



ESSAYS

Understanding Mechanisms in Organizational Research

Reflections From a Collective Journey

PETER J. J. ANDERSON

RUTH BLATT

MARLYS K. CHRISTIANSON

ADAM M. GRANT

University of Michigan

CHRISTOPHER MARQUIS

Harvard University

ERIC J. NEUMAN

SCOTT SONENSHEIN

KATHLEEN M. SUTCLIFFE

University of Michigan

Social mechanisms are theoretical cogs and wheels that explain how and why one thing leads to another. Mechanisms can run from macro to micro (e.g., explaining the effects of organizational socialization practices or compensation systems on individual actions), micro to micro (e.g., social comparison processes), or micro to macro (e.g., how cognitively limited persons can be aggregated into a smart bureaucracy). Explanations in organization theory are typically rife with mechanisms, but they are often implicit. In this article, the authors focus on social mechanisms and explore challenges in pursuing a mechanisms approach. They argue that organization theories will be enriched if scholars expend more effort to understand and clarify the social mechanisms at play in their work and move beyond thinking about individual variables and the links between them to considering the bigger picture of action in its entirety.

Keywords: *social mechanisms; theory building; meso theorizing; organizational research*

Creating a new theory is not like destroying an old barn and erecting a skyscraper in its place. It is rather like climbing a mountain, gaining new and wider views, discovering unexpected connections between our starting point and its rich environment.

—Albert Einstein (Einstein & Infeld, 1938)

The process of theory building is tricky. Many theorists claim that the best way to learn about theory building is to do it (see Lave & March, 1975). In the spring of 2004, we set out to understand better theory construction by taking part in a doctoral seminar entitled “Mechanisms of Organized Action.”¹ Using the work of Hedström and Swedberg (1998) as a conceptual starting point, our primary goal was to better appreciate how a mechanisms-based approach can inform our understanding of management and organization theories and theory construction.² This essay reflects some of what we learned.

Social mechanisms are “bits of theory about entities at a different level (e.g., individuals) than the main entities being theorized about (e.g., groups), which serve to make the higher level theory more supple, more accurate, or more general” (Stinchcombe, 1991, p. 367). They are the theoretical “cogs and wheels” that explain why two variables covary (Hernes, 1998, p. 74). Social mechanisms are the explanations of how the components of a theory interrelate (Elster, 1989), a necessary—but in many cases absent—aspect of organizational theories (Sutton & Staw, 1995; Weick, 1989). In this seminar, we asked each other and our guest participants, “What happens when we make explicit the mechanisms that are implicit in organizational research?”

Our approach was to broaden our inquiry from the formally enrolled student members of our seminar (first seven authors) and the faculty instructor (Kathleen Sutcliffe) to include 10 of our colleagues: Wayne Baker, Stuart Bunderson, Jerry Davis, Jane Dutton, Mary Ann Glynn, Bob Quinn, Jeffrey Sanchez-Burks, Gretchen Spreitzer, Klaus Weber, and Karl Weick. We invited them to present their research at the Ross School of Business at the University of Michigan and to make explicit the mechanisms that underlay their theoretical arguments. In the following sections, we describe what we discovered, what

intrigued us, what confused us, what surprised us, what blindsided us, what was missing, what was left ambiguous, and what we wanted to know more about. We highlight some of our challenges and propose some questions for researchers who might want to adopt a mechanisms-based approach to research. We argue that all scholars can benefit from thinking in terms of social mechanisms. Organizational explanations are typically rife with mechanisms, but they are often implicit. We encourage organizational scholars to make these mechanisms explicit.

MECHANISMS AND THEORY BUILDING

We view a social mechanism as a process that explains an observed relationship; mechanisms explain how and/or why one thing leads to another: “If a regression tells us about a relation between two variables—for instance, if you wind a watch, it will keep running—mechanisms pry the back off the watch and show how” (Davis & Marquis, in press). A focus on mechanisms enables one to move beyond thinking about individual variables and the specific links between them to considering the bigger picture of action in its entirety. For example, to understand how a watch functions, the important items are not the moving hands or the winding knob but rather the internal cogs and wheels and how they enable the translation from winding a knob into the movement of the watch hands. According to Hernes (1998), mechanisms are about “the wheelwork or agency by which an effect is produced. In this way, mechanisms do not merely address what happened but also how it happened” (p. 74).

To that end, mechanisms allow us to see beyond the surface-level description of a phenomenon. If we observe two variables, *X* and *Y* and some association between them, we know little more than that *X* and *Y* are correlated. Does *X* cause *Y*? Does *Y* cause *X*? Or are we observing a spurious correlation between the two brought about by a third unobserved variable, *Z*? Answering this question requires one to move beyond studying the *X*-*Y* relationship to addressing the question of why and how the relationship occurs. In other

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words, what is the process underlying the relationship? As Weick (1974) put it, mechanisms are about verbs and causal links rather than nouns and variables (see also Sandelands & Drazin, 1989).

