atmospheric Sciences*, 26: 636–646.
- McAllister, D. J., & Bigley, G. A. 2002. Work context and the definition of self: How organizational care influences organization-based self-esteem. *Academy of Management Journal*, 45: 894–904.
- McDaniel, R. 2007. Management strategies for complex adaptive systems sensemaking, learning, and improvisation. *Performance Improvement Quarterly*, 20: 21–41.
- McKelvey, B. 1999. Avoiding complexity catastrophe in co-evolutionary pockets: Strategies for rugged landscapes. *Organization Science*, 10: 294–321.
- McKelvey, B. 2004. Complexity science as order-creation science: New theory, new method. *Emergence: Complexity & Organization*, 6(4): 2–27.
- McNeely, B. L., & Meglino, B. M. 1994. The role of dispositional and situational antecedents in prosocial organizational behavior: An examination of the intended beneficiaries of prosocial behavior. *Journal of Applied Psychology*, 79: 836–844.
- Meyer, A., Gaba, V., & Colwell, K. 2005. Organizing far from equilibrium: Nonlinear change in organizational fields. *Organization Science*, 16: 456–473.
- Miller, C. C., Burke, L. M., & Glick, W. H. 1998. Cognitive diversity among upper-echelon executives: Implications for strategic decision processes. *Strategic Management Journal*, 19: 39–58.

- Miller, K. I. 2007. Compassionate communication in the workplace: Exploring processes of noticing, connecting, and responding. *Journal of Applied Communication Research*, 35: 223–245.
- Mintzberg, H. 1979. *The structuring of organizations*. Englewood Cliffs, NJ: Prentice-Hall.
- Mitleton-Kelly, E. 2003. *Complex systems and evolutionary perspectives on organisations: The application of complexity theory to organisations*. Kidlington, UK: Elsevier Science.
- Nicolis, G., & Prigogine, I. 1989. *Exploring complexity: An introduction*. New York: Freeman.
- O'Donohoe, S., & Turley, D. 2006. Compassion at the counter: Service providers and bereaved consumers. *Human Relations*, 59: 1429–1448.
- Olson, B. J., Parayitam, S., & Bao, Y. 2007. Strategic decision making: The effects of cognitive diversity, conflict, and trust on decision outcomes. *Journal of Management*, 33: 196–222.
- Oveis, C., Horberg, E. J., & Keltner, D. 2010. Compassion, pride, and social intuitions of self-other similarity. *Journal of Personality and Social Psychology*, 98: 618–630.
- Ozer, D. J., & Benet-Martinez, V. 2006. Personality and the prediction of consequential outcomes. *Annual Review of Psychology*, 57: 401–421.
- Page, S. 2011. *Diversity and complexity*. Princeton, NJ: Princeton University Press.
- Pascale, R., Millemann, M., & Gioja, L. 2000. *Surfing the edge of chaos*. New York: Crown Business.
- Perrow, C. 1979. *Complex organizations: A critical essay* (2nd ed.). New York: Random House.
- Plowman, D., Baker, L., Beck, T., Kulkarni, M., Solansky, S., & Travis, D. 2007. Radical change accidentally: The emergence and amplification of small change. *Academy of Management Journal*, 50: 515–543.
- Plowman, D. A., & Duchon, D. 2008. Dispelling the myths about leadership. In M. Uhl-Bien & R. Marion (Eds.), *Complexity leadership*: 129–153. Charlotte, NC: Information Age.
- Plowman, D. A., Solansky, S., Beck, T. E., Baker, L., Kulkarni, M., & Travis, D. V. 2007. The role of leadership in emergent, self-organization. *Leadership Quarterly*, 18: 341–356.
- Powley, E. H. 2009. Reclaiming resilience and safety: Resilience activation in the critical period of crisis. *Human Relations*, 62: 1289–1326.
- Powley, E. H., & Cameron, K. S. 2008. Organizational healing: Lived virtuousness amidst organizational crisis. In C. C. Manz, K. S. Cameron, K. Manz, & R. D. Marx (Eds.), *The virtuous organization*: 21–44. Hackensack, NJ: World Scientific.
- Prigogine, I., & Stengers, I. 1984. *Order out of chaos*. New York: Bantam Books.
- Quinn, R. W., & Worline, M. C. 2008. Enabling courageous collective action: Conversations from United Airlines Flight 93. *Organization Science*, 19: 497–516.
- Scott, W. R. 2003. *Organizations: Rational, natural, and open systems* (5th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Scott, W. R., & Davis, G. F. 2007. *Organizations and organizing: Rational, natural, and open system perspectives*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Simon, H. 1976. *Administrative behavior*. New York: Macmillan.
- Stacey, R. D. 2001. *Complex responsive processes in organizations: Learning and knowledge creation*. London: Routledge.
- Stacey, R. D. 2003. *Complexity and group processes: A radically social understanding of individuals*. New York: Brunner-Routledge.
- Stacey, R. D. 2005. *Experiencing emergence in organizations: Local interaction and the emergence of global pattern*. New York: Routledge.
- Stacey, R. D., Griffin, D., & Shaw, P. 2000. *Complexity and management: Fad or radical challenge to systems thinking?* London: Routledge.
- Sutcliffe, K. M. 2000. Organizational environments and organizational information processing. In F. M. Jablin & L. L. Putnam (Eds.), *The new handbook of organizational communication*: 197–230. Thousand Oaks, CA: Sage.
- Thom, R. 1975. *Structural stability and morphogenesis*. New York: W. A. Benjamin.
- Thompson, J. D. 1967. *Organizations in action*. New York: McGraw-Hill.
- Trice, H., & Beyer, J. 1993. *The cultures of work organizations*. Englewood Cliffs, NJ: Prentice-Hall.
- Uhl-Bien, M., Marion, R., & McKelvey, B. 2007. Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *Leadership Quarterly*, 18: 298–318.
- Wheatley, M. J. 2010. *Leadership and the new science: Discovering order in a chaotic world* (3rd ed.). San Francisco: Berrett-Koehler.
- Wrzesniewski, A., Dutton, J. E., & Debebe, G. 2003. Interpersonal sensemaking and the meaning of work. *Research in Organizational Behavior*, 25: 93–135.
- Wuthnow, R. 1991. *Acts of compassion: Caring for others and helping ourselves*. Princeton, NJ: Princeton University Press.

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