ORGANIZATIONAL CHANGE AND MANAGERIAL SENSEMAKING: WORKING THROUGH PARADOX

LOTTE S. LÜSCHER
Clavis Consultancy

MARIANNE W. LEWIS
University of Cincinnati

As change becomes a constant in organizational life, middle managers charged with interpreting, communicating, and implementing change often struggle for meaning. To explore change and managerial sensemaking, we conducted action research at the Danish Lego Company. Although largely absent from mainstream journals, action research offers exceptional access to and support of organizational sensemaking. Through collaborative intervention and reflection, we sought to help managers make sense of issues surfaced by a major restructuring. Results transform paradox from a label to a lens, contributing a process for working through paradox and explicating three organizational change aspects—paradoxes of *performing*, *belonging*, and *organizing*.

Organizational change is essential for short-term competitiveness and long-term survival, but it poses daunting managerial challenges. Advanced technologies, global markets, and mobile capital intensify pressures to constantly cut costs while enhancing flexibility (Leana & Barry, 2000). According to Kanter, Stein, and Jick (1992), managing change has become the ultimate managerial responsibility as firms continuously engage in some form of change—from shifting organizational boundaries, to altering firm structure, to revising decision-making processes. Yet major change projects rarely claim "substantial success" (Taylor-Bianco & Schemerhorn, 2006).

Although executives design such projects, middle managers serve as critical change agents. Middle managers operationalize change initiatives, thereby aligning their units to executive mandates (Balogun & Johnson, 2004). Huy (2002) described "middles" as the lynchpins of organizational change, acting as intermediaries between top management and the front line. His study depicts middle managers' need to implement change while managing subordinates' emotions, for change can spur debilitating anxiety and defensiveness. Labianca, Gray, and Brass (2000) also stressed managers' roles as models. They found that employees watch their supervisors intently, skeptical of management's commitment to change.

In such contexts, "sensemaking" becomes exceptionally vital and difficult for middle managers. According to Weick (1995), sensemaking denotes efforts to interpret and create an order for occurrences. Managers, however, must also communicate their understandings, particularly in the midst of organizational change, in a way that provides their subordinates with a workable certainty. Such "sensegiving" seeks to influence subordinates' interpretations (Maitlis, 2005). Yet change may foster intense cognitive disorder for middle managers (McKinley & Scherer, 2000). Such conditions spur confusion, anxiety, and stress that impede, or even paralyze, decision making. Indeed, Huy (2002) blamed unsuccessful change projects on managers' inability to cope with shifting organizational expectations—shifts that dramatically alter their cognitive and behavioral interactions with the world around them. Balogun and Johnson further explained that middle managers "have the challenge of grasping a change they did not design and negotiating the details with others equally removed from the strategic decision making" (2004: 543).

Unfortunately, studies of managerial sensemaking and change are rare (Maitlis, 2005). In particular, research offers scant insight into "how middle managers interpret change, and how their schemata, or interpretive frameworks, develop and change" (Balogun & Johnson, 2004: 523). Our study is an attempt to fill this gap. We conducted "action research" at the Danish Lego Company, studying production managers in the midst of an extensive restructuring. Broadly defined, action research involves "researchers working with members of an organization over a matter which is of genuine concern to them and in which there is an intent by the organizational members to take action based on the intervention" (Eden & Huxham, 1996: 527).

The structure of this article follows the flow of

our research. We begin by reviewing literature that provided our theoretical base. The Methods section then presents the premises of action research and its design for this study. Next, we detail the findings, examining how paradox became integral to our process and focus. In conclusion, we discuss how this study moves the notion of paradox from a label to a lens for middle managers seeking to make sense of organizational change. Results offer methodological and theoretical contributions, for our work illustrates the unique potential of action research. Through collaborative intervention and reflection, we researchers and the studied managers developed a process of working through paradox. Applying that process, we identified managerial challenges surfaced by organizational change, elaborating paradoxes of performing, belonging, and organizing and identifying respective coping strategies.

LITERATURE REVIEW

Organizational change poses a particularly critical and difficult setting for sensemaking. As Weick (1995) explained, sensemaking is an effort to create orderly and coherent understandings that enable change. Yet dynamic contexts intensify experiences of complexity, ambiguity, and equivocality. Complexity rises as work demands shift, multiply, and potentially conflict (Hatch & Ehrlich, 1993). Ambiguity renders new demands uncertain and frequently misunderstood (Warglien & Masuch, 1996), and equivocality fosters confusion as demands become open to varied, even contradictory, interpretations (Putnam, 1986). As a result, actors often struggle with changing roles, processes, and relationships. Without clear understandings, anxiety may paralyze decision making and action (Davis, Maranville, & Obloj, 1997; Smircich & Morgan, 1982).

Organizational change spurs reframing, as actors seek to make sense of disparities between their expectations and new experiences (Balogun & Johnson, 2004). According to Bartunek (1984), frames provide a structure of assumptions, rules, and boundaries that guide sensemaking and over time become embedded and taken-for-granted. Shocks and surprises signal that existing frames may no longer apply. Reframing, therefore, enables actors to alter meanings attributed to changing situations (Watzalawick, Weakland, & Fisch, 1974). Argyris's (1993) distinction between "single-loop" and "double-loop learning" offers illustration. Single-loop signifies incremental variations within an existing frame, and double-loop denotes reframing, substantially altering an actor's view and thus enabling dramatic changes in understanding and action.

Managers play a key role in facilitating subordinates' reframing, but they often struggle to make sense of change themselves (Bartunek, 1984; Isabella, 1990). A growing literature examines strategic sensemaking and change (e.g., Smircich & Morgan, 1982). According to Gioia and Chittipeddi (1991), top managers seek to comprehend external dynamics and then initiate responsive organizational change. McKinley and Scherer (2000) explained that resulting initiatives help executives explicate their new understandings, providing a sense of order. In contrast, middle managers, those charged with implementing such changes, often experience intense confusion, perceiving executive initiatives as replete with multiple and unclear mandates.

Striving to fulfill "boundary-spanning" and sensegiving responsibilities, middle managers face further sensemaking challenges. During change efforts, managers link executives to employees (Kanter et al., 1992). Yet Balogun and Johnson (2004) found that as firms become more geographically dispersed and leaner, middle managers' sensemaking is inhibited. Through restructuring, top managers have less contact with lower levels, relying on middle managers to span boundaries. Simultaneously, managers have fewer interactions with executives, limiting opportunities to seek clarification. So while employees look to their managers to give sense to change mandates, managers themselves struggle for understanding (Gioia & Chittipeddi, 1991). Too often, a result is anxiety that debilitates decision making and implementation.

Despite the importance of managerial sensemaking during organizational change, related studies are rare, in part because of research challenges. Such investigations require exceptionally intimate, real-time, and longitudinal research access for at least two reasons. First, frames fluctuate as managers struggle for meaning through social interactions and experimentation (Maitlis, 2005). Therefore, examining their sensemaking requires a highly interactive method (Balogun & Johnson, 2004). Second, managers may be unwilling or unable to articulate their understandings. Argyris (1993) explained that in changing times, managers often grapple with conflicting emotions tied to "undiscussable" facets of organizational life. He called for more collaborative methods, stressing the potential for action research to support sensemaking and enable induction. Indeed, leveraging psychodynamic traditions, action researchers (e.g., Vince & Broussine, 1996; Westenholz, 1993) have demonstrated how intervention may help actors surface more subconscious anxieties, cope with defenses, and alter their cog-

nitive frames. Building from these models, we now describe our methods, explaining our choice of research setting, the philosophical underpinnings of action research, and the specifics of our collaborative approach.

METHODS

The Lego Company

This study was set at the Lego Company. Renowned for its building bricks—acclaimed as the toy of the 20th century—the firm launched extensive change efforts in 1998, sparked by rising competition and a stagnating market. CEO Kjeld Kirk Kristiansen hired an aggressive executive, Poul Plougmann, to lead a comprehensive restructuring. These changes altered the very nature of middle management at Lego. As Floyd and Wooldridge (1992) explained, middle managers link strategic decision making and daily operations but face growing challenges as their authority levels change. Indeed, Lego executives sought to implement self-managed teams at every level and to integrate middle- and lower-level managers. As a result, the remaining managers experienced intense pressure to make sense of, and act according to, the organizational changes.

Our study focuses on production managers in the manufacturing division in Billund, Denmark, for three reasons. First, this division was a microcosm of wider changes at Lego. At the start of our study, the division had just been reduced from four layers of management to three levels of teams: executive, management, and production. The number of managers had been cut from 72 to 45 and distinctions between middle and line managers eliminated, as every manager was now a member of a management team and the manager of his (managers were all men) own production teams. Instead of being in charge of a production line, for example, a manager was now responsible for two or three self-managing teams. Second, the first author had conducted previous training with this division, providing a solid basis of trust and access. Third, the division director, the executive focused on the operations of the Billund manufacturing division,[1] shared our interests in sensemaking and change. In his view, the managers seemed paralyzed, stuck between their previous understandings of managing in a hierarchical structure and the new approach to managing teams in a flexible, lean organization. He felt that the managers needed help making sense of the changing demands to enable implementation and achieve productivity and quality improvements. For this reason, the director was enthusiastic about our research. Although he sought additional, long-term benefits, our contract with Lego was not to study effects on performance. Rather, we agreed that examining and supporting managers' sensemaking would be our focus.

Action Research

In action research, one "seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people" (Reason & Bradbury, 2001: 1). This method rests on a distinctive philosophy. Instead of viewing relevance and rigor as a dilemma, *both* are positioned as primary and interwoven criteria for quality research (Eden & Huxham, 1996). In this context, relevance denotes results that are useful to a study's subjects *and* valued by social science. Roots of this method lie in Dewey's *How We Think* (1933) and his call for research searching for practical solutions to practical problems. Likewise, Lewin (1946) recommended that subjects and researchers be jointly responsible for developing and evaluating theory to ensure that the results of inquiry (1) reflect the knowledge created through the participative process and (2) help improve the social situation of the subjects. Researcher and subject engagement are critical to ensuring relevance. According to Argyris (1993), its participatory nature makes action research ideal for exploring latent dynamics of organization life. In contrast, more detached approaches miss discrepancies between "espoused theories" and "theories-in-use," as researchers may only have access to what actors can, will, and/or are allowed to express.

