

EVENT SYSTEM THEORY: AN EVENT-ORIENTED APPROACH TO THE ORGANIZATIONAL SCIENCES

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Organizations are dynamic, hierarchically structured entities. Such dynamism is reflected in the emergence of significant events at every organizational level. Despite this fact, there has been relatively little discussion about how events become meaningful and come to impact organizations across space and time. We address this gap by developing event system theory, which suggests that events become salient when they are novel, disruptive, and critical (reflecting an event's strength). Importantly, events can originate at any hierarchical level and their effects can remain within that level or travel up or down throughout the organization, changing or creating new behaviors, features, and events. This impact can extend over time as events vary in duration and timing or as event strength evolves. Event system theory provides a needed shift in focus for organizational theory and research by developing specific propositions articulating the interplay among event strength and the spatial and temporal processes through which events come to influence organizations.

Time is like a river made up of the events which happen, and a violent stream; for as soon as a thing has been seen, it is carried away, and another comes in its place, and this will be carried away too (Aurelius, 167).

That our experience of life can be described in terms of events is something that has been recognized since antiquity. The things that happen to us—the events of our work and personal lives—form the core of what is called “experience.” Events occur over time, playing a major role in shaping thoughts, feelings, and actions. In fact, when people describe their lives, they often refer to events as central to their development,

character, and circumstance. As Pillemer notes, “In every life, the ongoing stream of mundane daily occurrences is punctuated by distinctive, circumscribed, highly emotional and influential episodes” (2001: 123). Some have gone so far as to suggest that “the world is composed of events and experiences rather than substantial entities” (Langley, Smallman, Tsoukas, & Van de Ven, 2013: 5).

In organizations, events occur at every hierarchical level, from the most molar environmental level to the most molecular individual level, and their effects can travel up, down, or within hierarchical levels. This seems an obvious fact, making it all the more surprising that scholars have largely failed to offer a comprehensive account of the central role events play in understanding organizational phenomena. This represents a significant gap in our understanding of organizations, in part because focusing on events calls attention to dynamics, change, and system interrelationships that have heretofore been neglected in theory and research. Although certain types of events have been studied and process-oriented research considers events a part of the broader process

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flow, scholars have largely focused on enduring features of the work environment as the key cause of organizational phenomena.

Concerned with quite different phenomena, feature-oriented theories focus on the relatively salient, enduring, and stable representative features of individuals, teams, and organizations. For example, in job characteristics theory, different degrees of a feature-oriented independent variable (e.g., an individual's amount of job autonomy) are presumed to lead to different amounts of a feature-oriented dependent variable (e.g., job satisfaction). Features operate, in part, by structuring daily experiences, reflecting the generally stable *amount* of a particular variable for an individual, group, or organization. Thus, variance in features causes variance in some feature serving as the dependent variable.

Without a doubt, features are crucial, thus supporting the considerable attention given to them in past research. Yet it is also clear that organizational phenomena are not solely limited to features. This has been increasingly recognized under the auspices of event-oriented theory perspectives. Events differ from features in many ways, but perhaps the greatest difference lies in the fact that events are discrete and bounded in space and time. In addition, events can become "strong" enough to produce change or variability in behaviors or features and can lead to subsequent events. In this way, events can form larger chains of events that affect organizations across time. For example, a terrorist attack may change security systems, a new law may bring expanded and intrusive internal regulations, a new boss may implement substantial changes in organization rules, and the unexpected turnover of a valued team member can influence the motivation and goal-oriented behavior of those who remain.

To move toward a more event-oriented perspective, we develop event system theory (EST), an overarching event-oriented theoretical system that bridges and ultimately extends feature- and process-oriented perspectives. In so doing, we make three important theoretical contributions. First, event-oriented theories have been relatively rare, particularly when compared to feature-oriented theories. As we will show, however, an explicit focus on events generates unique insights and forces scholars to theorize across space and time, which is often neglected in feature-oriented scholarship. For example, most

phenomena have downstream consequences, yet feature-oriented theories are typically silent with respect to such effects. A natural outcome of thinking across space and time is that it prompts a focus on change, dynamics, and longitudinal phenomena. Because feature-oriented research focuses on the amount of a construct and covariation among constructs, it often neglects change and development.

Second, even though a body of event-oriented research (including process- and change-based research) exists, it has been limited in important ways. This includes focusing only on certain types of events (e.g., affective events, CEO succession), treating events in a dichotomous manner (i.e., the event occurs or does not occur) without understanding the underlying event characteristics (i.e., what makes events impactful and trigger changes), taking a retrospective approach by examining a specific event only after it appears to have been impactful, and offering only descriptive accounts of event patterns. In total, these limitations make it difficult to offer predictive, multilevel accounts of changes in organizational phenomena over time.

Third, EST serves as a pivotal bridge between feature- and process-oriented theory and research. Importantly, it can be used to better describe the multilevel nature and temporal dynamics inherent in organizational phenomena associated with events, thereby offering a more comprehensive and veridical account of organizational behavior. For example, the unfolding model of turnover (Lee & Mitchell, 1994) showed how both events and features impact turnover decisions. This included three event-precipitated turnover paths (e.g., being passed over for promotion, receiving an unexpected job offer) and one feature-driven turnover path (e.g., level of job dissatisfaction). These paths varied in the amount and type of deliberation, behavior change (e.g., search behaviors), and time to actually depart (a subsequent event). Considering only events or features would have led to a deficient theory and understanding of the phenomena.

To develop EST, we draw from and extend open system theory to explain when and how events affect the behavior and features of organizational entities and trigger subsequent events. We then place EST in the context of the larger ontological and epistemological commitments currently present in the field of management as reflected

in variance- and process-oriented theories. Following this, we define what events are, describe what makes some events stronger than others, and discuss how events impact outcomes depending on space and time.

EST IN CONTEXT

EST and Open System Theory

Open system theory (Katz & Kahn, 1978; von Bertalanffy, 1950) has proven to be influential, in part, because it provides a general framework within which to understand how organizations function. The basic principle of open system theory is that organizations import some form of energy from the environment, transform this energy in various ways, and produce some sort of output that is exported back to the environment (Katz & Kahn, 1978). Less well recognized, however, is that organizations are composed of events:

The human organization lacks structure in this anatomical sense; its land and buildings are trappings; its members come and go. Yet it has structure; membership is not accidental and the behavior of members is not random. We have argued that the resolution of this paradox lies in the patterns of the events of organizational life themselves. The events are structured, and the forms they assume have dynamic properties. Social organizations as contrived systems are sets of such patterned behavioral events (Katz & Kahn, 1978: 753-754).

Events maintain or create organizational structures (Morgeson & Hofmann, 1999), which can be enduring (leading to stable organizational structures over time) or dynamic (leading to changes in organizational structures over time). This tension between stability and change is captured in open system theory through the concept of steady states and dynamic homeostasis (Katz & Kahn, 1978; Lewin, 1947; Luenberger, 1979). Open systems attempt to achieve a degree of constancy embedded in an equilibrium in terms of the inflow and outflow of goods and materials (Berrien, 1961; von Bertalanffy, 1950). This constancy is manifested in organizational structures and functions that allow for variation in interdependent entities' actions and behaviors in adapting to nonroutine events.

The focus in open system theory has been on the recurring events that help create a steady state and enable routine organizational

functioning (Miller & Rice, 2013; Rice, 2013). Less attention has been paid to nonroutine events and how they can change organizational functioning. To address this gap, EST focuses on how events command attention and impact organizational behaviors, features, and subsequent events across levels and time. In EST, events can influence organizational entities through changing or creating (1) individual or collective behaviors (e.g., individuals or groups voluntarily terminate and quit their jobs after experiencing shocking events [Lee & Mitchell, 1994]; airline passengers have to take off their shoes to pass security screening after the 9/11 terrorist attacks), (2) features (e.g., a merger changes existing justice norms and leads to the formation of a new division in the merging companies [Monin, Noorderhaven, Vaara, & Kroon, 2013]), or (3) subsequent events (e.g., a counteroffer from one's current company causes one to give up on moving to a new company; the Enron scandal resulted in a number of subsequent events, including the bankruptcy of the Enron Corporation and the de facto dissolution of Arthur Andersen LLP).