There is a limit, however, to the generality of mechanisms. Mechanisms are not like the deterministic laws of physics in which certain inputs lead to certain outputs with no ifs, ands, or buts (Elster, 1998; Hedström & Swedberg, 1998). Instead, mechanisms allow us to address the probabilistic nature of social life, an idea that Coleman (1964) captures nicely with his description of models of social processes as "sometimes-true theory" (p. 516). There are boundary conditions to all social theory, and a mechanisms-based approach helps make these boundaries explicit. As Stuart Bunderson from Washington University remarked during his presentation to us on March 17, 2004, "Clarity about mechanisms allows researchers to consider possible boundary conditions of a relationship and to conduct subsequent empirical tests to evaluate an argument's validity."

The focus on mechanisms as explanations provides a clear connection to advice on theorizing that organizational scholars have offered the field in special issues of the *Academy of Management Review* (October 1989) and *Administrative Science Quarterly* (September 1995). An integral goal of theory construction, as described by Weick (1989), is to design a process that highlights relationships, connections, and interdependencies in the phenomenon of interest. Inherent in this explanation is the idea that a theory should make explicit the linkages that connect the input and the output, thereby illuminating the process by which the input is transformed into the output. Sutton and Staw (1995) further expound on this point. They suggest that predicting a relationship is not sufficient for building theory unless that predicted relationship is thoroughly explained. They note, "The key issue is why a particular set of variables are expected to be strong predictors The logic underlying the portrayed relationships needs to be spelled out" (p. 376). In their view, strong theory must delve into the underlying processes to understand the systematic reasons for a particular occurrence or nonoccurrence. The essence of all of these comments is appropriately summarized in Sutton and Staw's assertion that organizational research cannot present theoretical contributions without clearly offering an explanation of the connections among phenomena, a story about why acts, events, structures, and thoughts occur. These ideas are consistent with the etymology of the word

explain, which comes from the Latin *explanare*, which means "to take out the folds, to make something level or even" (Kaplan, 1964, p. 330; Webster's, 1979). When we speak colloquially of explanations, we ask someone to tell us how the story unfolds.

Focusing on social mechanisms is one way to heed this theory-building advice and delve deeper into the explanations of social phenomenon. Our seminar presenters described how focusing on a mechanisms-based approach enabled them to achieve a deeper level of theorizing. Gretchen Spreitzer, in describing her work with Bob Quinn on March 31, 2004, said, "Thinking about mechanisms helped us to make the implicit more explicit in our work. It helped us uncover important patterns that we had not seen before." Similarly, Mary Ann Glynn (March 29, 2004) explained, "One of the utilities of a mechanism-based approach to organization theory is that it enables you to articulate the causal linkages."

To see how uncovering mechanisms leads to better and deeper theorizing, suppose we have strong reasons to believe that *X* causes *Y*. Figure 1 visually represents this relationship. Yet a larger question looms: Why does *X* cause *Y*? The answer may more closely resemble the model in Figure 2, pictured here as it unfolds. This second model still shows that *X* leads to *Y* but suggests that the transition from *X* to *Y* is not as smooth and straightforward as initially believed. Instead, there are extra kinks in the initial, unexplained effect, suggesting some of the inner workings, mechanisms to relating *X* and *Y*. The end result is a model that still represents a causal relationship between *X* and *Y*, but unlike the first (Figure 1), it is explicit in the mechanisms of how *X* causes *Y*. An explicit focus on understanding the relationships involved between *X* and *Y* often results in a deeper level of theorizing than just focusing on each of those variables or simply their association.

MECHANISMS IN ORGANIZATION STUDIES

Jerry Davis (March 3, 2004) asserted that organization studies are uniquely suited to mechanisms-based theorizing and that organizational scholarship will benefit from more such theorizing. As he noted, collective action (e.g., a social movement, an organizational decision, or contagion of an idea in a population) normally requires thinking through the link from individual to collective processes. Mechanisms enable