Rather than posing a trade-off, rigor complements relevance. Susman and Evered (1978) explained that action research demands rigor, like positivist science, but applies a different meaning. Because the action researcher is an active part of the studied system, researchers and subjects must rigorously account for their perspectives. Instilling rigor requires an iterative process of data collection and analysis and systematic triangulation of multiple perspectives. In their review, Eden and Huxham (1996) described action research as a continuous cycle of developing and elaborating theory from practice. Although intervention is an effort to surface deeper issues and possible solutions, interspersed periods of reflection enable participants to

[1] Hereafter, we refer to this division as "the organization" and refer to the production managers as "the managers." See Lüscher (2002), for further details of this research design.

analyze intervention results and the research process itself. Triangulation validates and enables this cycle. As in more traditional methods, triangulating multiple investigators, theories, and data sources aids pattern identification. Yet action research also draws in varied perspectives to spur rethinking of engrained frames and routines (Eden & Huxham, 1996). In sum, through iterative cycles and triangulation, findings are the result of joint action and negotiated reality, triangulated using multiple viewpoints, and validated by participants' determination of these viewpoints' value in practice.

Although action research shares the overarching criteria of relevance and rigor, specific approaches vary widely. As Miles and Huberman (1994) noted about qualitative research in general, action research crosses paradigmatic boundaries. Specific uses range from organizational development (OD) and experimental efforts to more phenomenological and critical approaches (Huxham & Vangen, 2000). Reason (1993) explained that early action research, such as that promoted by the Tavistock tradition (cf. Trist & Bamforth, 1951), was embedded within the functionalist, problem-driven paradigm. Yet increasingly, action research, including our own, applies more social constructivist emphases on sensemaking and interpretation. To distinguish among alternative approaches, Chisholm and Elden (1993) called for action researchers to specify their research purpose, researcher roles, and research design flexibility. We now address these elements, describing possible variations and specifying our approach to action research.

Research purpose. A purpose of action research is to "produce practical knowledge that is useful to people in the everyday conduct of their lives" (Reason & Bradbury, 2001: 2). Yet desired forms of practical knowledge differ across approaches. As Chisholm and Elden (1993) noted, traditional action research was an effort to enhance performance and generate theory. Today, action research purposes tend to be instrumental (e.g., improving organizational systems), theoretical (e.g., contributing to social science), and emancipatory (e.g., empowering the oppressed). In our case, we sought to help the Lego managers create sense out of their cognitive disorder. Like their director, we viewed the managers' understandings of changing demands as the base for future action and performance. Yet we also sought to expand the theory of managerial sensemaking and organizational change. In our social constructivist mode, we wished to use action research to contribute process *and* product as research and sensemaking became interwoven. The research process can be as valued as its end results because intervention and reflection lay groundwork that may help a social system develop the capacity for self-study and ongoing change (Reason, 1993).

Researcher roles. Although researcher engagement pervades action research, researcher roles run the gamut in terms of centrality and control. According to Chisholm and Elden (1993), more conventional roles, such as those employed in OD efforts, position the researcher as expert, assuming primary oversight of the research design, data collection, analysis, and induction as he or she consults organizational participants. In contrast, collaborative approaches involve sharing research responsibilities while leveraging the different knowledge of researchers and subjects. Our goals—to enable and examine managers' sensemaking—demanded that we facilitate collaborative inquiry and instill methodological rigor. Through collaboration, we sought to "unpack" the managers' changing frames. Building trust with and among the managers, we hoped to bypass their defense mechanisms and access normally undiscussable realms of daily life (Argyris, 1993). In this mode, as Gustavsen (2001: 25) explained, data collection and analysis become tightly interwoven. Data are cocreated and analyzed as the research context fosters "moments of dialogue." While we contributed understandings of social systems, theory, and methodology, the managers offered insights into their organization, perceptions, and behaviors.

In such collaborative approaches, a complementary researcher role entails instilling methodological rigor (Eden & Huxham, 1996). This role involves three components broadly described here, then detailed in the "research process" subsection. First, to enable effective collaboration, researchers identify possible patterns and emerging categories to explore with the subjects. In our study, systematically reviewing intervention session notes, interview codings, and existing literature enabled this effort. Second, the researchers leverage outsider perspectives to critique the research process. For us, colleague researchers, internal consultants, and research assistants served in this capacity. Third, researchers encourage subjects' ongoing experimentation and reflection to assess the validity and value of findings. Our periodic interventions enabled managers to articulate and question their understandings, then apply their thinking in subsequent practice, returning to gauge the effects during later intervention sessions.

Research design flexibility. Action research varies in the degree to which the research process is predetermined. Some designs rely on systematized intervention to guide researchers as they engage with organizational participants. For instance, OD

efforts often apply a documented implementation process, but experimental studies vary intervention treatments to test a priori hypotheses. Social constructivist approaches, in comparison, collaboratively explore open-ended questions. Chisholm and Elden (1993) stressed that action research should be most open when the specific issues of study must be identified as part of the process. Such was the case at Lego. We sought to first surface, and then help managers cope with, their sensemaking challenges. Therefore, our research design was highly flexible. We began by asking, How might middle managers make sense of complexity, equivocality, and ambiguity intensified by organizational change? To address this question and ensure design flexibility, we used a collaborative and iterative process. Work of McKernan (1996) proposing cycles of plan development, implementation, and evaluation served as a guide. Our study started when we and the managers identified broad concerns of mutual interest and then formulated a plan for intervention. Implementation involved conducting "sparring" intervention sessions during which participants dug into their initial concerns to examine more specific issues. Evaluation denoted reflection sessions wherein participants would assess their sparring sessions and subsequent actions. The process cycled as evaluation offered feedback with which researchers and managers could revise the focal issues and intervention plan. As a result, the action research itself became a process of collaborative sensemaking.

Research Process

Broadly speaking, our research entailed corresponding phases of groundwork, intervention, and theory building, each involving rigorous triangulation of varied data sources and perspectives. Eden and Huxham (1996) stressed the benefits of triangulation, as approaching research from different angles enables more reliable, valid, and creative results (Jick, 1979). Data that tap multiple viewpoints are vital to sensemaking studies in particular, as researchers are challenged by participants' and their own "engrained frames" (Bartunek, 1984). To detail each phase, we now describe its timing and related organizational change events, its goals and key data sources, and emerging insights into managerial sensemaking. Although presented as sequential, the phases were iterative and cyclical. For instance, our starting groundwork evolved throughout the research process, just as theory building was central to our final phase but began at the onset.

Groundwork. This phase started in May 1999. Only months earlier, Lego had publicly announced its major restructuring. Now the Billund manufacturing division had become the first to implement the new team structure. Staffing cuts had been made, new reporting lines drawn, and confusion and anxiety were rampant. To build a solid research base within this setting, we sought to develop our initial understandings of the changing context and to create a working contract that would clarify the mutual expectations of the managers and the researchers. In this phase, data collection involved semistructured interviews and archival data. Interviews focused on managers' perceptions of the restructuring, primary areas of concern, and desired outcomes of the study. We began with a management team that became our focus group, interviewing its eight managers and their executive director. To consider different views, we also interviewed three of the managers' subordinates and the human resources (HR) director. Interviews were tape-recorded and coded with Qualitative Media Analyzer (a program from CVS Information System at Aarhus University in Denmark). Archival material offered secondary data. Specifically, we gathered public information on Lego via news publications, articles, and books and reviewed three reports given to employees on Lego's new management philosophy.

As we analyzed this foundational data, early effects of the restructuring became evident. For instance, the interview data were replete with expressions of frustration and pleas for clarity. Most noticeable were frequent uses of such terms as "tensions," "tug-of-war," "contradiction," and "conflict." In an interview in May 1999, one manager explained, "We used to know what it takes to be a manager here. The remaining managers know how to achieve success, but only in the old organization. Now we are told that our practices are no longer valid. What do they want then?" Sharing these repeated concerns with the focus group, we planned the goals of this study and the nature of researcher-manager interactions. Together, we agreed that this action research should help managers find ways to make sense of and act upon changing demands. We also defined two forms of research interactions. We agreed that *sparring sessions* would serve as intervention opportunities for any production team or individual manager to meet with the first author and explore specific issues of concern. The managers chose the label "sparring" to signal their desire for the researcher to pose supportive but challenging questions that might help us collaboratively explore and possibly resolve their issues. *Review sessions*, in contrast, de-

noted settings in which the researcher could feed back issues and emerging understandings to the focus group, seeking members' input to enhance future sparring and fuel collaborative induction.

Interventions. Although the three research phases overlapped considerably, the intervention phase dominated from fall 1999 through summer 2000. For the managers, this marked an intense period of adjusting to the new structure. Thus, our sparring sessions provided them a timely setting in which to express their concerns and seek alternative meanings. Managers could leave sparring sessions to apply their new understanding in practice, then return to a subsequent session to further explore its (in)effectiveness. Indeed, the goals of this phase were twofold. We sought to help managers make sense of challenging issues and to continuously assess and enhance the value of sparring in enabling their sensemaking.