System theories maintain that components of a system interface with one another rather than operate exclusively to determine the properties and functioning of that system (Ahrne, 1994). Thus, drawing from system theories (Berrien, 1961; von Bertalanffy, 1950), we define the event system as a complex of three interacting event components: (1) event strength (an event's novelty, disruption, and criticality), (2) event space (where an event originates and how its effects spread through an organization), and (3) event time (when an event occurs, how long an event remains impactful, and the evolution of event strength).

EST and Variance- and Process-Oriented Theories

Historically, two major types of theories have been forwarded in the organizational sciences (Mohr, 1982). The first, *variance theories*, are primarily concerned with issues of covariation among constructs. This reflects a research tradition focused on how relatively stable features are interrelated, which has yielded considerable insight into how the *amount* of a given organizational feature is related to the *amount* of another organizational feature. For example, variance-oriented research might examine how

an organization's cultural values (an organizational feature) are related to its reputation (another feature). Exploring feature interrelationships dominates the organizational sciences and flows directly from the assumptions articulated in Aristotle's *Metaphysics*, which gives primacy to the quality of things.

The second major theory type is a direct reaction to the philosophical limitations in such a "thing-quality paradigm" (Rescher, 1962: 410). Termed *process theories*, these theories involve understanding how patterns of events lead to outcomes (Pentland, 1999). This reflects a research tradition consisting of "stories about what happened and who did what when—that is, events, activities, and choices ordered over time" (Langley, 1999: 692). Although a more recent addition to the organizational sciences, process-oriented theories also have a long philosophical tradition, reflected in the idea that "natural existence consists in and is best understood in terms of processes rather than things—of modes of change rather than fixed stabilities" (Rescher, 1996: 7).

Interestingly, variance-oriented theories elevate things (i.e., features) at the expense of processes, whereas process-oriented theories elevate processes at the expense of features. Rescher goes so far as to suggest that "process has *primacy* over things. Substance is subordinate to process: Things are simply constellations of processes" (1996: 2). These two major types of theories represent competing world views that espouse incommensurate ontologies.

EST shares elements of both variance and process theories but integrates and goes beyond them in important ways. For example, although events can be characterized and quantified in a variety of ways (EST focuses on the crucial role of novelty, disruption, and criticality), much like what occurs in variance theories, the phenomenon itself is a transitory and unstable process (i.e., events arise and impact entities). Importantly, although process theory focuses on the process whereby events cause outcomes, it largely deals with events as a whole (i.e., process studies do not clearly quantify events). In addition, it does not consider an event's essential nature (i.e., what makes some events stronger than others) and the implications this has for outcomes (i.e., how event strength leads to outcomes). This orientation may result from the philosophical commitments of process theory,

which explicitly denies the existence of discrete events. For example, Rescher notes that "the idea of discrete 'events' dissolves into a manifold of processes which themselves dissolve into further processes" (1996: 29).

EST bridges variance and process theories by offering an integrative framework that consists of quantifiable events that exist uniquely in space and time and within the flow of other entities and events, forming a process over time. Extending prior variance and process theories, EST articulates why event strength is quantified by novelty, disruption, and criticality (indicating what makes events meaningful and impactful). EST then focuses on the interplay between event strength and spatial and temporal factors that change or create behaviors, features, and subsequent events (i.e., the amount of a given event characteristic interfaces with spatial and temporal factors to bring about the change in the amount of an organizational phenomenon). As such, EST integrates and extends variance and process theories to offer unique and important epistemological and ontological contributions to the organizational sciences. We begin our development of EST by defining the term *event* and then considering issues associated with event strength, space, and time.

DEFINING EVENTS

Previous Conceptualizations

The general idea that one should study events has a long philosophical tradition, ranging from Dewey's (1929) view that discrete experiences are a key unit of analysis to Pepper's (1948) "contextualism" that suggested phenomena can only be understood in terms of distinct events and the surrounding context. In the organizational sciences, many micro-oriented scholars have used numerous terms to describe events, such as critical incidents (Flanagan, 1954), shocks (Fligstein, 1991; Lee & Mitchell, 1994), jolts (Meyer, 1982), milestones (Hannigan, 1995; Hoffman, 1999), occurrences (Basch & Fisher, 1998), prototypic exemplars (Ligon, Hunter, & Mumford, 2008), crises (Gersick, 1991), turning points (McAdams & Bowman, 2001), and emergencies (Latané & Darley, 1969). Other scholars have specifically used "event" terminology, focusing on such things as affective events (Weiss & Cropanzano, 1996), justice events (Rupp & Paddock, 2010), anchoring

events (Ballinger & Rockmann, 2010), embedded organizational events (Peterson, 1998), momentous events (Pillemer, 2001), positive events (Ilies, Keeney, & Scott, 2011), negative events (Lavalley & Campbell, 1995), daily life events (Langston, 1994), work events (Mignonac & Herrbach, 2004), uncommon events (Latané & Darley, 1969), stressful life events (Holmes & Rahe, 1967), and novel and disruptive events (Morgeson, 2005).

Much of the above literature has a more micro, quantitative, and predictive orientation. There is also substantial macro literature focused on the topics of sensemaking and organizational change that is more qualitative and retrospective in nature, where events are seen as foundational for sensemaking or organizational change processes. Scholars have described these events as discrepant (Weick, 1995), surprising (Louis, 1980; Maitlis, 2005), confusing and uncertain (Cornelissen, 2012; Sonenshein, 2007), unusual (Vaara, 2003), critical (Hoffman & Ocasio, 2001), unexpected (Nigam & Ocasio, 2010), complex (Cornelissen, 2012), disruptive (Stigliani & Ravasi, 2012), and interrupted (Weick, 1995). In this literature many types of events have been investigated, such as organizational entry surprises (Louis, 1980), organization identity threats (Elsbach & Kramer, 1996), strategic change initiatives (Gioia & Thomas, 1996), acquisitions (Vaara, 2003), and disruptive occurrences on the shop floor (Patriotta, 2003).

Although important, there are several problems associated with past event-oriented research, ultimately limiting its usefulness as a general theory of events. First, many of the definitions are relatively broad or inclusive. For example, affective events are defined as "a change in circumstances, a change in what one is currently experiencing" (Weiss & Cropanzano, 1996: 31), a definition that potentially includes almost anything to which a person has an affective reaction. Second, the definitions are often circular. That is, events are commonly defined by their outcomes and are viewed as negative and positive if they produce such an outcome (e.g., Ilies et al., 2011; Lavalley & Campbell, 1995). Third, much of this research focuses on the adjective that precedes the word "event" (e.g., positive, anchoring, interruptive) and describes people's responses to certain types of events rather than what distinguishes salient events from nonsalient events. EST addresses these limitations and offers a concise

definition of events in terms of their attributes (not their content) as a prelude to understanding how and why events can impact organizations.

Toward a Definition of Events

Floyd Allport offered perhaps one of the earliest, complete, but somewhat abstract and broad accounts of events. In writings stretching across three decades, Allport (1940, 1954, 1967) articulated a view of science centrally organized around events. His view has been influential, with many of his core organizing concepts serving as the foundation for seminal works in the organizational sciences (e.g., Katz & Kahn, 1978; Weick, 1979). We draw from and further develop this view of events. Allport's basic unit is the entity, which is any "explicitly denotable" thing. Entities have "continuances," or ongoing stable ways of being. When entities meet, events can occur. From our perspective, entities can include individuals (e.g., subordinates, leaders, upper managers), teams, departments, organizations (e.g., competitors, suppliers), and environments (e.g., regions, industries). In this way, entities are independent "objects." This highlights the fact that events arise and take on meaning from multiple sources and at multiple hierarchical levels (Langley, 1999) and that all entities possess the potential to act or be acted upon. For example, workers may interact with senior leaders or customers; teams may interact with other teams, customers, and suppliers; or organizations may operate within certain kinds of technical and natural environments, all of which can produce events.