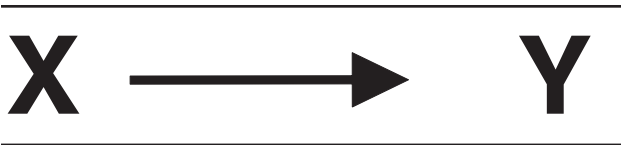


Figure 1: Simple depiction of *X* causing *Y*

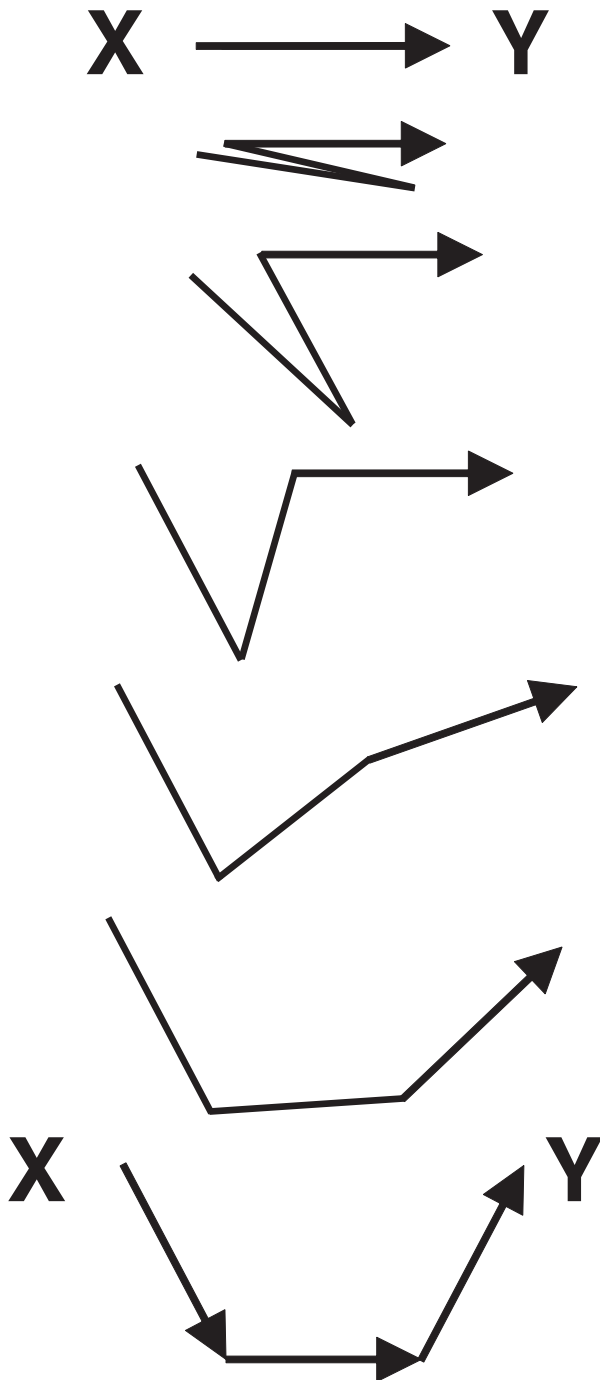


Figure 2: Unfolding the macrolevel effect into its microlevel components

us to understand how the individual pieces ultimately result in the collective outcome. For example, Davis noted that March and Simon's (1958) explanation of hierarchy in terms of bounded rationality serves as a masterful example of mechanisms-based theorizing. They began with a question about how cognitively limited individuals are able to accomplish ends greater than their individual abilities and efforts would suggest. They argued that this occurs through the differentiation of subunits into bite-sized chunks and the artful reaggregation of those chunks via hierarchy. Thus, the transformation of atomistic action into complex organization is explained through two mechanisms: differentiation and aggregation. Identifying these two processes gives researchers and managers insight into the mechanisms through which individuals accomplish collective action. Like the *X* and *Y* example (see Figure 1), a theory based only on the individual inputs or the organizational output would be, to quote Stinchcombe (1991), "less supple, less accurate and less general" (p. 367) than a theory that considered the underlying mechanisms.

Karl Weick (December 10, 2003) provocatively opened our class with a dictionary definition of mechanisms using machine imagery. He then proposed that such an approach to understanding mechanisms in organizational research might lead scholars to overlook the importance of so-called disciplined imagination in their theorizing. To guide our exploration of mechanisms in organizational studies, Weick recommended a taxonomy developed by Hedström and Swedberg (1998) that focuses on three different types of social mechanisms (see Figure 3): situational, action-formation, and transformational. Those mechanisms that explain the influence of macro forces on more microlevel phenomena are situational mechanisms. Those that operate solely at the micro level linking cognition to behavior are action-formation mechanisms. Finally, those that describe how microlevel factors affect the macro level are transformational mechanisms. We found this multi-level, macro-to-micro, micro-to-micro, micro-to-macro, bathtub-shaped model quite useful for exploring the topic. Because we situated our analyses of mechanisms in organizational studies, we see the micro-macro distinction as relative. For example, under our conception, a corporation could be a macro force operating on individuals at the micro level; the corporation could also be an actor at a micro level, and the macro influence might therefore be an organizational field, country, or even geographic community.