During this period, the first author conducted 92 individual and 26 team sparring sessions, averaging 90 minutes each. All 45 managers—the membership of three management teams— engaged in some degree of sparring over this time period. Use of a logbook, of a dictaphone, and of external observers aided collection of intervention data. We did not record the sessions directly to avoid inhibiting open discussion. Rather, the first researcher took notes using the following structure for her logbook: opening concern, central issue(s) discussed, researcher's questions and impressions, concluding session summary. Immediately following every session, she documented the experience more fully using a dictaphone. External observers served to aid triangulation. A Lego HR facilitator, with whom the managers were already quite comfortable, observed most group sessions, contributing her notes on more specific manager and researcher comments and discussing her views of the session with the first researcher at its conclusion. For the last two months, once managers expressed feeling at ease with the sparring process, two graduate research assistants also observed each session to track their flow and document all comments.

During the intervention phase, the first author and the focus group held four review sessions to evaluate emerging patterns of managerial issues and of sensemaking. Examining accumulated intervention data from the logbook and from the dictaphone and observers' notes, the first researcher would present the issues raised by managers. Working collaboratively, she and the focus group categorized the issues within three themes. The first involved managers' *roles*, encompassing questions about what effective management meant in the new structure. For instance, a manager stated, "As a manager . . . you are supposed to have all the answers, be the best technician and be very sure of yourself. But how can we be people oriented, but also production oriented?" (logbook, August 1999). The second theme dealt with *relationships*, as managers questioned how to interact as leaders of production teams and members of a management team. A manager offered this example: "If we [the management team] don't communicate or trust each other, how can we expect more of our production teams?" (logbook, August 1999). The last theme revolved around the *organization*, indicating confusion over structural and procedural changes. A quotation from a manager illustrates: "I know we are part of the changes. But are we supposed to continue making changes or should we just try to create something more stable?" (logbook, February 2000).

Early in the intervention phase, we also began to systematize interactions during sparring sessions, seeking a toolbox of questions that might help managers examine their issues more deeply. We proposed, and the focus group approved, the use of Tomm's (1987) interventive questioning. Designed to help tease out sources of cognitive disorder through collaborative action research, his four types of questions seemed an excellent fit. Linear and circular questions help surface existing understandings of an issue. Linear questions ask participants to describe their view of a situation—what is the issue, how did it arise, what are possible causal explanations. Circular questions seek to widen the focus from descriptions and reasons toward broader connections in behavioral and communicative patterns. Asking participants to examine an issue from others' viewpoints elaborates its complexity. In contrast, reflexive and strategic questions aid exploration of alternative understandings and responses to the issue. Reflexive questions encourage participants to consider deeper implications. These questions help participants reflect upon potential effects of their perceptions and actions and to consider new options. Lastly, strategic questions are the most confrontational and directive. Posing more varied alternatives, a researcher pushes participants to experiment with different framings and related responses. These interventive questions are illustrated in the Findings section.

Theory building. In the final phase, we sought to formulate, evaluate, and revise our understandings within coherent concepts and theory. Although sparring sessions continued through fall 2001, in retrospect, the theory-building phase began in earnest in October 2000, when a review session sparked more intensive and focused induction. Self-managed teams had been in place for over a

year, and we had collected extensive data identifying both primary concerns of managers and emerging patterns of sensemaking within sparring sessions. The first author had become sensitized to frequent indicators of contradictions and tensions and had turned to the psychological and organizational literatures on paradox for insight. In that October review session, while analyzing the accumulated list of sparring session issues, she shared with the focus group theoretical understandings of paradox, noting possible examples within the list. The notion seemed to resonate immediately with the managers. The energy in the room rose and became palpable as they elaborated, identifying numerous instances of paradoxical managerial demands.

Review sessions and outsider perspectives were vital to the theory-building phase, which continued until the final report was submitted in spring 2002. At review sessions, the first researcher fed back issues, patterns, and meanings she had identified by scrutinizing the intervention data (from the sparring logbook, interview transcripts, and observers' notes). As the first author and focus group concentrated increasingly on paradoxes, we introduced other viewpoints. In addition to examining paradox literature, the first author sought a researcher in that area—the second author—to critique identified patterns, pose alternative explanations, and help craft more integrative models. During this phase, the HR facilitator observed all review sessions to assess whether the researcher and managers were remaining open and critical. Another consultant, hired to provide unrelated training at Lego, facilitated a review aimed at elaborating central themes. That session was videotaped and the consultant's feedback shared with the participants. Lastly, we conducted semistructured interviews with top executives Kjeld Kirk Kristiansen and Poul Ploughman, seeking their views on how the restructuring was affecting middle managers.

Paradox became central to our collaborative theory building as understandings that had emerged during the intervention phase gained added meaning. Managerial themes, initially focused on roles, relationships, and the organization, became conceptualized as paradoxes of performing, belonging, and organizing, respectively. Likewise, the sparring sessions had evolved into a patterned process deemed instrumental in helping managers wrestle with these paradoxes. In sum, by using paradox as a lens (Cameron & Quinn, 1988; Lewis, 2000; Poole & Van de Ven, 1989), we came to view sparring sessions as a process of *working through paradox* and the managers' challenges as *paradoxes of organizational change*. We now detail these findings.

FINDINGS

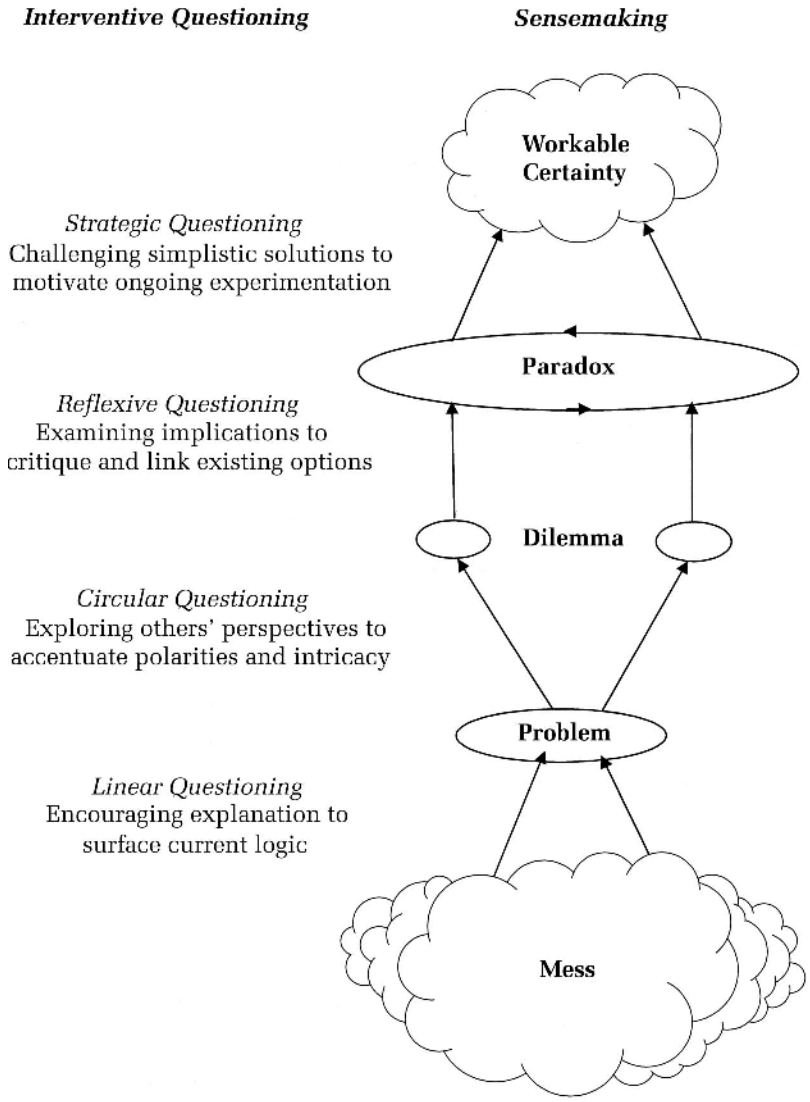
During our action research, sparring sessions provided a bounded context for sensemaking—an opportunity to collaboratively surface and alter managers' understandings of change. Sparring facilitated double-loop learning by helping managers' question their existing frames and explore alternatives (Argyris, 1993; Bateson, 1972). Indeed, shared with the focus group, Watzlawick and colleagues' (1974) underlying premise became our mantra for sparring: The problem is not the problem; the problem is the way you think about the problem.

Sparring: A Collaborative Process of Working through Paradox

We now describe the collaborative process that became our means of *working through paradox*, helping the managers make sense of tenuous demands to reduce anxiety, escape paralysis, and enable action. Figure 1 depicts sparring as the interplay of sensemaking (on the right) and interventive questioning (on the left). When we presented an early version of this figure at a review session, the focus group quickly recognized it as an illustration of sparring sessions. The managers generally expressed satisfaction with the process, sharing their experiences to elaborate the different stages. To now detail each stage, we leverage feedback from the focus group and an integrating example from an extended sparring session. In later subsections, we add examples to demonstrate process variations spurred by different paradoxes of organizational change.

Mess. Sparring began as the participating manager posed an issue of personal concern. In Figure 1, a cloud depicts this starting point. Building from Ackoff (1978), we use "mess" to denote an intricate, fluid, and fuzzy issue. As Weick (1995) posited, actors initiate sensemaking by broadly bracketing a mess, defining what is and is not of interest, thereby setting boundaries for exploration. In this vein, sparring sessions typically would build from a messy issue, such as "How do we start working as a management team?" "How can I motivate people in my self-managed team?" "What do the executives expect from us now?" (examples from logbooks). Such examples illustrate the managers' desires for simple answers to intricate questions. Yet by stating the issue, the managers created a foundation for our collaborative sensemaking.

FIGURE 1
Sparring: A Collaborative Process of Working through Paradox



Problem. From this base, interwoven interventive questioning and sensemaking helped managers define a more specific problem. According to Ackoff (1978), formulating a problem bounds a mess to enable reflection. In the sparring sessions, linear questioning spurred this transition. Encouraging managers to thoroughly explain the issue helped surface their current logic. Such sparring supports the dominant mind-set by seeking a rational, problem-solution approach (Ford & Backoff, 1988). As Smith (1988) explained, problems differ from messes by signifying a call to action. A clearly stated problem places an issue on an agenda for solution finding, fueling hope for resolution. Indeed, focus group managers noted that they found linear questions comforting initially, as they vented their frustrations and requested assistance.