Given this potential interaction, Allport defined an event as the point in space and time where entities or entity actions contact, encounter, or meet each other. Events thus reflect discrete, discontinuous "happenings," which diverge from the stable or routine features of the organizational environment. This view of events is deliberately broad and comprehensive in that it allows one to analyze any open system in terms of events, ranging from the molecular to the molar. Yet this breadth and flexibility is also a potential limitation, in part because this conceptualization implies that virtually every happening (e.g., having lunch at work, answering the phone, meeting a customer) might be considered an event.

Because EST is organizationally focused, we further refine and develop this conception of events in three ways. First, to separate events from entities' responses to events, we define events as being part of the environment or context that is external to the perceiver (Johns, 2006; Mowday & Sutton, 1993). Events may originate inside or outside the organization, but they constitute observable actions or circumstances (e.g., a hostile takeover attempt, a new competitor's product, a machine failure, a new CEO). Internal psychological processes may lead to or reflect reactions to events, but they are not events in themselves.

Second, events are bounded in space and time (i.e., discrete) such that they have an identifiable temporal beginning and end and evolve in a specific setting. They also represent some discontinuity, thereby possessing a nonroutine character. Scholars working in this domain have come to similar conclusions. For example, affective events theory suggests that events are important happenings that occur "in a certain place during a particular period of time" where there is some key "change in circumstances" (Weiss & Cropanzano, 1996: 31). Similarly, research on "surprises" suggests that an event is "unexpected and draws attention away from the standard progression of the work" (Bechky & Okhuysen, 2011: 239). Events break people out of established routines as well as their own automatic cognitive processing (Morgeson, 2005), and they command our attention (Mowday & Sutton, 1993).

Third, events can result from the actions of a single entity on another entity or can occur when the actions of multiple different entities converge. Regardless of the specific form of interaction, events have a decidedly between-entity (as opposed to intra-entity) character. Thus, an event occurs between entities, represented by their interaction (Weick, 1987). Rousseau and Fried captured this idea nicely, describing events as including an "intersection of an action with its context" (2001: 9). Thus, events are external, bounded in time and space, and involve the intersection of different entities. Having defined events, we turn to describing how and why events impact the behavior and features of organizational entities and trigger subsequent events.

EVENT STRENGTH

Entities encounter numerous events on a day-to-day basis, yet not all events are salient or

command attention (Nigam & Ocasio, 2010). Routine happenings are ignored, whereas more significant events prompt controlled information processing and entity action (Morgeson, 2005). Considerable research has supported the idea of two modes of information processing (Bargh, 1994; Evans & Stanovich, 2013; Kahneman, 2003, 2011; Petty & Cacioppo, 1986; Schneider & Shiffrin, 1977): automatic (implicit, rapid, shortcuts) and controlled (explicit, effortful, slow, logical). We are interested in how events engage this second type of information processing.

Researchers have discussed how events and controlled information processing can trigger organizational changes (e.g., Armenakis & Bedeian, 1999; Fox-Wolfgramm, Boal, & Hunt, 1998; Isabella, 1990). Yet such research takes a retrospective approach to studying how organizations respond to events that have happened and were found to be important (i.e., having created some changes). A key unanswered question revolves around what it is about events that commands attention and produces change. Building on previous research, EST focuses on the key event characteristics of novelty, disruption, and criticality, which provide particularly important information about event strength.

Event Novelty

Novelty reflects the extent to which an event is different or varies from current and past behaviors, features, and events, thus representing a new or unexpected phenomenon (Lee & Mitchell, 1994; Morgeson, 2005). Novelty helps an event stand out and triggers in-depth interpretation. The controlled information processing associated with novel events centers on information search and involves questions such as "What is this?" "How did this happen?" and "What information do I need to interpret what is happening?" This information processing occurs because there are no established scripts or routines to guide action. For example, the construct of surprise is driven by novelty and is defined as change and contrast (Louis, 1980). Novel events differ or reflect a break in expectations (Ballinger & Rockmann, 2010; Bechky & Okhuysen, 2011) and are unanticipated (Staw, Sandelands, & Dutton, 1981), nonroutine (Hoffman & Ocasio, 2001), uncommon (Latané & Darley, 1969), and surprising (Cornelissen, 2012). Variation from expectations prompts entities to engage in controlled

information processing and to initiate changes. In the presence of routine events, entities may not engage in deliberate analysis or strive for changes but may instead resort to established and familiar actions and responses.

Examples of novel events include the introduction of new work procedures, new members joining a work team, or a competing company designing a new product. The publication of the new business school rankings in 1988 (in *Businessweek*) was a surprise and caused major immediate deliberations and long-term changes in business schools (Elsbach & Kramer, 1996). The 9/11 tragedy was a surprise and had major consequences for travel in the United States. When events are novel, entities are usually ill prepared with a set of rules or procedures to effectively respond to the events. As such, novel events require entities to change or create new behaviors, features, and events in order to respond to the event.

Proposition 1: The more novel an event, the more likely it will change or create behaviors, features, and events.

Event Disruption

Disruption reflects a discontinuity in the environment (Hoffman & Ocasio, 2001), where the external situation has somehow changed. As a result, it concerns the amount or degree of change in usual activities (Dohrenwend, Raphael, Schwartz, Stueve, & Skodol, 1993; Perkins, 1982) and reflects perceived threats experienced with major disruptions (Morgeson & DeRue, 2006). The terms disruptive (Hannigan, 1995; Patton, 2010) and upheaval (Gersick, 1991) have been used to describe these events. In short, things do not continue the way they did prior to the event. Disruption to the ordinary and predictable flow of experience triggers further analysis (Stigliani & Ravasi, 2012). In other words, disruptive events may block or transform ongoing routines and require entities to adjust and adapt (Zellmer-Bruhn, 2003). This requires more deliberate, effortful information processing and changes to existing behaviors and features or the creation of new behaviors, features, and events. Such information processing might involve such questions as "What behaviors need to change?" and "What routines or rules need to be adjusted?"

Organizational examples include a major conflict between business units, a significant failure in equipment essential to the production process, or a substantial change in a project's deadlines. Other events at the environmental level can occur as well. The Exxon Valdez oil spill and the Tylenol tampering incident are events that caused major significant short-term disruptions for the companies involved and long-term consequences for the industry and the public as a whole (e.g., double-hulled tankers and tamper-proof packaging; Elsbach & Kramer, 1996). Disruptive events break entities out of their conventional thinking and response mode and compel them to change.

Proposition 2: The more disruptive an event, the more likely it will change or create behaviors, features, and events.

Event Criticality

Criticality reflects "the degree to which an event is important, essential, or a priority" to an entity (Morgeson & DeRue, 2006: 273) and typically triggers additional analyses and changes (Vaara, 2003). The more critical the event, the more likely it will be seen as salient and require unusual attention and action. Entities will not invest valuable resources and effort in interpreting and handling ordinary or trivial happenings. Others have suggested that criticality reflects an event's potential to have an influence on the "horizon" (Hoffman & Ocasio, 2001; Pirola-Merlo, Härtel, Mann, & Hirst, 2002) and may curtail the attainment of important goals such that the "centrality of the goal at stake in the exchange matters" (Ballinger & Rockmann, 2010: 378). Crises can "threaten the most fundamental goals of an organization" (Weick, 1988: 305).

In their qualitative examination of events, Morgeson and DeRue (2006) found that 20 percent of critical events had implications for performance, with another 15 percent related to interpersonal conflict that negatively influenced team and task processes. Because critical events tend to command attention and influence resource allocation (Gersick & Hackman, 1990), they often become a central focus until they are resolved. Effortful analysis is needed to determine how much attention the event needs and what and how many resources should be allocated to dealing with it. Organizational

examples include the bankruptcy of a key supplier or the unexpected death of a key executive. Much of the research on organizational "threats" describes major, financially related events (e.g., a new product that captures the market) that have implications for organizational survival and development (Hermann, 1963). When events are critical, new behaviors, features, and events will be more likely to emerge. In contrast, when events are not critical, entities may not pay attention or react to them.

Proposition 3: The more critical an event, the more likely it will change or create behaviors, features, and events.