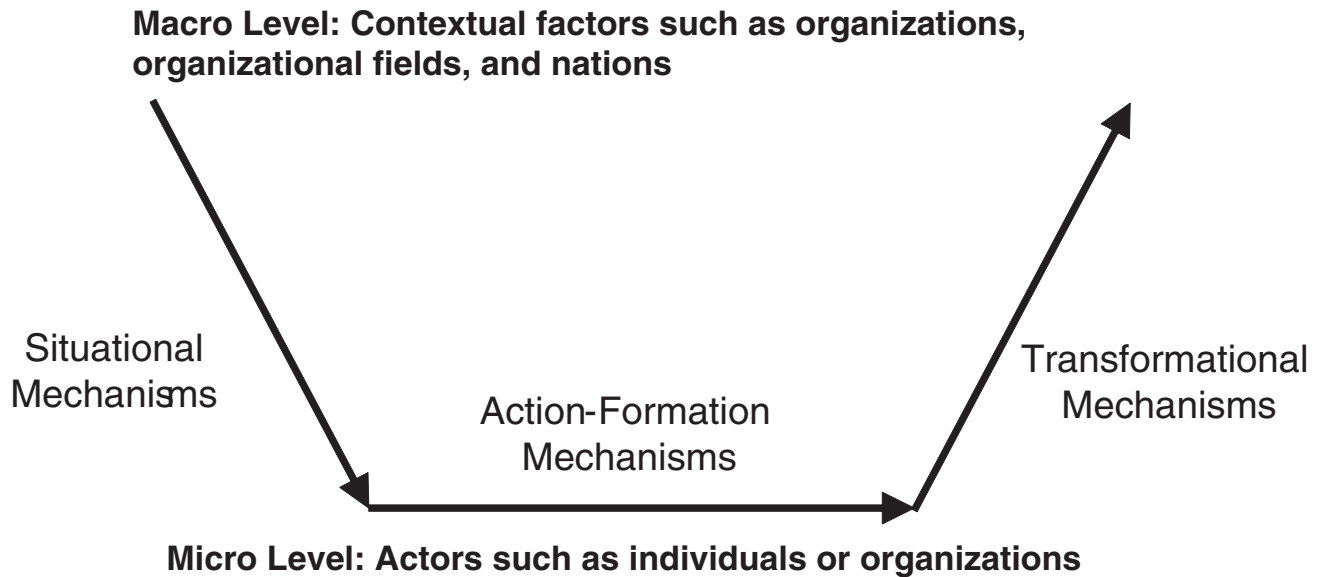


Figure 3: Adaptation of Hedström and Swedberg's mechanism model
 Source: Hedström and Swedberg (1998).

We illustrate the Hedström and Swedberg model with examples from our presenters at both the organizational and individual levels of analysis.

Two of our presenters employed situational mechanisms, describing macro influences on more micro behaviors. Klaus Weber (March 24, 2004) explained how national cultures influence the public self-presentation strategies that biotech companies use in Germany and the United States. He described ecological fit as an important mechanism that determines the cultural resources on which firms draw (i.e., how firms in different locations face different problems that lead them to utilize different cultural tools; Weber, 2003). Jeffrey Sanchez-Burks (April 14, 2004) demonstrated the connection between national culture and individual behavior in organizations. As a mechanism, he described how relational schemas (i.e., expectations of what should happen in a specific situation) develop in different cultures and are then reflected in how individuals approach social situations. For example, the protestant relational ideology, a dominant relational schema in the United States, leads individuals to eschew relational concerns at work (Sanchez-Burks, 2002).

Other presenters provided examples of action-formation mechanisms whereby the beliefs and opportunities of a social actor generate individual action. Wayne Baker (March 10, 2004) discussed mechanisms of network diffusion (Baker & Faulkner, 2003, 2004). One of the examples he raised, operating at the

organizational level, was the diffusion of corporate governance practices among large U.S. companies (Davis, 1991). Davis found that the social mechanism influencing the adoption of governance practices was social cohesion: The closer a focal actor's connection to a prior adopter, the greater the likelihood of adoption. Presumably, this is a result of the focal firm's uncertainty and information sharing among connected firms. Jane Dutton, Gretchen Spreitzer, and Bob Quinn all discussed action-formation mechanisms at the individual level. For example, Roberts, Dutton, Spreitzer, Heaphy, and Quinn (in press) theorize about the relationship between receiving positive feedback about the self and identity change. They write that the process of collecting self-relevant feedback from diverse others highlights capacities that individuals are not aware that they possess. This awareness of new capacities nourishes positive shifts in identity and enables individuals to draw on these capacities as they carry out their work.

Finally, some of our presenters also illustrated transformational mechanisms whereby processes at the micro level lead to change at the macro level. Mary Ann Glynn explained how and why organizational names have changed from colonial times to the present (Glynn & Abzug, 2002). In examining these changes, it was found that an important mechanism was a legitimacy threshold: Name changes increase dramatically after a tipping point has been reached in the prevalence of types of names. For example, in the

1980s, there were many changes to acronym-based names as a result of corporate mergers and acquisitions. After the number of these changes passed a certain threshold, Glynn argued that these names began to define legitimacy, and even firms that had not undergone mergers adopted acronym-based names. Finally, speaking of the individual level, Bunderson (2003) described how individuals' functional backgrounds influence the structure of social networks. He found that one mechanism by which individual functional background influences networks is that it increases expert power that enables experienced individuals to cross boundaries, communicate with others, and become more central in a group.

We found Hedström and Swedberg's (1998) typology of mechanisms—situational, action-formation, and transformational—to be a tractable framework for identifying and making explicit the mechanisms inherent in a theory. The multilevel nature of the model forced us to think more rigorously about how certain theories might apply to multiple levels of analysis and about the potential boundary conditions of a mechanisms approach. In our next section, we describe the key themes that emerged as challenges to a mechanisms-based approach to theorizing.