For instance, in an individual sparring session, a manager sought to examine a delegation issue (this session, which occurred in April 2000, serves as our integrating example). He began by depicting the mess: "I'm not sure how to effectively delegate now. For example, my department has a very prestigious product development project. I did appoint a project leader, but I worry that he isn't selecting the best people for his team." Linear questions pushed the manager to define a more precise problem by explaining his view. Questions (as recorded in the logbook) included: "Why is this issue important to you?"; "What factors do you think affect the issue?"; and "What are your concerns?"

Sparring helped managers explicate their current frames. In the integrating example, the manager summarized his problem: "How can I ensure that

my delegate makes good decisions?" (logbook). The initial comfort of an explicit problem, however, was often gradually replaced by a realization that the issue could not be packaged into a problem-solution approach. As White (1997) noted, problem formulation relies on "thin conclusions" that ignore surrounding intricacies. Linear questioning helped managers recognize when their current understandings oversimplified an issue. Hearing themselves articulate their fundamental assumptions about a problem, as well as its persistence and associated frustrations, made them aware that they were missing key elements, ignoring other perspectives and connections. Awareness that formal, problem-solving logic was insufficient motivated deeper exploration.

Dilemma. In the next stage of sensemaking, we investigated why managers felt incapable of solving problems, often identifying more complicated, underlying dilemmas. As Smith and Berg (1987) explained, a dilemma creates a sense of paralysis, or "stuckness," because it implies that a choice must be made between polarities each having high costs as well as valued benefits. Circular questioning (Tomm, 1987) accentuated the intricacy of issues by helping managers explore other perspectives (e.g., those of subordinates and executives).

Continuing with the previous example (from the logbook on an April 2000 sparring session) the first researcher asked such circular questions as, "How do you think your subordinates view your efforts to delegate? How might they feel when you make decisions for them?" and "How do you think your director expects you to delegate? What other expectations does he have of you as a team manager?" In response, the manager detailed related tensions. When he took the viewpoint of subordinates, he stressed the value of delegation for fostering motivation and trust, while noting continuing need for managerial oversight. When instead he took the viewpoint of the company's executives, expectations that the new structure be more participative were preeminent, as well as persistent demands to increase efficiency.

Awareness of a dilemma proved a valuable sensemaking stage. A dilemma contains the potential for resolution (i.e., an either/or choice) but requires grappling with multiple solutions, each posing benefits and limitations (Poole & Van de Ven, 1989). Exposing opposing sides of an issue intensified managers' sense of paralysis. By unpacking one polarity (e.g., stress delegation to empower subordinates), we were confronted with another (e.g., provide oversight to ensure efficiency), and vice versa.

Paradox. Oscillating between the horns of a dilemma motivated a paradoxical lens. As previous studies have suggested (e.g., Lewis, 2000; Westenholz, 1993), paradoxical thinking is spurred by recognizing a dilemma in which *no* choice can resolve the tension because opposing solutions are needed and interwoven. With the focus group, we identified reflexive questions as useful in encouraging managers to critique and alter their existing frames. According to Tomm (1987), reflexive questioning allows one to examine deeper implications. Although linear and circular questions help participants articulate current understandings of an issue, reflexive questions delve into the effects of those beliefs and related actions. Such questions pushed managers to examine the consequences of their understandings. In our continuing example, such questions included: "How does your current approach to delegation affect your role as manager?" "You say that you are also accountable for your team's production, what does that imply?" "You seem to define your responsibilities for both delegation and production as contradictory, but where does this understanding leave you— how do you respond?"

According to Argyris (1993), reflexive questions may spur double-loop learning, as participants not only question their current understandings, but also their very way of thinking. When a choice between polarities appeared untenable, the managers became wary of the either/or mind-set that had characterized their sensemaking to that point. In the integrating case, the manager was encouraged to think differently once he stated his predicament: "I'm stuck. I am ultimately responsible for my project leader's decisions, but I am supposed to let him, as well as everyone else, have more control over their performance. So how can I also be responsible?"

The seeming absurdity and rising frustration of such an unsolvable conflict sparked a search for both/and options. Moving to a higher level of abstraction, managers would seek a link between the contradictory elements. Further sparring encouraged such creativity. In our example, reflexive questions included: "So if you were to describe the project in five months, when everything is working well, what would be the results?" "What made them possible?" As the manager envisioned an alternative reality, he came to articulate the issue as paradoxical: "I think I let my delegate manage the project, but ask him to explain to me often what was happening, and to be willing to change quickly if needed. You see, I have to let go *and* retain control."

Workable certainty. During sparring sessions, different forms of interventive questioning helped shift our thinking. As we moved from a mess to a problem to a dilemma to a paradox, each stage encouraged deeper exploration toward a more "workable certainty." Following Weick (1995), workable certainty signifies that people can never fully grasp intricate situations. Rather, they are always in the process of sensemaking.

Strategic questioning challenges simplistic solutions, motivating managers to continuously experiment with alternative framings and approaches. Returning to our example, questions included: "Is what you are saying realistic? You want to leave your delegate in control, but you also don't want to let go of control?" "If you request constant updates, will your delegate truly be in control?" Such sparring seemed to help managers recognize the persistence of tensions and act accordingly. In this case, the manager developed a plan to discuss his concerns with the project leader, explaining that he wanted to trust him and delegate, but was concerned given such a high-stakes project. As the manager noted, "He [the project leader] will understand, I think. Maybe . . . I may even ask him what he suggests we do."

In the integrating example, as well as in other sparring sessions, closure did not signify a solution or endpoint, but a more manageable mess from which managers might work. Indeed, paradoxical understandings denoted a core change in their framing. We now elaborate this process by examining variations among different paradoxes of organizational change.

Paradoxes of Organizational Change

Applying paradox as a lens enabled new insights into managerial challenges. Early in the intervention phase, review sessions helped identify three themes that cut across issues: changes to managers' roles, relationships, and organization. As sparring sessions accumulated, however, paradox became central to our theory-building phase. In an extended review session (the October session described previously under "Theory Building") the managers and first author elaborated on the initial themes. Within each theme, we reviewed the expanded and more detailed list of managerial issues raised in sparring sessions from spring 1999 to fall 2000. We became focused on the pervasiveness of tensions, triangulated over different managers and issues. Agreeing that our original themes did not capture the intricacy of these tensions, we turned to prior work on paradox. The first author presented the focus group with existing paradox categories. These included group paradoxes of membership, belonging, and boundaries (Smith & Berg, 1987) and paradoxes of learning, belonging, and organization (Lewis, 2000).

As sparring sessions continued through fall 2001, we continued to painstakingly reexamine each managerial issue, exploring its fit and misfit within established paradox categories. Table 1 summarizes our results. Together, we came to view managers' issues as subsumed within paradoxes of performing, belonging, and organizing. In sum, we adapted two existing category labels (see Lewis, 2000; Smith & Berg, 1987) and constructed a third to categorize the tensions identified at Lego. We now leverage our sparring experiences and existing literature to unpack these paradoxes and related variations in our sensemaking process.

Paradoxes of performing. As the managers' roles "morphed," blurred, and multiplied, paradoxes of performing arose from conflicting managerial demands. According to Warglien and Masuch (1996), organizational change may foster competing views of managerial success; does it imply productivity or creativity, efficiency or quality, control or empowerment? At Lego, managers sought to make sense of their new roles as managers of self-managed teams. Table 1 summarizes how we worked through performing paradoxes during sparring sessions. The managers formulated such initial problems as, "How can I be in charge and let others make the decisions?" (logbook from sparring session, May 2000) and "How can we focus on building our teams, when there is such intense pressure to increase production?" (HR consultant notes from sparring session, October 2000). As the quote below reflects, the restructuring had disrupted managers' self-conceptions:

> As a manager you are used to being the guy who can handle it on his own. You are supposed to have all the answers, be the best technician and be very sure of yourself. . . . Now we should be people-oriented but also production-oriented; and we are supposed to reveal our own uncertainty and still be in charge. (transcript of interview, May 1999)

Mixed messages (Argyris, 1993; Putnam, 1986) from superiors to their subordinates seemed to perpetuate paradoxes of performing. For instance, a manager who tells his employees that he trusts them but constantly monitors their behavior sends signals of both trust and distrust. As other researchers have noted, a manager may or may not be aware of her or his mixed messages, but subordinates are challenged to respond to both signals (e.g., Labianca et al., 2000). If subordinates choose to accept the contradiction, the unclear communication may

TABLE 1
Examples of Working through Paradox

Problem: Formulating the Mess	Dilemma: Either/Or Thinking	Paradox: Discovering the Link	Toward a More Workable Certainty
Paradoxes of performing			
How do I avoid spending time on team conflict to keep my team focused on their work?	Should we address the conflict, OR should we get to work?	Build the team AND increase productivity.	Take time to deal with conflicts to create more efficient teams over the long run.
How can I delegate, when I know the best way to solve the problem?	Should I direct my employees, OR should I let them gain the experience?	Lead the way AND recede into the background.	Share my knowledge with employees to help them learn to solve problems themselves.
If teams become self-managing, what is my role?	Should I manage, OR should I let my employees manage?	Top-down AND bottom-up management.	Create optimal conditions for teams so they may become self-managing.
Paradoxes of belonging			
How do we come to trust each other in the team?	Should I express myself and risk being wrong, OR remain silent and risk not belonging?	Individual expression AND group formation.	Share my issues to enable comparisons, allowing the team to form around our individual expressions.
How can I involve team members at meetings when they don't say anything?	Should I talk, OR should I wait for them to take the initiative?	Engage AND disengage	Model effective communication and acceptance.
How do I build a strong team with such different members?	Should I set standard goals for the team, OR should I stress member differences?	Create unity AND emphasize diversity.	Treat members differently to build a homogeneous team.
Paradoxes of organizing			
How can I implement teams when the firm is in such turbulence?	Should I implement teams now, OR should I wait until changes stabilize?	Change AND stability.	Work to implement flexible, supportive teams capable of functioning in turbulence.
How can I establish self-managed teams when my employees are not motivated?	Should I force team building, OR should I respect my employees' wishes?	People act on what they find meaningful AND meaning is created through action.	Foster motivation for the new teams through the ongoing process of team building.
How can I follow executive mandates, when I have been told to make my own decisions?	Should I implement teams exactly as told, OR should I decide how best to organize my employees?	Explicit executive mandates for teams AND executive call to manage own teams.	Do what I believe is best for my teams, informing executives and working with them to ensure that my teams support firm objectives.

be confirmed and thereby established as part of the ongoing relationship.