Combining Event Characteristics and the Interpretive Process

Although we have discussed each of the event characteristics separately, it is clear that all three are present in varying amounts in every event. A key question thus revolves around how they combine to influence behaviors, features, and events. We suggest that they combine in an additive fashion, where the confluence of event characteristics determines the overall "strength" of an event, much in the same way that "situational strength" reflects the extent to which situations can constrain behavior (Mischel, 1969). For example, novel, disruptive, and critical events are more likely to affect organizational entities than are novel but nondisruptive and uncritical events. Because novelty, disruption, and criticality represent different aspects of an event, however, they can function independently. For example, disruptive events (e.g., major storms) are not necessarily novel. This suggests it is possible that two characteristics (or even one) can yield a strong enough event to prompt controlled information processing.

Event strength focuses on the general impact events have on behaviors, features, and subsequent events. Yet there is an interpretive process that occurs between event occurrence and entity action. This involves analyzing meaning, making sense of important issues (Gioia & Thomas, 1996), and communicating and reaching agreement about what is happening and how to proceed. It includes scripts, schemas, cognitive maps, symbols, metaphors, and accounts (Gioia, Thomas, Clark, & Chittipeddi, 1994; Orbach, 1997). In short, this sensemaking process (Weick,

1988, 1995) involves "figuring out what is going on and what should be done" (Vaara, 2003: 863). Beyond acknowledging its occurrence, we do not cover this process in detail largely because there is already substantial literature on sensemaking at the macro, organizational level and cognitive information processes at the micro, individual level. This literature is rich and extensive; therefore, we concentrate on the more novel theoretical analysis of what determines event strength and how events impinge on organizational entities across space and time.

EVENT SPACE

Event space reflects the specific location where an event originates and how its effects spread through an organization. Events occur in a specific place, location, or hierarchical level. This suggests that events can arise at every hierarchical level and can have a downward, upward, or within-level impact. This event spatial direction reflects the multilevel nature of event effects and represents how the effects of an event "move" through organizational space. Given this event movement, there are a number of important factors related to event origin, spatial dispersion, and spatial proximity that govern how much an event will influence an organization. These factors serve to moderate the relationships between event strength and outcomes. By describing these spatial facets, we build on our previous discussion of the impact of events by situating events in the context of the larger organization and environment.

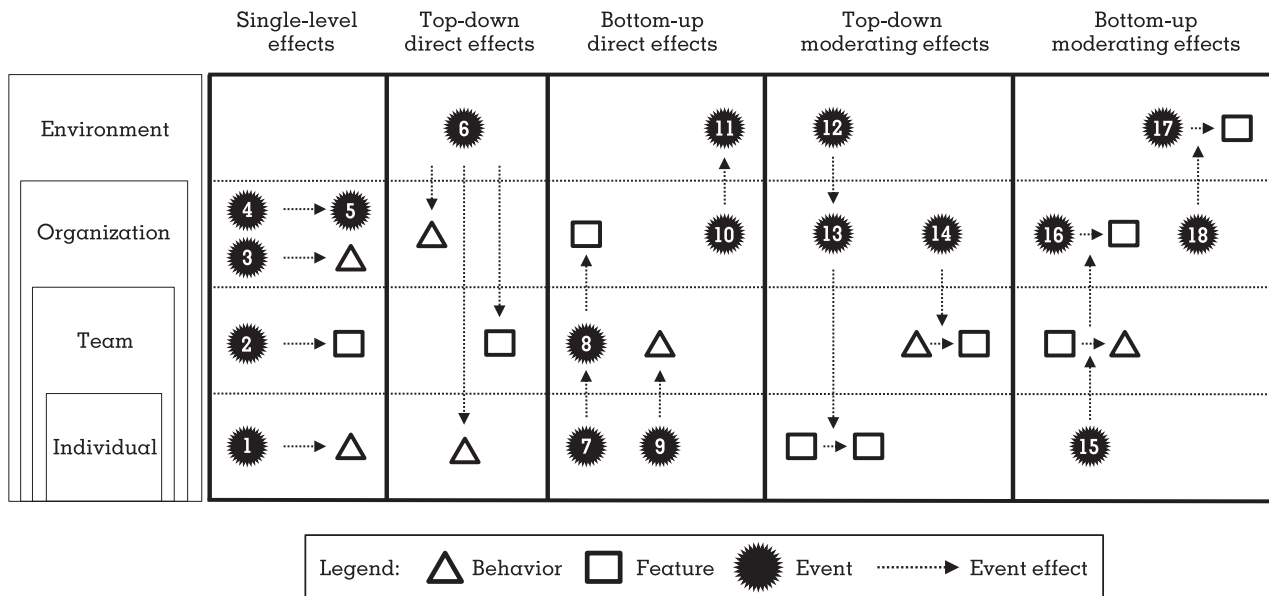
Event Spatial Direction

Events and their effects can travel within or across all organizational levels (e.g., environment, organization, team, individual). This can be thought of as event spatial direction, which generally takes one of five prototypical forms. Figure 1 illustrates the general forms event effects can take in an organization.¹

Single-level effects. Most simply, events can have a single hierarchical level effect on behaviors, features, or subsequent events

¹ There are a potentially large number of different ways events can impact behaviors, features, and subsequent events. Figure 1 illustrates a range of ways events have their effects but is by no means all inclusive.

FIGURE 1
Prototypical Effects of Events on Entities^a



^a The prototypical examples are illustrative and not exhaustive. The specific effects shown in the figure are linked to the examples described in the text.

Note: Numbers within each event correspond to the numbered examples used in the text.

(Figure 1). These single-level effects reflect events that arise and effectuate changes at the same hierarchical level (i.e., individual, team, organization). That is, an event arises at a given level and its impact is restricted to that same level. This is perhaps the most commonly studied event effect as it reflects a traditional disciplinary approach where scholars focus on how events at a given level influence outcomes at that same level.

For example, at the individual level, scholars have studied how justice events (Event 1²) can spark positive and negative emotions and subsequent behavior (Weiss, Suckow, & Cropanzano, 1999). At the team level, a lapse in patient care (Event 2) can lead to new policies (which become features over time) concerning the treatment of patients (Blatt, Christianson, Sutcliffe, & Rosenthal, 2006). Finally, at the organizational level, scholars have explored how a range of organizational events such as new technology introductions (Event 3) impact role behavior (Barley, 1986) and power dynamics (Burkhardt & Brass, 1990) and how mergers and

acquisitions (Event 4) can impact managerial interpretations of change (Isabella, 1990) and “post-acquisition integration challenges” (Event 5; Vaara, 2003). As this range of examples demonstrates, the event and its associated outcome(s) reside within the same hierarchical level.

Top-down and bottom-up direct effects. Events can have a top-down (e.g., organizational to individual) direct effect on lower-level behaviors, features, and subsequent events. Typically, this kind of effect involves a higher-level event constraining or enabling lower-level processes (Kozlowski & Klein, 2000). The idea of top-down direct effects is that the event itself directly influences lower-level phenomena. Of course, by expanding across levels we are not only spreading the controlled cognitive activities but also engaging broader social processes, such as influence and power.

For example, Tilcsik and Marquis (2013) recently examined how “mega-events” (e.g., the Olympics, national political conventions) and natural disasters (e.g., floods, earthquakes) can impact corporate philanthropy in U.S. communities. These are two different types of environmental events, in that mega-events are planned, anticipated, and actively sought by a given

² All event numbers correspond to the numbers found in Figure 1.

community, whereas natural disasters are negative exogenous events. Not surprisingly, both events produced behavioral change in corporate giving, but the form of the effects differed somewhat. Mega-events (Figure 1, Event 6) led to an increase in giving by local corporations, but the impact of natural disasters depended on the severity of the event itself. Major disasters had a negative effect, but more minor disasters had a positive effect. This research shows that higher-level environmental events can have a direct effect on lower-level behavior, changing what had been fairly stable organization-level behavior. Although not discussed by Tilcsik and Marquis (2013), it is also possible to imagine how such events can also influence the team and individual levels. This might involve developing norms around becoming involved in promotional activities (in the case of mega-events) or volunteer activities (in the case of natural disasters), as illustrated by the event effect arrows extending to these lower levels in Figure 1.