CHALLENGES OF A MECHANISMS-BASED THEORY OF ORGANIZING

We present three recurring themes from our discussions and offer recommendations on how to use mechanisms productively in organizational research. First, we address what we have come to call the stopping rule, a set of guidelines for determining when to stop looking for new mechanisms. Second, we discuss the challenge of addressing the dynamics of mechanisms and processes that occur over time. Finally, we explore linkages between mechanisms-based work and managerial practice.

The Stopping Rule

Mechanisms-based research calls for investigators to push their theory beyond stating that *X* causes *Y* to understanding the processes by which *X* causes *Y*. However, as Kaplan (1964) writes, no matter what explanation one has provided, there exist new relationships to be elucidated: "There is always something else to be explained . . . Explanations, like con-

cepts and laws, have a certain openness; in particular, every explanation is 'intermediate,' in the sense that it contains elements which are to be explained in turn" (pp. 340-341). Thus, mechanisms, although designed to provide answers, tend to raise additional questions. Each time they discover an answer to one research question, scholars face many new questions. Why? How? When? For whom? Under what conditions?

For example, in his discussion of network processes of diffusion, Wayne Baker described how structural equivalence (i.e., holding the same network position as others) is one of the mechanisms of diffusion. We speculated that it might be fruitful to push the explanation further to understand the processes that underlie structural equivalence. We considered social comparison as a possible mechanism underlying the structural equivalence mechanism: Individuals look to others for information about how to act (Festinger, 1954). We could push this explanation still further, delving into the cognitive processes that result in social comparison, or perhaps even deeper into the neurological processes that underlie these cognitive processes. To understand network diffusion, where and when does it make sense to stop explaining? Is it network position, social psychological processes such as social comparison, or cognitive processes?

Facing these questions, scholars concerned with mechanisms may experience a tyranny of freedom (Schwartz, 2000). There is no limit to the number of available research questions and explanations, and few guidelines exist for choosing which of these questions to ask and answer. How do scholars know when to stop searching for explanations or mechanisms and say, "That's enough!"? To address where and when to stop, we have distilled advice from our presenters and the mechanisms literature into three recommendations.

Look to the boundaries of existing literature. Perhaps the most straightforward stopping rule implores scholars to ask, "What does the field already know?" and then forge one step beyond it. Klaus Weber described how existing literature should guide us to understand where to stop and where to continue searching for explanations. He drew on Kuhn's (1996) discussion of the incremental process of scientific discovery and how many advances are based on elaborating and refining previous work. For example, he discussed how the concept of legitimacy was once seen as a key mechanism of isomorphism in new institutional theory. However, as legitimacy became relatively accepted, scholars began pushing to under-

stand the conditions and boundaries of legitimacy, and so the next logical question focused on unpacking the mechanisms that underlie legitimacy. Weber suggested that an examination of current boundaries provides direction about opportunities to ask the next questions of why and how.

Investigate contiguous levels of analysis. According to Hackman's (2003) bracketing decision rule, scholars should investigate one level above and one level below their focal phenomena. If a researcher is interested in understanding individual behavior, the key mechanisms may reside in group structures and processes (one level above) and in individual cognitions and emotions (one level below). This rule is constructive in guiding scholars to invest time and energy in the questions closest to their areas of expertise. For example, Hackman describes the value of bracketing in discovering important mechanisms in a study of motivation in orchestra groups amidst changing gender composition. A focal phenomenon of interest was the motivation of orchestra groups, which declined significantly as the prevalence of women in the traditionally male groups increased. In search of mechanisms, the researchers looked upward to the orchestra culture and downward to individual actors. At the organizational level, the degree to which the orchestra's cultural norms approved or disapproved of women was an important influence on how members reacted to the entrance of women. At the individual level, men reacted considerably more negatively to these gender composition changes than did women. Thus, both individual-level and cultural factors helped to explain why group motivation decreased as women entered the orchestra groups.

Another example is Marquis's (2003) study of the social network structure of 51 U.S. communities, which investigated why communities established earlier are more likely to have cohesive networks. Previous explanations for this phenomenon focused on local cultural factors relating to the upper class (Kono, Palmer, Friedland, & Zafonte, 1998). Alternatively, by exploring mechanisms at a lower level of analysis (in this case, the individual organizations that compose the community networks), Marquis found that the pattern is maintained by new entrants to the system imitating other local actors.

The bracketing rule also comes with limitations along with the advantages. Questions of what constitutes an appropriate level may remain ambiguous. If a researcher believes that a culture has prescribed a par-

ticular set of norms, to which culture should the researcher turn—group culture, department culture, organizational culture, local community culture, regional culture, or even national culture?