As sparring sessions accumulated, we became aware of a "trickle-down" pattern of mixed messages. The managers often described executives as giving such messages. Yet the managers in turn sent similar mixed messages to their own employees. For example, executives called for managers to build effective teams while ensuring productivity. One manager, in response, felt that he must address conflict within one of his teams, but he was concerned that such a discussion would become emotional, time consuming, and inefficient. Struggling with this conflict, the manager gave mixed messages to that team. During a sparring session, he explained how he began a production team meeting by saying, "We need to talk about the conflict that is growing in our team, and preventing you from working effectively. So I need you to speak up in an *honest, orderly and civilized* manner" (logbook, November 2000). At one level the manager had called for an open discussion, but he also had constrained the expression allowed. He did not understand why his team reacted with silence, so we explored the question, "What if your subordinates' honest expressions are not orderly and civilized?"

Working through paradoxes of performing, most often the first researcher and managers used *splitting* to separate tensions temporally (e.g., first focusing on "a," then on "b") or spatially (e.g., half of team focuses on "a," the other half on "b") and enable a more workable certainty. By examining

new data and perspectives, we sought to generate a meaning that could accommodate contradictions. As previous studies have suggested (e.g., Lewis, 2000; Poole & Van de Ven, 1989), splitting helps managers view conflicting demands as complementary.

Continuing the previous example, this manager felt stuck, facing the dilemma: Should we address the conflict (build the team) or should we get to work (increase productivity)? Viewing good managerial performance as now requiring both, he sought a link between the demands. Reframing required moving from an either/or decision toward a both/and perspective. As Poole and Van de Ven (1989) proposed, splitting the tension aided such reframing. Using temporal separation, the manager applied means-end logic to reframe the issue: Addressing conflicts *now* may enable the team to *eventually* focus on its tasks. Using his new frame, the manager opened his next team meeting by stating, "We need to talk about this conflict. Let's hear what you are experiencing so we can work through it. Unless we talk about what is bothering you, we won't be able to reach a point where we can have a civilized and orderly working relation. So how do you experience the problem? (sparring session logbook, November 2000).

Paradoxes of belonging. Working through paradoxes of belonging helped managers cope with changing relationships. Related sparring sessions focused on the anxiety stemming from teams—how managers might relate to the management team and to their own production teams. For example, tensions surfaced at the first sparring session with the management team that became our focus group. This session was marked by awkward periods of silence, with the most interactive conversations occurring during a coffee break. Indeed, this insightful comment was made during the break:

> I don't know what we are doing in teams if nobody ever wants to say what they are really thinking. . . . Nobody dares ask for help, including myself. . . . Are people scared or what? We don't know what will be accepted, and I guess we want to know that first. And if nobody talks, we'll never know, will we? Ha, ha. (HR facilitator notes, August 1999)

Table 1 offers examples of belonging paradoxes addressed in sparring sessions. Sparring began as problems were formulated: How could managers begin working as a team when they did not trust the team? How could managers come to trust each other if not by sharing common experiences? How could they become part of the team, while preserving their independence? As managers became aware of such challenges within the management team, they noted similarities within their own production teams, supporting Smith and Berg's premise that "group life is inherently paradoxical" (1987: 15). Lewis (2000) depicted belonging paradoxes as tensions between self and other, noting that groups become cohesive by valuing the individuality of their members.

Although mixed messages appeared to underlie paradoxes of performing, "recursive cycles" seemed to be the dominant communication pattern in the belonging paradoxes. According to Putnam (1986), recursive cycles denote a double bind in which actors feel stuck in an emotional cycle of social interactions. For instance, each time actors move toward a group, they fear losing their individuality. Yet as actors reveal themselves, they risk being rejected by the group. One side of the dynamic fuels the opposite, fostering emotional paralysis. As illustration, during individual interviews in April and May 1999, every single member of the focus group expressed the hope that the management team would become a valuable setting for discussing managerial challenges. Yet these same managers all noted difficulty trusting the team enough to start sharing their concerns. Furthermore, the managers avoided discussing their hesitancy with each other for fear it would signal distrust, potentially harming team relationships.

Confrontation helped the managers break out of recursive cycles to work through belonging paradoxes. This finding elaborates those of previous studies. For instance, Smith and Berg (1987) claimed that when tensions swirl around relationships, emotions (e.g., hope, fear) spur defensiveness and the need for confrontation. Following Vince and Broussine (1996), we noted two possibly interwoven approaches to confrontation: "collective reflection" and "modeling." Collective reflection is an attempt to address one's own defenses. Such confrontation may occur most effectively away from the emotion-laden context and with an outsider, someone who is not caught up in the emotions but is capable of empathizing with involved actors. Individual sparring sessions enabled this approach, as managers shared their concerns with the first researcher. The second approach occurred within a group. Yet rather than overtly discussing concerns about that group with the group, confrontation in this setting entailed modeling. Taking the risk of revealing themselves, actors model their hopes for group interactions (Vince & Broussine, 1996). For example, in a group sparring session, a manager finally spoke up, saying: "In my department I am struggling with issues of. . . . I'm sure that I am not the only one having these problems" (logbook, October 1999).

Managers also seemed more comfortable confronting belonging paradoxes when they focused on tensions in their production teams, rather than in the management team. This focus diverted attention from the managers themselves toward their subordinates' defenses. For instance, in a group sparring session, a manager questioned how to involve his employees in team meetings when they remained quiet (logbook, January 2000). He noted that he usually responded by doing all of the talking, reconstructing past, hierarchical dynamics as meetings became manager lectures rather than team discussions. Through collective reflection, managers examined the tension between subordinates' desires to be involved and fears of being vulnerable. During sparring, we formulated a paradox of managers' needing to engage to disengage. The manager who initiated this discussion summarized: "I think I may need to just show them by revealing myself, and see if someone follows." If he modeled the desired behavior— engaging in team interactions— others might confront their conflicting emotions and experiment with ways to participate. By then gradually disengaging, the manager could allow the team to take the initiative.

Paradoxes of organizing. Studies suggest that the very process of organizing spurs paradox (e.g., Smith & Berg, 1987; Weick, 1995). Lewis (2000) described paradoxes of organizing, especially prevalent in periods of changes, as stemming from conflicts between old and new. Likewise, Putnam (1986) described the clash between changing organizational objectives as paradoxical: organizations tend to solve problems fostered by the constraints of one objective by introducing a new objective. Yet the new organizational objective may be just as constraining, albeit in new ways, thereby compounding issues. Similarly, the existing culture and structure reflect and inhibit behaviors aimed at their change (Poole & Van de Ven, 1989).

Compared to paradoxes of performing and belonging, paradoxes of organizing operate at a more macro level. At Lego, triangulation over managerial sparring sessions, external observations, and varied focal issues helped accentuate these differences. As possible patterns were examined with the focus group, organizing paradoxes became identified by managers' articulating tensions embedded within the changing system, rather than tensions within their own roles (performing paradoxes) or among their relationships and teams (belonging paradoxes). Exemplified in Table 1, organizing paradoxes included managers' examining such problems as how to implement teams when the very purpose of teams was still emerging within the organization. Likewise, they asked how they could follow the expanding set of executive mandates regarding teams when one mandate was for managers to manage their own teams. As one manager stated:

> It is interesting what is happening in the organization right now. I just think that managers have a hard time making sense of this. Nobody can work efficiently when there is so much turbulence. We seem to be waiting for the organizational changes to stop so we can get to work. . . . But we are also supposed to be implementing the changes (logbook, group sparring session, September 2000).

We came to view "systemic contradictions," or communication patterns entrenched deep within organizational processes, practices, and structures (Putnam, 1986), as underlying paradoxes of organizing. For instance, as changes began, executives stressed how they valued managers who take initiative, are creative, and demonstrate diverse capabilities. Yet, as one manager explained (logbook, sparring session, October 2000), rewarded managers tended to have a very uniform profile. In his concluding interview, the CEO confirmed this contradiction, stating: "I tell my managers that I do not want them to question firm goals and strategies all the time. They have to be able to convey common aims and stick to the plan." Yet later, he said: "The managers around me all know that they are obligated to question routine practice and engage in dialogues to improve praxis all the time. They must be willing to take personal risks and constantly reflect on whether practice could be improved" (transcript, August 2001). Such statements reflect ingrained, but conflicting, norms, as successful managers were described as both compliant and independent.

Paradoxes related to the change process, and thus to the ongoing process of organizing, appeared to become paralyzing when middle managers blamed executives for the tensions. During review sessions, we speculated that top management may attempt to deny paradoxical features of changes, sending clear, one-dimensional messages in hopes of helping lower managers comprehend complicated issues. The result, however, is a vicious cycle. Middle managers eventually note conflicts among accumulating mandates and feel a sense of stuckness. Striving to maintain stability and create change, executives accentuate systemic contradictions.