Events can also have a bottom-up direct effect on higher-level phenomena. These bottom-up direct effects reflect how lower-level events can cause behavioral change, the emergence of new or altered features, or subsequent events at higher organizational levels (Figure 1). Bottom-up direct effects are typified by the emergence of new or different phenomena at higher organizational levels (Hitt, Beamish, Jackson, & Mathieu, 2007; Kozlowski & Klein, 2000). The bottom-up direct effect of events is the main way collective phenomena emerge, as individuals and collectives interact to create larger collective structures (Morgeson & Hofmann, 1999). For example, there is emerging evidence to suggest that some individuals are qualitatively better performers than others (Humphrey, Morgeson, & Mannor, 2009; O'Boyle & Aguinis, 2012). These "stars" or "strategically core" individuals are responsible for a disproportionate share of the organization's success and output. Now imagine what might happen if one of these star performers left an organization (Event 7). Beyond the obvious effect on organizational performance, another potential outcome is that other team members may also decide to leave (Event 8), as turnover has been shown to be "contagious" in teams (Felps et al., 2009). Recognizing this, organizations may directly intervene by granting workers more work scheduling autonomy (a behavioral change) or by making structural or policy changes to create a better working

environment (a feature change). Another example could be a worker being accused of theft (Event 9), prompting his coworkers to come to his defense or introduce new monitoring activities. Finally, organizational events can impact the broader environment. For example, in 1984 the Union Carbide pesticide plant in Bhopal, India, released toxic gas (methyl isocyanate) into the environment (Event 10), resulting in thousands of deaths in the surrounding community (Event 11; Weick, 1988). As these examples illustrate, there are a number of ways in which events can have bottom-up direct effects on behaviors, features, and events.

Top-down and bottom-up moderating effects. Events can have a top-down moderating effect on the relationship between lower-level behaviors, features, and events. This kind of effect occurs when the relationship between two lower-level behaviors, features, or events is shaped, changed, or moderated by a higher-level event (Kozlowski & Klein, 2000). Also called cross-level moderation, what is unique to EST is the prediction that it is an event rather than a stable higher-level feature that moderates lower-level relationships (Figure 1). There are fewer examples of this kind of top-down moderating effect of events in the literature, but there are a number of scenarios where this is likely to occur.

For example, considerable evidence demonstrates that social features such as feedback from others and social support are negatively related to turnover intentions (Humphrey, Nahrgang, & Morgeson, 2007). This suggests that jobs providing feedback and offering supportive relationships are more enjoyable, leading to lower turnover intentions. Yet the relationship between these positive social features and turnover intentions is likely to be influenced by higher-level events. For example, as a result of the financial crisis of 2008 (Event 12), many organizations, such as General Motors and Chrysler, declared bankruptcy (Event 13). An organizational event like bankruptcy undoubtedly has a direct effect on job characteristics and turnover intentions (as described in top-down direct effects), as well as weakens the relationship between social job characteristics and turnover intentions (i.e., a top-down moderating effect). This occurs, in part, because experiencing such a novel and disruptive event focuses attention on saving one's job rather than worrying about the quality of the immediate work environment. Another example is how organizational adoption of new team structures (Event 14) might lessen the

direct relationship between leadership behavior and team performance (a feature).

Although not identified in existing multilevel theory, EST suggests that events can also have a bottom-up moderating effect on the relationship between higher-level behavior, features, and events. This kind of effect occurs when the relationship between two higher-level behaviors, features, or events is shaped, changed, or moderated by a lower-level event (Figure 1). This is analogous to the top-down moderation described previously, with the key difference being that the moderating effect is emanating from lower-level events. To the best of our knowledge, there are no examples or elaboration of this kind of bottom-up moderating effect of events in the literature, but there are scenarios where this may occur.

For example, a strong individual event could moderate relationships at higher aggregate levels. The death of Steve Jobs (a particularly strong individual event; Event 15) undoubtedly moderated many important relationships at Apple Computer's organizational and team levels. Because Jobs directly handled important new product launches, often obsessively planning and rehearsing even the smallest details, it is likely that new product launches (Event 16) were less successful (an organizational-level feature) after his death than they were before. Similarly, stable routines in product development teams (a team-level feature) were likely disrupted, leading to new team behaviors as team members made sense of the event. Another example might be how new governmental regulations (Event 17) and their impact on financial reporting requirements (an environmental feature) may be influenced by the lobbying efforts of a single influential organization (Event 18).

Event Origin

With an understanding of event direction, we turn to a consideration of how an event's origin (the hierarchical level at which an event occurs) can influence behaviors, features, and events. Events may originate inside or outside the organization and have direct or indirect impact on entities within a focal organization. Events can occur at any hierarchical level, but assuming equivalence in event strength, events that occur at higher levels (e.g., CEO, top management team) are likely to have a much larger organizational impact than events that occur at lower levels (e.g., an employee retires and leaves the team). This is largely due to the

potentially larger scope of events at higher organizational levels and the increased likelihood that these events can impact the overall context, potentially shaping behaviors, features, and events at lower levels (e.g., employees' behaviors, division features, events happening to project teams).

For example, Chen and Kanfer's (2006) theory of team motivation suggests that downward team contextual influences on team members are quite persistent and pervasive over time. In contrast, upward influences of team members on team-related dimensions may only occur in situations that allow team members to affect their teams (e.g., a team member is asked by the team leader to design a new team decision-making process). In addition, top-down effects "can be manifest within short time frames, whereas emergent, bottom-up linkages necessitate longer time frames" (Kozlowski & Klein, 2000: 23). Because organizations, teams, and individuals are all nested within the external environment, events arising in the external environment can have a wide-ranging immediate impact. One has only to look at such things as serious natural disasters, extreme market fluctuations, or terrorist attacks to understand how virtually every aspect of organizational life can be affected. In contrast, lower-organization-level events (e.g., a poor performer in a shop floor team) can often be isolated or "walled off" from other individuals or units, thereby minimizing their impact. Thus, the influence of event strength on event outcomes may depend on event origin.

Proposition 4a: Event origin moderates the relationship between event strength and event outcomes such that novel, disruptive, and critical events originating at higher levels will be more likely to change or create behaviors, features, and events than events originating at lower levels.

Proposition 4b: Event origin moderates the relationship between event strength and event outcomes such that novel, disruptive, and critical events originating at higher levels will be more likely to moderate the relationship between lower-level behaviors, features, and events than events originating at lower levels.

Event Spatial Dispersion

Regardless of the hierarchical level at which they originate, events can vary considerably in the

extent to which their effects are dispersed throughout the organizational hierarchy (holding time constant; Abbott, 1984). Some events arise and remain at the same hierarchical level. For example, product development teams might have a major disagreement over project requirements, reducing the amount of helping within the team (a behavioral change), as well as producing poor communication structures (a feature change) and requiring a revision to the production schedule (a subsequent event). In this example the changes take place at the team level across time.³ This is illustrated in the shaded section of Figure 2.

Events might also occur at a given level but have an effect that extends to other levels over time. Continuing with the product development team example, the disagreement might also affect the decisions of team members to remain with the organization and the organization's ability to meet key customer deadlines. In turn, missing a key customer deadline may cause the customer to move that business to a competitor and may lead to lower organizational reputation in the broader business environment. As shown in Figure 2, because of the original team-level event, individuals may decide to quit their jobs (a subsequent individual-level event), the organization may fail to meet the deadline of delivering new products (a subsequent organization-level event), and the customer may shift business to a competitor (a subsequent organization-level event), which may result in lower organizational reputation (a change in an environmental feature). Thus, event strength may interact with event spatial dispersion to impact event outcomes, with events influencing more organizational levels creating greater changes.

Proposition 5: Event spatial dispersion moderates the relationship between event strength and event outcomes such that novel, disruptive, and critical events that impact a greater number of levels will be more likely to change or create behaviors, features, and events than events that impact fewer levels.

³ Dispersion contains some elements of space and time, as illustrated in this example.