Know yourself. In making stopping decisions, scholars must consider their own interests and skills. Our assumptions about the world shape our interests toward particular questions and types of explanations (Bannister, 1966; Kelly, 1955; Little, 1972). We may find ourselves most engaged and satisfied if we pursue those questions that we find inherently fascinating (Holland, 1996; Ryan & Deci, 2000). Regarding skills, scholars may be particularly adept at answering certain questions, employing particular methods, and explaining certain phenomena. Other questions, methods, and phenomena may not fit scholars' strengths. For example, the network diffusion studies we examined focus on network factors such as cohesion and structural equivalence rather than psychological processes that underlie these mechanisms. We suspect that one reason for this focus is that these mechanisms fit the interests and strengths of the network researchers.

Another aspect of knowing oneself that may help scholars determine when and where to stop consists of clarifying the objectives of the research. Are scholars hoping to develop descriptive, prescriptive, and/or interpretive conclusions? Are they seeking to understand a specific independent variable or a particular dependent variable? Are they asking questions and discovering answers directed at making a difference in practice? In a given research project, a scholar may be more concerned with some of these objectives than others. Certain questions and explanations may be well suited to achieving these objectives. As such, identifying the objectives of their research projects may facilitate scholars' efforts to decide when and where to stop.

Temporal Processes

Beyond the stopping rule, we encountered a second challenge in applying the Hedström and Swedberg (1998) framework in our research: Things become more complicated when one considers that organizational processes unfold and change over time. In considering dynamic processes, the categorization of mechanisms into situational, action-formation, and transformational mechanisms forces the theorist to freeze the process in question at a certain point in time and does not allow

room for mechanisms at each stage to change. For example, when Jane Dutton presented her research on the organizing of compassion on April 7, 2004, she presented a model comprising three stages: activation, mobilization, and acceleration (Dutton, Worline, Frost, & Lilius, 2004). When her theory was applied to the Hedström and Swedberg framework, however, she commented that much of the dynamism in the process of organizing was lost. Moreover, she reflected that fitting the model into the framework forced her to focus on the parts of the process at the expense of the dynamic unfolding whole. Thus, although advantageous at times for illuminating new patterns and questions, Hedström and Swedberg's model may not be applicable to all mechanisms and may ironically induce a kind of reductionism that causes scholars to lose sight of the whole.

In considering frameworks that may better account for dynamic processes that unfold over time, we found Barley and Tolbert's (1997) structuration framework to be a constructive alternative to the Hedström and Swedberg (1998) approach. The Barley and Tolbert framework describes a generic model for the relationship between institutions and actions, describing an ongoing process of how institutions constrain action and how action in turn both maintains and modifies the institutions that constrain it. Importantly, this process unfolds over time. Figure 4 is a modified version of Barley and Tolbert's model that incorporates Hedström and Swedberg's typology of mechanisms. The vertical arrows denote situational mechanisms that account for how macro forces such as institutions influence micro action. The diagonal arrows represent how micro action modifies or maintains the macro influences that constrain it. The process unfolds over time, allowing for the mechanisms to change over time and accounting for changes in either the constraining context or the action-formation mechanisms, both of which are represented on the horizontal axes. Thus, the Barley and Tolbert framework allows for numerous cycles of situational, action-formation, and transformational mechanisms that unfold over time and occur in the context of interactions. Rather than focusing on a particular type of social mechanism at a particular moment in time (a snapshot approach to organizing), their framework explains social phenomena as continuous processes entailing successive interactions from the macro to the micro and then back to the macro.

Linking to Practice

Thus far, much of this essay has focused on how a mechanisms-based approach can make the explanations in a theory more explicit. A continual challenge for management theorists, however, is to contribute to management practice. Inspired by Spreitzer and Quinn's presentation, we were challenged to consider the role of mechanisms in facilitating conversations between theorists and practitioners. The issue of bridging the gap between theory and practice is becoming increasingly relevant; indeed the theme of the 2004 Academy of Management meeting was "Creating Actionable Knowledge." Scholars have written for decades about understanding the relationship between theory and practice, and we are mindful that our field lacks consensus about the relationship. Some scholars believe that theory ought to inform and be informed by practice (e.g., Lewin, 1951; Rynes, Bartunek, & Daft, 2001), whereas others believe that theory serves an entirely different and incommensurate function from that of practice (e.g., Sandelands, 1990).

As we continued to consider mechanisms, we realized that a deeper understanding of mechanisms might be one way to better translate organizational theories into managerial action. Bridging the divide between theorists and practitioners is no simple task. Weick (2003) claims that the key criticisms that practitioners make of theorists is that they "comment on practice but elide context, overlook constraints, take the wrong things for granted, overestimate control, presume unattainable ideals, underestimate dynamism, or translate comprehensible events into incomprehensible variables" (p. 453). Mechanisms, because they are situated in context and have clear boundary conditions, seem ideally suited to begin to address this concern.