Working through organizing paradoxes seemed to require *acceptance* via both/and approaches to paradox (Lewis, 2000). In common use, acceptance may imply submission, surrender, or avoidance. Yet, in the context of paradox, acceptance denotes

a new understanding of inconsistencies, conflict, and ambiguity as natural working conditions (Poole & Van de Ven, 1989). Such awareness was empowering, reducing tendencies to blame executives and shifting responsibility to the managers to find means of living with tensions. For example, at a management group sparring session (logbook, September 2000), the managers decided to explore the questions, What expectations do we have of our director? and How do we expect to be managed? Sharing their hopes for their team and its management, they raised the dilemma of needing the director to make a *common* agenda for team meetings, but also wanting him to address their *different* needs. Ensuing debate revolved around how the director could know what would be perceived as "common" and how he could determine what each manager needed. Eventually the team noted that the two poles were linked: high-performing, unified teams simultaneously meet diverse, individual needs. Once both polarities of the paradox were accepted, the managers agreed that they should provide their director with more information prior to team meetings, helping him set an agenda that worked for *both* the team and its members.

At the final review session with the focus group in September 2001, according to both the logbook and the HR facilitator notes, one manager noted a distinction of organizing paradoxes. He commented that sparring had helped them work through many of their role and relationship challenges but also said that it seemed that managers were becoming more, rather than less, frustrated with the changing organization. Other members agreed, noting that executive mandates were still ambiguous. The conversation evolved into a lengthy debate over whether the ambiguity was a consequence of poor communications, or part of the change process itself. In time, the group came to describe executives' messages as necessarily reflecting broader organizational tensions. As Poole and Van de Ven (1989) proposed, acceptance proved vital in this case, enabling a degree of comfort with contradictions ingrained in the organizing process. Such recognition helped tap the positive potential for tensions to trigger both/and approaches and ongoing adjustment. Yet acceptance also seemed precarious. Despite consensus that organizing paradoxes were inherent in change, a few managers still harbored desires for resolution. Their parting comments exposed lingering hope that executives would eventually make mandates simple, clear, and unequivocal.

DISCUSSION

Paradox became central to the process *and* focus of our study of organizational change and managerial sensemaking. In hindsight, this is not surprising. "When environments are complex and changing, conditions are ripe for the experience of contradiction, incongruity, and incoherence and the recognition of paradox and ambiguity within organizations" (Hatch & Ehrlich, 1993: 505–506). According to Lewis, change surfaces "contradictory yet interrelated elements—elements that seem logical in isolation but absurd and irrational when appearing simultaneously" (2000: 760). In turn, such awareness spurs sensemaking, as actors seek a more orderly understanding. This was the case at Lego. Middle managers felt paralyzed, struggling to comprehend the restructuring and its impact on their roles, relationships, and organization.

In line with what others have proposed (e.g., Cameron & Quinn, 1988; Poole & Van de Ven, 1989), we found that shifting the notion of paradox from a label to a lens aids sensemaking. Paradox may then serve as a means for managers and researchers to consider other perspectives, alter their assumptions, and explore issues in fundamentally different ways (DeCock & Rickards, 1996). As Wendt explained, "The wisdom extracted from organizational paradoxes can change how we think more than what we think" (1998: 361). Indeed, comprehending paradox helped the Lego managers move beyond a search for simple, logical solutions to intricate, messy issues. Through intervention and reflection, we constructed more meaningful and actionable understandings. We now discuss these contributions, as well as the limitations and implications of the study.

Contributions

In line with Reason (1993), our action research resulted in both process and discrete products. Contributing a process of working through paradox, our collaborative approach extends theories of sensemaking and change (e.g., Bartunek, 1983; Isabella, 1990; Labianca et al., 2000; Maitlis, 2005). "Working through" does not imply eliminating or resolving paradox, but constructing a more workable certainty that enables change. Through our action research, sparring developed into a form of "paradoxical inquiry," a term coined to highlight the concept's similarities and differences with dialectical inquiry (cf. Schweiger, Sandberg, & Rech-

ner, 1989).[2] Like dialectical inquiry, sparring offers a systematic means of enhancing collaborative interactions. Yet their goals and approaches differ. The aim of dialectical inquiry is to improve decision quality by purposefully infusing tensions into group dynamics, then seeking resolution by synthesizing divergent alternatives. In contrast, paradoxical inquiry moves sensemaking toward an understanding that accommodates, rather than eliminates, persistent tensions. Illustrated in Figure 1, paradoxical inquiry leverages interventive questioning to help managers transition through sensemaking stages. Participants gradually surfaced, tested, and expanded simplistic, either/or frames to think more paradoxically. A facilitator and collaboration seemed key ingredients in sparring sessions.

An external facilitator may be vital to paradoxical inquiry. An ideal facilitator supports the sensemaking process from a viewpoint unencumbered by daily managerial responsibilities. In our case, the first author played this part, guiding sparring sessions by utilizing varied forms of questioning to enable transitions between phases. Argyris (1993) also stressed the facilitator role. By provoking discussions that disrupt ingrained modes of thinking, a facilitator may help actors break out of single-loop learning into double-loop reframing, particularly during major organizational change. Westenholz (1993), for example, used action research interventions to fuel debates that helped expose conflicting demands and encourage a paradox perspective. In their study of TQM adoption, De Cock and Rickards (1996) identified paradoxical themes through interviews and then presented those themes to managers in group feedback sessions. Like Westenholz's work and our study, their study showed that paradox energized reflection, offering a "counterweight to the unreflective discourse surrounding the management of change" (1996: 248). Yet unlike these studies, our action research also produced a specific process that became a valued tool for helping the managers work through paradoxes of organizational change.

The significance of collaboration in paradoxical inquiry extends research that depicts managerial frames as shifting through social interaction (e.g., Isabella, 1990; Maitlis, 2005). For example, Hatch and Ehrlich (1993) examined how a management team juxtaposed contradictory and equivocal messages in meetings. Using irony and humor helped managers work together to make sense of their paradoxical, changing roles. Similarly, Balogun and Johnson (2004) stressed the importance of middle managers' interactions to reframing. They explained that as firms move toward more decentralized structures, the actions, language, and shared experiences of peers have a direct effect on managerial sensemaking (2004: 524). Our study builds from these insights by recognizing the potential for action research to facilitate collaboration. Sparring sessions provided a space for managers to explore their tensions and critique their current frames.

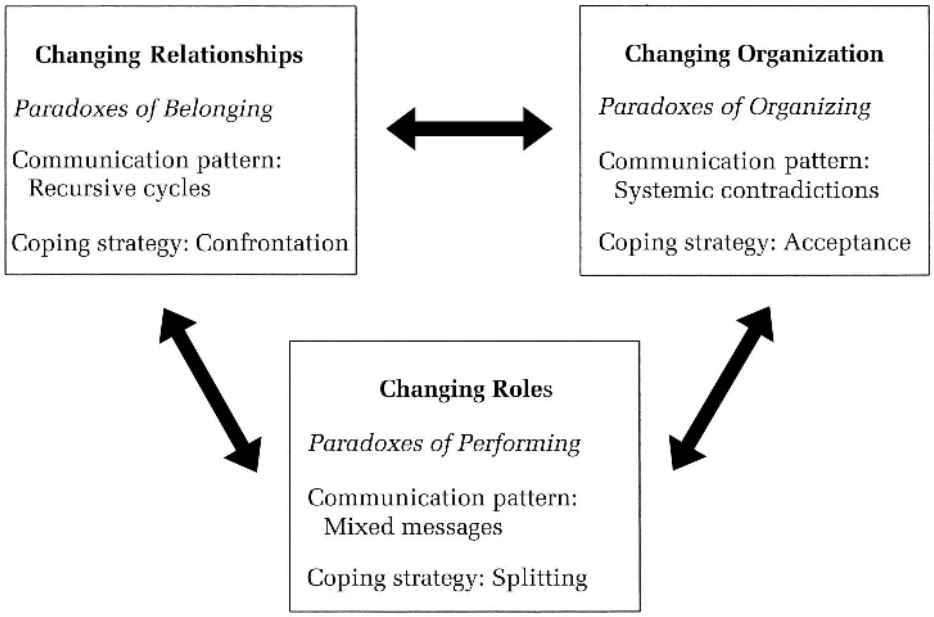
In practice, paradoxical inquiry may serve as a systematic means of helping managers cope with ubiquitous paradox. Organizational change places a premium on such sensemaking support. As McKinley and Scherer (2000) explained, the cognitive disorder created by change can debilitate, frustrate, and even paralyze middle managers. Developing and repeatedly applying this process at Lego, the production managers experienced how working through paradox could help them enact a more workable certainty—a negotiated understanding, sometimes even more complex than the former understanding, but eventually more meaningful and actionable.

The second area of contribution involves our discrete research products. The substantive categories resulting from our work exemplify how a paradox lens helped shed new light on managerial challenges of organizational change. We came to view the managers' issues in terms of three paradoxes, each with a prominent communication pattern and coping strategy. By illustrating and elaborating paradoxes of organizing (Lewis, 2000) and belonging (Lewis, 2000; Smith, & Berg, 1987) and by introducing paradoxes of performing, our research demonstrates the importance of managers' understanding varied forms of paradox. Stepping back to examine these products, we propose that more intricate links exist among the paradoxes. Figure 2 illustrates the proposed relationships. Such links further strain sensemaking, as seemingly distinct, albeit difficult, issues are further complicated by their interplay.

This action research extends understandings of interconnections among paradoxes. In her work on communicative patterns of paradox, Putnam (1986) posited a linear, upward flow from mixed messages sent at the individual level toward systemic contradictions entrenched within a firm. In essence, tensions bubble up. Mixed messages often become stable patterns, fostering recursive cycles within groups as they become undiscussable and emotion-laden elements of daily life (Argyris, 1993). Eventually such communicative patterns become independent of actors, embedded within the system

[2] Special thanks to the reviewer who suggested this language and comparison.