Event Spatial Proximity⁴

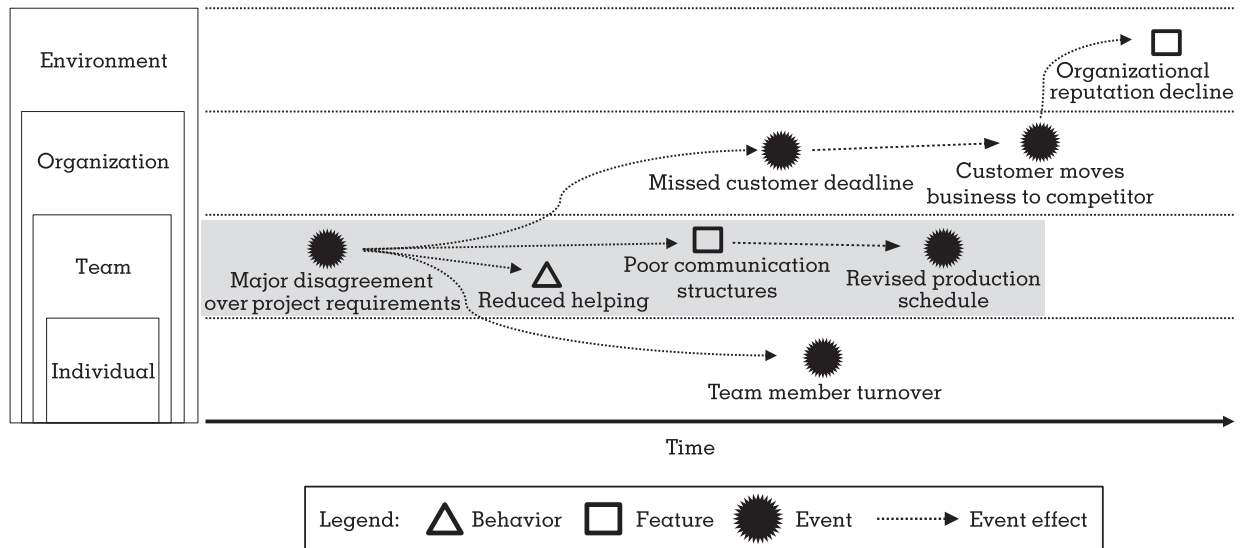
Hierarchical organization is created to take advantage of the division of labor and unity of command (Hinds & Kiesler, 1995). Nevertheless, "the division of labor into functionally specialized units and unity of command constrain communication linkages to specified vertical connections within the chain of command" (Hinds & Kiesler, 1995: 375). In other words, the greater the distance between two organizational levels, the less likely entities affiliated with one level will access information and be influenced by events arising at the other. For example, a production team member's turnover is more likely to impact his or her team leader than the company CEO. In addition to this "vertical" or hierarchical aspect (the number of hierarchical levels between two entities), event proximity has a "horizontal" component (the physical distance between two parties at the same hierarchical level). For example, two employees or teams could have similar hierarchical levels but be distant in terms of where they are in the organization chart and be separated physically (different floor, building).

Social information processing theories suggest that spatially proximal entities are subject to social influence "through exposure to or inaccessibility of other individuals [and] organizational subclimates and events" (Rice & Aydin, 1991: 224). In addition, knowledge sharing is less likely to happen when organizational members operate at organizational levels or locations more distant from each other (Ipe, 2003). Hence, spatial distance may weaken the impact of event strength on event outcomes. When entities are closer to the location where an event occurs, they may have more direct and effective receipt of information and cues regarding the event. Consequently, they will be more strongly influenced by the event.

Proposition 6: Event spatial proximity moderates the relationship between event strength and event outcomes such that novel, disruptive, and critical events closer to the entity location will be more likely to change or create behaviors, features, and events than events that are farther away from the entity location.

⁴ We focus on physical distance. Scholars have also discussed psychological distance, but a consideration of this issue is beyond the scope of our present discussion.

FIGURE 2
Example of Impact of Events on Entities



EVENT TIME

Events are bounded in time; this is part of what distinguishes them from more chronic features of the work environment. This temporal aspect of events raises a number of intriguing issues with respect to their impact on behaviors, features, and subsequent events. Events can be transitory, with effects limited in time or scope, or long-lasting, with a correspondingly larger impact. The timing of events in an entity's developmental history can play an important role in determining an event's impact. Event strength also can vary over time, and the trajectory of event strength is likely to interact with general event strength to impact event outcomes. It is to these temporal issues we turn.

Event Duration

Although events are bounded in time, they are also likely to vary in duration. Some events might last only a brief moment, whereas others might extend over time, having a stronger influence. Duration is likely to moderate the impact of event strength on event outcomes. Assuming equivalence in novelty, disruption, and criticality, events that last longer are more impactful on organizational entities than events that are shorter in duration. A study of production and service teams found that longer event duration had a greater impact on team functioning

(Morgeson & DeRue, 2006). When events linger, additional attention and resources may be needed to ultimately respond to the event itself. For example, a long-lasting lawsuit may cost a firm's top management, department managers, and lower-level employees considerable time and effort. Shipp and Jansen (2011) maintain that longer episodes of person-environment (PE) fit experiences are more likely to be included in PE fit narratives. Therefore, event strength and duration may interact to affect event outcomes. When events last longer, event novelty, disruption, and criticality will be more strongly related to changing or creating behaviors, features, and events.

Proposition 7: Event duration moderates the relationship between event strength and event outcomes such that novel, disruptive, and critical events that are longer in duration will be more likely to change or create behaviors, features, and events than events that are shorter in duration.

Event Timing

Research suggests that entities (e.g., organizations, teams, and individuals) experience distinct stages of development (Allen & Meyer, 1993; Gersick, 1988; Quinn & Cameron, 1983) and have

different needs at these different stages (Smith, Mitchell, & Summer, 1985). For example, Quinn and Cameron (1983) identified four different stages in an organizational life cycle: entrepreneurial, collectivity, formalization, and elaboration. Each stage is associated with unique demands and needs. At the entrepreneurial stage, new ventures may concentrate on attracting investments and increasing their market value. Thus, a new venture will be more likely to respond to investment requests than acquisition deals (two different events) because it is focused on growth and enhancing value for the merger and acquisition market. At the elaboration stage, new ventures have become established. This results in an emphasis on creativity and innovation to foster organizational revitalization. Accordingly, firms at this state will be more receptive to events that lead to innovative changes in organizational practices (e.g., rewarding employees for proposing new ideas for organizational development) than events that formalize production and management processes (e.g., introducing additional layers of management).

Similarly, team development models suggest that teams go through a series of stages, including forming, storming, norming, performing, and adjourning (Tuckman, 1965; Tuckman & Jensen, 1977). At the norming stage, appointing a new transformational leader is likely to motivate teammates to overcome difficulties and establish effective processes, thereby allowing the team to realize its goals. In contrast, at the adjourning stage a team has reached its goals and is ready for disbandment. Thus, in this stage events related to recognizing team members' accomplishments and arranging their future activities will be appealing to members. Events that match the development stage of entities may trigger responses and reactions significant enough to bring forth changes.⁵

Finally, at the individual level, a leader's developmental readiness and trigger events jointly lead to authentic leader development (Avolio & Hannah, 2008). Similarly, and consistent with PE fit theory and research (Edwards, 2008), when

events fit more with a person's development stage by meeting the distinct needs and demands of that stage, events are more likely to have a larger impact.

Proposition 8: Event timing moderates the relationship between event strength and event outcomes such that novel, disruptive, and critical events that better match the needs associated with the developmental stage of entities will be more likely to change or create behaviors, features, and events than events that do not match the needs associated with the developmental stage.

Event Strength Change

Events are dynamic and evolutionary. That is, as they unfold and interact with circumstances and entities upon their inception, events may become more or less novel, disruptive, and critical. As a result, their overall strength can change over time. For example, the confrontation between Democrats and Republicans over health care reform began with heated debates but later escalated to the historic shutdown of the U.S. government, resulting in hundreds of thousands of federal employees suffering unpaid leave.