There are several areas in which our presenters found mechanisms to be helpful for managers. For example, according to Spreitzer and Quinn, both experienced executive education instructors, students desire to know under what conditions a strategy will succeed and when it will not. By providing explicit explanations and isolating those elements that can be manipulated to change outcomes, mechanisms may be one key to translating theory into action. More concretely, mechanisms may allow people to see how they can travel from *X* to *Y* and allow them to recognize

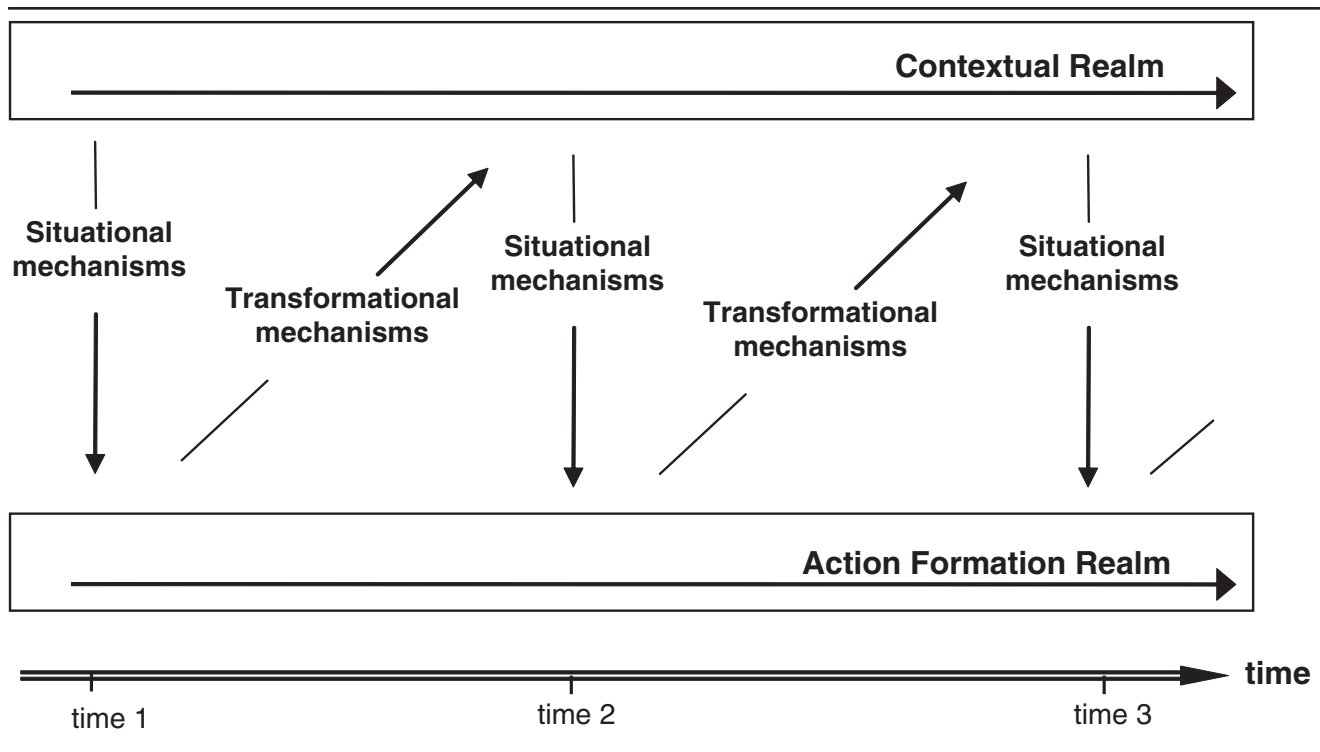


Figure 4: Adaptation of Barley and Tolbert's structuration model
 Source: Barley and Tolbert (1997).

what exactly they need to do to set the process in motion. For example, the displeasure with total quality management following its initial success resulted from the way that top management mandated its implementation without offering clear explanations to middle management about how it really worked (Hackman & Wageman, 1995). In this instance, even if the theory is not important to the implementation itself, the detailed cogs and wheels that translate *X* into *Y* may be essential for managers to understand and believe in the efficacy of the programs.

CONCLUSION

We began this essay by accentuating the importance of mechanisms in the theory-building process. We described the benefits of mechanisms in terms of seeing new relationships and advancing our capabilities to predict and understand the social world. We discussed the challenges of applying mechanisms in organizational research and presented approaches to transforming these challenges into opportunities, including how these can even help us connect better with more practice-oriented audiences.

As noted, our initial goal was to understand how studying mechanisms would help us build better the-

ory by focusing more explicitly on explanations. An unexpected byproduct was that we learned even more about the scholarship of our colleagues and bolstered our broad research community. In addition, we realized that studying the mechanisms that underlie one's existing work also opens new research opportunities. Our presenters noted that a focus on mechanisms helped them develop new insights and research questions. This point was perhaps best explained by Stuart Bunderson:

A consideration of mechanisms might suggest the next interesting question for my work. For example, in studying the relationship between team functional diversity and team process/performance [Bunderson & Sutcliffe, 2002a, 2002b], we recognized that we (and others in this domain of research) were making an assumption about how member expertise was being combined to affect a team's decision. Specifically, we were assuming that each member's expertise was equally weighted. While this was perhaps a serviceable assumption in that particular study, it is clearly a questionable assumption since intra-group involvement and influence may not be (and very likely is not) purely democratic. This led to a follow-up study in which I explicitly examined how member differences in functional background can lead to different levels of intra-group involvement and influence [see Bunderson, 2003].