FIGURE 2
Managerial Challenges of Organizational Change Viewed through a Paradox Lens



itself. As illustrated in Figure 2 with the arrows pointing in both directions, our study suggests more reciprocal interplay among paradoxes. Living with systemic contradictions, actors may come to send mixed messages or fuel recursive cycles. For instance, the organizing paradox of needing both stability and change is reflected in conflicting mandates for managers to increase productivity and build their teams. In this case, performing paradoxes may mirror systemic contradictions as managers communicate mixed messages of needing to resolve team conflicts but also use team time efficiently. Likewise, systemic contradictions may spur recursive cycles. For example, conflicting organizational demands for top-down and bottom-up management may challenge managers to engage and disengage in their teams' efforts.

Interwoven communication patterns, in turn, imply the potential for coping strategies to reinforce each other. Paradoxes of performing, for example, are related to actors' self-understanding. Splitting may enable reframing by reducing cognitive conflict between seemingly competing roles, expectations, and demands. Likewise, emotional tensions that pervade paradoxes of belonging may benefit from more social confrontation through collective reflection and modeling. In turn, viewing paradox as a natural feature of intricate and dynamic systems suggests that paradoxes of organizing benefit from acceptance. Yet ongoing paradox management may require all of the above, as coping with one paradox may enable coping with related paradoxes. Splitting exposes alternative perspectives that may aid confrontation, while acceptance reduces defensiveness to facilitate splitting, and social confrontation may fuel exploration of undiscussable issues and foster more collaborative and productive sensemaking.

Lüscher, Lewis, and Ingram (2006) complements these findings, focusing on the social construction of paradoxes. That work examines the communicative patterns identified by the action research reported here and related paradox studies. As they noted, "Identifying links between paradoxes and communication suggests discursive processes through which actors seek to make sense of change, but that often foster anxiety and paralysis" (Lüscher et al., 2006: 492).

Limitations

The limitations of this work stem from the nature of action research as well as from our particular approach. By scrutinizing the boundary conditions of this study, we now address limits to its impact and generalizability.

The impact of this research on the managers and on the Lego Company was limited by its design. Our goals were solely supporting managerial sensemaking and building related theory. As the approving executive understood, we did not seek to enhance performance or implement change mandates. Rather, helping middle managers construct a more workable certainty was seen as a necessary

foundation for future efforts. When we arrived, the managers felt nearly paralyzed by complexity, ambiguity, and equivocality. Upon our leaving, they expressed new comfort in their paradoxical demands. Yet the lasting value of these results is unknown.

Whether a paradox lens and paradoxical inquiry can or should be retained is a provocative question. Calls to institutionalize paradoxical thinking have been heard since Peters and Waterman (1982) and issued by OD texts (e.g., Bolman & Deal, 1991; Collins & Porras, 2002). Indeed, at the end of our study, the focus group managers stated that they looked forward to integrating "self-managed sparring sessions" into their routines, hoping to work through paradox on an ongoing basis. Yet as Westenholz (1993) argued, paradox frames are precarious. Actors are tempted continuously into old schemata as tensions persist. Paradoxical inquiry may be more effective when it is used periodically—to reexamine taken-for-granted frames or in times of change—and when it is led by an external facilitator. That said, some managers may be particularly capable of internalizing a paradox lens. Previous research suggests that managers should develop paradoxical capabilities (e.g., Cameron & Quinn, 1988; Lewis, 2000), but might some personalities be more amenable than others? For instance, Leana and Barry (2000) proposed that tolerance for ambiguity and openness to experience might help managers to better cope with tensions sparked by change.

Furthermore, not all issues are paradoxical and, therefore, appropriate for paradoxical inquiry. For instance, a technical problem, no matter how messy, may demand a solution, and some dilemmas require an either/or trade-off, despite each option having its downsides. In such cases, more traditional logical problem solving may be the fitting and efficient approach (Ackoff, 1978). In contrast, paradox denotes tensions that are tightly interwoven and persistent. Paradoxical inquiry may fit instances of managers feeling stuck (Smith & Berg, 1987), in that that are unable to reach a solution or make a trade-off because divergent approaches trigger the need for their opposite. In these cases, facilitated collaborative sparring may help managers break out of well-worn sensemaking paths to explore an issue in a new light. We encourage future research to further delineate uses for paradoxical inquiry and characteristics conducive to a paradox lens.

The long-term impact of this action research is also unclear. This study was enabled by the researchers' and Lego executives' belief that managerial sensemaking is a critical foundation for change implementation and ongoing performance. Research supports this claim broadly (e.g., Davis et al., 1997; Weick, 1995). Balogun and Johnson found that middle managers *create change*, determining its outcomes "through their social processes of interaction and the meanings they develop as a result" (2004: 546). Similarly, Labianca and colleagues (2000) identified a strong link between managers' sensemaking and their commitment—or resistance—to change. Yet specific behavioral and organizational effects of paradoxical inquiry remain in question. During this action research, the managers reported back on the benefits of their altered frames. For example, reframing the performing paradox of needing to build his team *and* focus on productivity, a manager found that setting aside time to deal with team conflicts enabled members to be more efficient in their work. Yet whether such responses to paradoxes continued and how they affected larger structural changes is unknown. For example, if productivity pressures intensified, would the manager reduce "team-building time" in favor of keeping his subordinates on the production line? Such questions call for more longitudinal and targeted research.

Questions of generalizability also arise, as action research is necessarily situated. Our research approach, setting, and findings are necessarily interwoven. Indeed, we fully assume that the types of paradoxes and effectiveness of paradoxical inquiry will vary over settings and studies, but we hope that our research can serve as a guide. Two factors, in particular, may influence the worth of this guide: idiosyncrasies of Lego and our focus on middle managers.

First, Lego provided an excellent but possibly exceptional setting for studying change and managerial sensemaking. Like countless other corporations, Lego faced disruptive environmental shifts, responding with dramatic restructuring. Furthermore, the paradoxical tensions identified by the production managers mirror those found in other studies (e.g., Ford & Backoff, 1988; Lewis, 2000; Smith & Berg, 1987; Warglien & Masuch, 1996). Yet the interest of Lego's executives in sensemaking may not be common in corporations. In particular, the director who approved our study stressed his desire to support managerial sensemaking, rather than to speed change implementation or performance improvements. Regardless, we look to future research to apply paradoxical inquiry, enabling comparisons among varied organizational settings.

A second generalizability issue revolves around our focus on middle managers. This action research offers insights into the sensemaking of this vital, and often overlooked, group of change agents. Yet

executives remain critical. We encourage investigations of whether a paradox lens and paradoxical inquiry might support more strategic sensemaking. Such studies may elaborate existing understandings of the value and challenges of paradoxical leadership, building from the early works of Cameron and Quinn (1988). Similarly, organizations may be more effective when managers at different levels levels share similar paradoxical understandings. Handy suggested that discrepancies between top and middle management views can challenge both sides: "Living with paradox is like riding a seesaw. If you know how the process works, *and* if the person at the other end also knows, then the ride can be exhilarating. If, however, your opposite number does not understand, or willfully upsets the pattern, you can receive a very uncomfortable and unexpected shock" (1994: 48).

Implications

We hope that this work provides an exemplar for the study of organizational paradoxes and the practice of action research. Yet our collaborative approach offers both opportunities and challenges for researchers. On the one hand, our methods enabled remarkable access to the sensemaking process. Sensemaking is a social activity, originating in the relations between organizational actors and extending to the unique relationship between researcher and researched. Sparring sessions enabled us to help managers surface and question their existing frames. Review sessions complemented these efforts, expanding sparring insights by engaging a team of managers in reflective data analysis and induction.

Collaborative action research, however, stands in stark contrast to methods that pose researchers as objective and neutral, or that treat researcher influence as a bias or unintended effect. Indeed, our approach requires a degree of flexibility and involvement foreign—and potentially anxiety-provoking—to many trained researchers. The research process is rendered more visible and reliable, however, through a disciplined account of managers' and researchers' roles in constructing shared understandings. Researchers must remain highly critical of their own perceptions. In this case of sensemaking and paradox, we became acutely aware of temptations to revert to a linear, problem-solving mode. As frustrations rise, both managers and researchers may push for clean, concise answers. The temptation is often great (who doesn't hold an opinion about "what ought to be done here"?). As interventionists, action researchers are judged on their ability to help enact change. Likewise, organizational actors want to learn how to *do* something differently. They want researchers to tell them *what* to do. In contrast, applying paradoxical inquiry, the researcher serves to encourage exploration of new modes of thinking, alternative perspectives, and varied means of framing reality that may facilitate action.

Indeed, this action research became a collaborative process of sensemaking. Together with the managers, we worked through paradoxes of performing, belonging, and organizing. Our experience confirms Eisenhardt's (2000) claim that by exploring paradox, managers and researchers open opportunities for understandings more in tune with the inconsistencies, contradictions, and absurdities of their dynamic setting. Applying a paradox lens disrupts existing frames—frames that contained perceptions within current belief systems. As change intensifies complexity, ambiguity, and equivocality, and tensions become increasingly pervasive in daily life, the ability to comprehend paradox is emerging as a critical managerial, as well as research, skill (Handy, 1994). Yet just as labeling paradox may do little to support managerial sensemaking, the same is likely true for researchers (Lewis, 2000; Wendt, 1998). Poole and Van de Ven (1989) encouraged researchers to actively use a paradox lens to help break out of oversimplified, often polarized concepts and models and fuel more creative theory building. Yet exploring paradox is paradoxical. We certainly experienced this at Lego as our growing comfort with a paradox lens both challenged and energized our thinking.