Another high-profile event occurred in Seattle. The legislature committed to constructing a tunnel beneath the city so it could tear down a viaduct damaged by earthquakes. Digging commenced in 2013 but, after starting, the borer (dubbed "Big Bertha") encountered a buried pillar, which stopped progress. Event strength increased over the subsequent months as the exact cause (they did not know for weeks what had happened or why) and amount of damage were ascertained. The latest description of the event is that the main drive bearing needs a repair that could take over six months. Thus, event strength has increased dramatically in that the event is far more novel, disruptive, and critical than originally thought. In addition, there are new work schedules, lawsuits over who will cover the costs, renegotiations of costs, changes in material needs, and cost increases up to four times original estimates. And the outcomes of this event are still unfolding.

Gestalt characteristics theory highlights that the extent to which entities are affected by their experiences is ascribable to their general level (the average strength of the experiences over

⁵ Although we do not outline the interpretive process that follows an event's occurrence, it seems that an entity's developmental stage can also impact the interpretation of the event itself (i.e., perceived novelty, disruption, and criticality). The dynamics of this interpretive process are worthy of further development.

time) and development trend (the experiences becoming more or less salient over time; Ariely & Carmon, 2003). More recently, Liu, Mitchell, Lee, Holtom, and Hinkin pointed out that "people use salient summary features of their experience over time (e.g., change trajectory) to describe the past and project the future" (2012: 1362). Supporting the unique effects of the general level and development trend of experiences on entities' behavior change, Liu et al. (2012) found that the average level and change trajectory of job satisfaction experiences exerted significant effects on turnover at both the individual and unit levels. In a study of physically painful events, Ariely (1998) demonstrated that the slope of an experience profile reflective of a painful event's development trend significantly predicted one's summary evaluation of experience. In addition, Hausknecht, Sturman, and Roberson (2011) modeled justice experience trends and showed that employees' improving justice experiences over time engender more favorable job attitudes. Finally, consistent with temporal construal research (Trope & Liberman, 2003), projection into an event's future along with its current magnitude may impact ongoing decisions and behavior.

Accordingly, the impact of an event's average strength across time on event outcomes may be altered by changes in event strength over time (i.e., the evolutionary trend of past and current states as well as future prospects of event strength). Specifically, when an event's strength displays a faster growth trajectory, the event's average strength will be more likely to influence event outcomes. In contrast, when an event's strength displays a faster declination trajectory, the event's average strength will be less likely to influence event outcomes.

Proposition 9: Event strength change moderates the relationship between an event's average strength and event outcomes such that in the presence of greater increment (decrement) in the event's strength over time, the event's average strength will be more (less) likely to change or create behaviors, features, and events.

DISCUSSION

EST contributes to and extends variance- and process-oriented perspectives by developing

a comprehensive and integrative account of how events become meaningful and come to impact organizations across space and time. By incorporating elements from both perspectives, EST outlines how characteristics of events exist within a multilevel system characterized by dynamic processes over time. This helps close a significant gap in our understanding of organizational dynamics, change, and system interrelationships. This is a crucial gap to fill because organizations are dynamic and characterized by both stability and change. Although we have a considerable understanding of stability, we know comparatively less about change. Events are a useful construct through which to understand both stability and change, and EST integrates and extends past event-oriented research by describing the specific spatial and temporal processes by which events come to influence organizational entities. Although we draw from existing research when possible, EST presents some unique challenges for theory and research. In this section we discuss EST's implications to assist scholars using EST to develop event-oriented theory. We then describe some areas for future research.

Theoretical Implications

As a theory that serves as an integrative bridge between variance- and process-oriented theories, EST has a number of important theoretical implications.

Events and organizational change. Perhaps one of the major reasons for the dominance of feature-oriented research is that features do exert a strong influence on organizations. This creates a strong tendency for homeostasis or routines, where "individuals and groups develop cognitive structures, habits of mind, to guide automatic cognitive processing" (Louis & Sutton, 1991: 70). However, "discrepant events . . . trigger a need for explanation" (Louis, 1980: 241). In other words, automatic processing and habits of mind reflect routines that are maintained until interrupted by an event such that "habitual behavior, once established, persists more or less automatically until and unless something specific happens to break a group out of its routine" (Gersick & Hackman, 1990: 80). Thus, events are often the means by which entities come to evaluate, change, or otherwise interrupt their routines or regular behavior.

The organizational change literature describes numerous aspects of the content and process of change (Armenakis & Bedeian, 1999), as well as how change is diagnosed, remedies for change, strategies for impacting the change process, and emotional reactions to change (Armenakis & Harris, 2009). Yet little is said about the role events might play in terms of event-generated changes across hierarchical levels and over time, or how change-related processes might differ for events versus features. Moreover, Johns concluded that there is little research on the contextual influences of time and space and "this unnatural, acontextual bounding of time and space foregoes the considerable advantage of studying whole events and processes" (2006: 390). To more completely explicate the roles of events, EST shows how events evolve in organizations across organizational levels and over time, and how event spatial and temporal factors interplay with event strength to change or create behaviors, features, and events. Thus, EST presents a number of opportunities for advancing the organizational change literature.

Research opportunities arising from EST. Instead of focusing on the stability inherent in features, the theoretical focus in EST naturally shifts to changes as prompted by events over time and across organizational levels. Theoreticians could investigate events that seem, based on the literature, to cause individual, team, or organizational changes such as layoffs, mergers, promotions, and new leadership. This shift in frame of reference brings to the foreground general questions about change, including changes in norms, interactions, relationships, and performance, all of which highlight the importance of events and their contrast with features. Examples from the goal-setting literature and entrepreneurship literature highlight some of these opportunities.

For example, EST offers a number of opportunities for extending goal-setting research, particularly in terms of how organizational events exert a top-down moderating effect on changes in new goal adoption and old goal abandonment. New goals are often embraced after events, especially events that signal the successful completion of previous goals. Examples include a surprise award, an unexpected promotion, or a transfer to a new division. Adoption and abandonment, however, often go hand in hand. An event represents a disruption that may

prohibit the accomplishment of an existing goal forever and require a set of new goals. An unexpected workforce reduction would do this, as would many major events at the organizational level (e.g., a merger, a competitor scooping the company's new product design that is still in process). What often emerges from these events is a new goal, which reenergizes and redirects future action. Goal abandonment and adoption may also have effects on goal space and timing dimensions. Leaving or adding a goal may influence the whole goal hierarchy in terms of priorities as well as goals in other domains (e.g., home or hobby activities). A new downstream and long-term goal may require new subgoals. In short, the use of EST may interface with goal-setting theory in new and important ways.

As another example, a valuable extension of entrepreneurial research would be to look at the ways events experienced by entrepreneurs lead to the emergence of new ventures. Entrepreneurial theorists have traditionally stressed the notion that entrepreneurship emerges from entrepreneurial opportunities, which are "those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production" (Shane & Venkataraman, 2000: 220). Drawing on EST, scholars can investigate the ways events may function as entrepreneurial opportunities to fuel entrepreneurship. For example, mega-events (e.g., the Olympics, World Cup) may trigger a quantum increase in new ventures in the hosting cities. In addition, certain events may prompt individuals to become entrepreneurs without the presence of entrepreneurial opportunities. For instance, after having her proposal for a new business rejected by the CEO, a top management team member may decide to start a new business to compete with her former company. These are but two examples of how using EST may yield new insight into the field of entrepreneurship.

The interface between events and features. When examining events, scholars should not ignore the critical role of features but should construct an integrative theory-building approach that examines the ways features and events jointly or independently affect entities. This may enable the development of more fine-grained organizational theories, enhancing their explanatory power and impact. Liu, Kwan, and Fisher (2014) showed that the interactions between

a CEO's core self-evaluations (a personality attribute) and two event strength indicators (criticality and novelty) explained a much larger portion of the variance in new venture performance than did a CEO's core self-evaluations alone. This highlights how a joint consideration of events and features can enhance our understanding of organizational phenomena.

Event clusters and chains. In developing EST, we focused on understanding what constitutes an event and how events impact entities across space and time. This involved treating events as discrete occurrences. Many events possess a singularity that lends itself to focusing on event strength and organizational impact without considering other events. Yet multiple (different) events can occur closely in space and time, forming a distinctive "event cluster" that can significantly impact entities. These event clusters might form from independent events that occur within a certain time frame and impact the same underlying behaviors, features, or other events. The potential combinations are too numerous to consider in this initial exposition of EST but certainly warrant further conceptual work.