Thus, although our stopping rule raises cautions about becoming mired in deeper and deeper questions, pushing the boundaries of one's assumptions and explanations can be generative, leading to research paths previously not considered.

Another theme that arose from our discussions was that focusing on mechanisms makes the socially constructed nature of research more explicit. Some of our previous recommendations prescribed that scholars should look for mechanisms that fit them and that much remains left open to individuals' definitions when choosing levels of analysis. That we have choices as scholars in deciding among mechanisms that interest us may introduce an arbitrariness into scholarship that makes research, at least partially, a process of creation. For example, we can opt to elucidate one set of mechanisms while ignoring another set. By focusing on one mechanism to the exclusion of others, we create research streams that may only partially explain a phenomenon. From our perspective, one benefit of an explicit treatment of mechanisms is to make more explicit our role in the creation of the social world. Revealing the logic that guides our choices in variable selection and hypothesis formulation, which often is only implicit in scholarly work, shows the reader which part of the social world we chose to explain. We can make the story of creation crisper and surface our role in that story: These are the assumptions of my story and the conditions under which my theory works, and this is what I overlooked and why.

This essay, much like mechanisms themselves, may have raised more questions than answers. We believe that grappling with these questions will constitute a fruitful journey for organizational scholars in the theory-building process. Ralph Waldo Emerson (1850) wrote, "Here is the world, sound as a nut, perfect, not the smallest piece of chaos left, never a stitch nor an end, not a mark of haste, or botching, or second thought; but the theory of the world is a thing of shreds and patches." We hope that our insights will contribute to the sewing of new patches by reinvigorating existing conversations and inspiring new conversations among organizational researchers.

NOTES

1. The course syllabus is available at <https://coursetools.ummich.edu/2004/winter/ob/899/001.nsf>
2. After an introductory session on mechanism-based theory, the seminar convened twice a week for 7 weeks. One

session per week involved a presentation by an invited researcher or team, followed by a more extensive discussion with the scholars of the assigned readings and topic, and then a focused discussion of the mechanisms in the work. Because we also wanted to extend our thinking about each of the topics that we considered, we reconvened a second time to elaborate our ideas. Between the two sessions, we were charged with the task of developing our ideas on how the mechanisms had been applied in the scholar's work and how this exercise added to our emerging knowledge on mechanisms in the theories discussed and in general. We hoped that a broader but also more refined picture of mechanisms would emerge as the weeks progressed.

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- PETER J. J. ANDERSON** is a doctoral student in Management & Organizations at the Ross School of Business at the University of Michigan. His research emphasizes alternative ways to view leadership, particularly how leadership can be viewed as a process in which multiple members of a group or team can share.
- RUTH BLATT** is a Ph.D. candidate in Management & Organizations at the Ross School of Business at the University of Michigan. Her research interests are in how individuals proactively create conditions for excellence in their work lives, particularly when they have weak contractual, physical, or psychological attachments to organizations. She also studies the relational bases for organizing under conditions of transience and dynamism.
- MARLYS K. CHRISTIANSON** is a Ph.D. student in Management & Organizations at the Ross School of Business at the University of Michigan. Her research focuses on how organizational structures and practices build capabilities within organizations. Topics of interest include mindfulness, resilience, coordination of work, well-being, and thriving at work.
- ADAM M. GRANT** is a doctoral student in organizational psychology at the University of Michigan. His research, funded by the National Science Foundation, focuses on designing work contexts to motivate employees to care about the welfare of other people. He examines the ways in which the relational properties of jobs, organizational cultures, and work environments spark the motivation to make a positive difference in others' lives and how this motivation makes a difference in employees' lives. Specific areas of interest include work motivation, job design, prosocial behavior, and well-being.
- CHRISTOPHER MARQUIS**, Ph.D., is an assistant professor in the Organizational Behavior unit at the Harvard Business School. His research focuses on how organizational behavior is historically contingent

and how environmental conditions during founding periods leave a lasting imprint on organizations. He has examined the effects of these historical processes in the context of community-based social networks and 20th century U.S. banking.

ERIC J. NEUMAN is a doctoral candidate in Management & Organizations at the Ross School of Business at the University of Michigan. His research focuses on how organizations operate within and are influenced by legal and political systems.

SCOTT SONENSHEIN is a doctoral candidate in Management & Organizations at the Ross School of Business at the University of Michigan. His

research interests include interpretive approaches to organizing, the role of language in organizations, and business ethics.

KATHLEEN M. SUTCLIFFE is a professor of management and organizations at the Ross School of Business at the University of Michigan. Her current research focuses on processes associated with team and organizational learning and resilience, high-reliability organizing, and investigation of the social and organizational underpinnings of medical mishaps. Her publications include two books and numerous articles.