Events can also be seen as causing a number of things to happen over time or downstream in the organization, forming what could be termed an *event chain*. For example, the wide-ranging responses to the 9/11 terrorist attacks show how an event may change or create behaviors, features, and events in the long run. Among other things, responses to 9/11 resulted in new and invasive surveillance of U.S. citizens. Similarly, in organizational acquisitions new employees enter (and others exit), changing well-established interaction patterns and group composition. New rules are implemented that change long-standing features (e.g., rules for promotion or raises or allocation of parking spaces). Subsequent events like new computer software for tracking employee attendance might be seen as directly caused by the takeover. We can expect and track these chains of an event's effects. Identifying, describing, and examining such event chains is a way to explicitly incorporate space and time into conceptual models.

Psychological processes underlying the relationship between events and outcomes. As mentioned earlier, there are some activities that transpire between when an event is first noticed and the event's eventual outcomes. Although we did not specify the psychological processes that

link event novelty, disruption, and criticality to event outcomes, this is clearly an important area for additional conceptual work. Cognitive and social processes push entities toward action. Yet, after deliberation, entities might decide they do not know what to do, they do not have the resources to deal with the event, or there is no urgency to respond. The point is that further theoretical elaboration is needed to specifically describe this overall process and how it unfolds over time.

Unique outcomes of events. Organizational theories have been criticized as being overly static when, in fact, many organizational phenomena are dynamic in nature (Liu et al., 2012). One explanation for this criticism is that most theories focus on stable features of individuals or their organizational environment, which tends to result in a focus on amounts of a stable outcome (e.g., a given level of entrepreneurial orientation as an individual attribute of a CEO is related to a given level of venture performance). When focusing on events, however, change-related outcomes become relevant and may help us to develop new and different types of dependent variables. First, events can elicit behavioral change or create new behavior. Such change or creation can happen quickly and be major, in part because events can disrupt steady states and produce effortful, controlled information processing (Morgeson, 2005). This type of reappraisal often does not occur when focusing only on features of organizational phenomena.

Second, even if some events only occur for a brief moment, they may permanently change existing features of the work environment or may generate new features. For example, a person might be highly committed to the organization (a feature of an individual's job attitudes), yet when the company is faced with a new international competitor (an environmental event), the organization's response might be to ask employees to work overtime more frequently. As a result, the employee's commitment may drop significantly. An unexpected promotion (an individual event), however, might serve to subsequently raise the employee's organizational commitment to pre-organizational event levels. Although this is a simple example, it illustrates how a diverse set of events occurring at different organizational levels can have a marked impact on the levels of existing features. In addition to changing existing features, events can beget new features. A

new policy or procedure in response to an event may, in turn, become a feature after it is accepted and routinized over time. For example, quality control routines in a pharmaceutical plant might continue until there is a contamination event. Such an event may alter existing quality control routines (i.e., features) and introduce new ones. Another example would be new safety regulations put in place after an accident on the shop floor. In these ways a fleeting event can have an enduring impact by producing new features.

Third, events may cause subsequent events to occur over time. The 9/11 terrorist attacks created a number of subsequent events (e.g., summits of world leaders and military actions) to counter the threat of terrorism. When an influential manager leaves her organization, her subordinates may quit their jobs to join her at the new organization, thereby creating a chain of turnover events. As such, although some initial events may not directly impact entities, they may still trigger subsequent events that require more immediate reactions from the entities.

Methodological Implications

Because many of our methodological prescriptions and techniques have been developed for feature-oriented research, they are not necessarily well-suited for an event-oriented approach. Events can be short, infrequent, unexpected, and nested, so conducting event-oriented research has its share of challenges, particularly when compared to feature-oriented research where phenomena accumulate slowly and are fairly static or stable over time. Fortunately, as event-oriented research has increased, methodological tools have been developed, modified, or adopted to facilitate such research. There are a range of research design and data analysis issues that must be taken into consideration in order to pursue an event-oriented program of research.

A key issue revolves around what to measure. If it is a description of the events themselves, records, reports, and perhaps behavioral observations might be appropriate. If it is an interpretation and reaction to the event, the researcher has to consider using interviews, observations, and questionnaires. The advent of social media (e.g., blogs, Facebook, Twitter) and the increasing ubiquity of audio and video monitoring of the workplace provide many opportunities

to both measure the event and gather immediate reactions to it. Another important methodological issue revolves around when to measure events. One strategy involves measuring features and base rates, then capturing the event while it is occurring (or very shortly thereafter) using experience sampling methods (Hektner, Schmidt, & Csikszentmihalyi, 2007). Because events often evolve and change as they unfold, continued tracking of event strength and movement across levels and time is necessary.

Conducting event-oriented research poses a number of interesting data analysis challenges as well. Perhaps the greatest challenge is the fact that events are nested within individuals, teams, and organizations, creating dependencies within a data set, particularly when multiple events are measured for a given entity (e.g., measuring consecutive workdays for a job incumbent, multiple events for a work team, or a series of corporate announcements). This dependency in the data violates the assumption of independence common for most statistical techniques. Fortunately, analytic methods have been developed that can account for this lack of independence, such as hierarchical linear modeling. Alternatively, many process-oriented scholars use qualitative procedures to analyze events and their effects on individual and organizational change. For example, the process studies highlighted in the recent *Academy of Management Journal* special issue offer a range of potential ways to use qualitative methods to study events (Langley et al., 2013).

Future Research Directions

It is important to mention, on the one hand, that not all events are negative (think of winning the lottery, discovering a drug that cures cancer, or winning a new customer account). These kinds of events may cause new or altered behaviors and features and generate other events, all of which may take adjustment time and incur costs of one sort or another but will still be seen as positive events. On the other hand, many events are negative, and perhaps there are ways we can avoid, deflect, or reduce their negative impact. In describing EST, we have largely taken what can be thought of as a "reactive" view of events. That is, these events arise in the external context, ultimately resulting in new or altered behaviors and features or subsequent events. Although

such an approach is appropriate given our goals of describing how event strength, space, and time affect entities, it does neglect some potentially more "proactive" views of events, especially ways that negative outcomes may be anticipated and managed. In this regard there are two key proactive aspects of EST that are important to consider for future research.

First, as suggested by Aspinwall and Taylor's (1997) research on proactive coping toward stressful events, entities can attempt to anticipate the occurrence of events and prepare for them (i.e., proactive coping). One's own history and the history of similar entities provide information about possible future events. Forecasting and scenario planning can aid preparation for novel, disruptive, and critical events. Simulations can be devised for training and awareness purposes. Engaging in preparatory activities has been shown to be an effective strategy, particularly when novel events occur (Morgeson, 2005). Further exploring the character and effectiveness of these proactive strategies is an important area of future scholarship.

Second, although events arise in the external context, we have not discussed in detail the specific sources of events. Although many events simply arise without any deliberate planning, other events can be created strategically to create a desired effect. This proactive creation of events could be used by entities at any level to create change in the organizational environment. For example, a leader may create an event (e.g., initiate conflict with a close competitor) to stimulate a change in organizational culture, interrupt a dysfunctional routine, or signal an external threat. Although exploring this kind of proactive event creation is beyond the scope of our model, EST does offer some insight into the kinds of events that might be created depending on the reactions and change one is seeking to achieve.

CONCLUSION

EST provides a shift in focus for organizational theory and research. The majority of published research focuses on what we call features—stable properties of individuals, teams, organizations, and environments—and explores how entity features cause subsequent entity features. Sometimes the entities are within levels (e.g., at the individual level, where people with higher

positive affect have higher levels of job satisfaction), and sometimes they are across levels (e.g., at the organizational and individual levels, where a supportive organizational culture is likely to reduce employee turnover). In contrast, EST focuses on events, which result in changes in current behaviors and features and the creation of new behaviors, features, and events over time and across levels. The specific propositions of EST describe how events become impactful, as well as the spatial and temporal processes through which they cause outcomes. Although EST has the potential to create new and substantive contributions to our understanding of changes in entities, clearly much more needs to be done. We hope that EST represents an important step toward a more event-oriented science.

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