In conclusion, we call attention to the double meaning of "working through paradox."[3] A paradox lens enabled sensemaking, and paradoxical inquiry guided our collaborative journey. Yet this journey did not end with resolution. Our action research helped reduce managers' anxieties about stuckness and paralysis. The paradoxes did not, however, disappear. Rather, we became increasingly convinced that our findings were a modest beginning, as awareness of paradoxes and their interactions with sensemaking and change complicated our very understandings of managing. For employing a paradox perspective in the traditionally problem-solving cultures of organizations and academia takes courage. Although an individual manager or researcher may recognize paradox and try to work through it, others' perceptions may vary. For instance, the manager who approaches intricate matters paradoxically may be perceived as

[3] We appreciate the reviewer comment that noted this double meaning.

inconsistent and unclear by subordinates. Yet if that manager continues approaching tensions from an either/or stance, he or she may be unable to navigate flexibly and contribute productively to change. Therefore, the lesson is not that paradox offers a panacea. There is no way out! Rather, a paradox lens and paradoxical inquiry may offer means for new and more enabling understandings of contradictory managerial demands and ubiquitous tensions.

REFERENCES

Ackoff, R. L. 1978. ***The art of problem solving.*** New York: Wiley.

Argyris, C. 1993. ***Knowledge for action: A guide to overcoming barriers to organizational change.*** San Francisco: Jossey-Bass.

Balogun, J., & Johnson, G. 2004. Organizational restructuring and middle manager sensemaking. ***Academy of Management Journal,*** 47: 523–549.

Bartunek, J. M. 1984. Changing interpretive schemes and organizational restructuring: The example of a religious order. ***Administrative Science Quarterly,*** 29: 355–372.

Bartunek, J. M. 1988. The dynamics of personal and organizational reframing. In R. E. Quinn & K. S. Cameron (Eds.), ***Paradox and transformation: Toward a theory of change in organization and management:*** 137–162. Cambridge, MA: Ballinger.

Bolman, L. G., & Deal, T. E. 1991. ***Reframing organizations.*** San Francisco: Jossey-Bass.

Cameron, K. S., & Quinn, R. E. 1988. Organizational paradox and transformation In R. E. Quinn & K. S. Cameron (Eds.), ***Paradox and transformation: Toward a theory of change in organization and management:*** 12–18. Cambridge, MA: Ballinger.

Chisholm, R. F., & Elden, M. 1993. Features of emerging action research. ***Human Relations,*** 46: 275–298.

Collins, J. C., & Porras, J. I. 2002. ***Built to last.*** New York: HarperBusiness Book.

Davis, A. S., Maranville, S. J., & Obloj, K. 1997. The paradoxical process of organizational transformation: Propositions and a case study. In W. A. Pasmore & R. W. Woodman (Eds.), ***Research in organizational change and development,*** vol. 10: 275–314. Greenwich, CT: JAI Press.

De Cock, C., & Rickards, T. 1996. Thinking about organizational change: Towards two kinds of process intervention. ***International Journal of Organizational Analysis,*** 4: 233–251.

Dewey, J. 1933. ***How we think.*** New York: Heath.

Eden, C., & Huxham, C. 1996. Action research for management research. ***British Journal of Management,*** 7: 75– 86.

Eisenhardt, K. M. 2000. Paradox, spirals, ambivalence: The new language of change and pluralism. ***Academy of Management Review,*** 25: 703–705.

Floyd, S. W., & Wooldridge, B. 1992. Middle management involvement in strategy and its association with strategic type: A research note. ***Strategic Management Journal,*** 13: 153–168.

Ford, J. D., & Backoff, R. W. 1988. Organizational change in and out of dualities and paradox. In R. E. Quinn & K. S. Cameron (Eds.), ***Paradox and transformation: Toward a theory of change in organization and management:*** 81–121. Cambridge, MA: Ballinger.

Gioia, D. A., & Chittipeddi, K. 1991. Sensemaking and sensegiving in strategic change initiation. ***Strategic Management Journal,*** 12: 433– 448.

Gustavsen, B. 2001. Theory and practice: The mediating discourse. In P. Reason & H. Bradbury (Eds.), ***Handbook of action research:*** 7–26. London: Sage.

Handy, C. 1994. ***The age of paradox.*** Boston: Harvard Business School Press.

Hatch, M. J., & Ehrlich, S. B. 1993. Spontaneous humor as an indicator of paradox and ambiguity in organizations. ***Organization Studies,*** 14: 505–506.

Huxham, C., & Vangen, S. 2000. Leadership in the shaping and implementation of collaboration agendas: How things happen in a (not quite) joined-up world. ***Academy of Management Journal,*** 43: 1159 –1175.

Huy, Q. N. 2002. Emotional balancing of organizational continuity and radical change: The contribution of middle managers. ***Administrative Science Quarterly,*** 47: 31– 69.

Isabella, L. A. 1990. Evolving interpretations as a change unfolds: How managers construe key organizational events. ***Academy of Management Journal,*** 33: 7– 41.

Jick, T. D. 1979. Mixing qualitative and quantitative methods: Triangulation in action. ***Administrative Science Quarterly,*** 24: 602– 611.

Kanter, R. M., Stein, B. A., & Jick, T. D. 1992. ***The challenge of organizational change: How companies experience and leaders guide it.*** New York: Free Press.

Labianca, G., Gray, B., & Brass, D. J. 2000. A grounded model of organizational schema change during empowerment. ***Organization Science,*** 11: 235–257.

Leana, C. R., & Barry, B. 2000. Stability and change as simultaneous experiences in organizational life. ***Academy of Management Review,*** 25: 253–259.

Lewin, K. 1946. Action research and minority problems. ***Journal of Social Issues,*** 2(4): 34 – 46.

Lewis, M. W. 2000. Exploring paradox: Toward a more comprehensive guide. ***Academy of Management Review,*** 25: 760 –776.

Lüscher, L. 2002. ***Working through paradox: An action research on sensemaking at the Lego Company.***

Doctoral dissertation, Aarhus School of Business, Aarhus, Denmark.

Lüscher, L., Lewis, M. W., & Ingram, A. 2006. The social construction of organizational change paradoxes. ***Journal of Organizational Change Management,*** 19: 491–502.

Maitlis, S. 2005. The social processes of organizational sensemaking. ***Academy of Management Journal,*** 48: 21– 49.

McKernan, J. 1996. ***Curriculum action research: A handbook of methods and resources for the reflective practitioner.*** London: Sage.

McKinley, W., & Scherer, A. 2000. Some unanticipated consequences of organizational restructuring. ***Academy of Management Review,*** 25: 735–752.

Miles, M. B., & Huberman, A. M. 1994. ***Qualitative data analysis.*** Newbury Park, CA: Sage.

Poole, M. S., & Van de Ven, A. H. 1989. Using paradox to build management and organization theories. ***Academy of Management Review,*** 14: 562–578.

Putnam, L. 1986. Contradictions and paradoxes in organizations. ***Organization communication: Emerging perspectives:*** 151–167. Norwood, NJ: Ablex.

Reason, P. 1993. Sitting between appreciation and disappointment: A critique of the special edition of *Human Relations* on action research. ***Human Relations,*** 46: 1253–1280.

Reason, P., & Bradbury, H. 2001. ***Handbook of action research.*** London: Sage.

Schweiger, D. M., Sandberg, W. R., & Rechner, P. A. 1989. Experiential effects of dialectical inquiry, devil's advocacy, and consensus approaches to strategic decision making. ***Academy of Management Journal,*** 32: 745–772.

Smircich, L., & Morgan, G. 1982. Leadership: The management of meaning. ***Journal of Applied Behavioral Science,*** 18: 257–274.

Smith, G. F. 1988. Towards a heuristic theory of problem structuring. ***Management Science,*** 34: 1489 –1506.

Smith, K. K., & Berg, D. N. 1987. ***Paradoxes of group life.*** San Francisco: Jossey-Bass.

Susman, G. I., & Evered, R. D. 1978. An assessment of the scientific merits of action research. ***Administrative Science Quarterly,*** 23: 582– 603.

Taylor-Bianco, A., & Schermerhorn, J. 2006. Self-regulation, strategic leadership and paradox in organizational change. ***Journal of Organizational Change Management,*** 19: 457– 470.

Tomm, K. 1987. Interventive interviewing—Part II: Reflexive questioning as a means to enable self-healing. ***Family Process,*** 26: 167–183.

Trist, E. L., & Bamforth, K. W. 1951. Some social and psychological consequences of the longwall method of coal-getting. ***Human Relations,*** 4: 3–38.

Vince, R., & Broussine, M. 1996. Paradox, defense and attachment: Accessing and working with emotions and relations underlying organizational change. ***Organization Studies,*** 17: 1–21

Warglien, M., & Masuch, M. 1996. ***The logic of organizational disorder.*** New York: de Gruyter.

Watzlawick, P., Weakland, J. H., & Fisch, R. 1974. ***Change: Principles of problem formation and problem resolution.*** New York: Norton.

Weick, K. E. 1995. ***Sensemaking in organizations.*** Thousand Oaks, CA: Sage.

Wendt, R. F. 1998. The sound of one hand clapping: Counterintuitive lessons. ***Management Communication Quarterly,*** 11: 323–371.

Westenholz, A. 1993. Paradoxical thinking and change in the frames of reference. ***Organization Studies,*** 14: 37–58.

White, M. 1997. ***Narratives of therapists' lives.*** Adelaide: Dulwich Centre Publications.

Lotte S. Lüscher (lotte@clavis.dk) is an organizational psychologist and the owner of Clavis Consultancy. She works as a management consultant for Danish firms and as an assistant professor at the University of Aarhus. Her research explores an action research approach to the social construction of sense and shared reality in changing organizations. She earned her Ph.D. in management from the Aarhus School of Business.

Marianne W. Lewis (marianne.lewis@uc.edu) is an associate professor of management at the University of Cincinnati. Her research explores tensions, conflicts, and paradoxes that both impede and enable innovation. In particular, her work addresses the challenges of developing new products, implementing technological and organizational change, and building organization theory. She earned her Ph.D. in management from the University of Kentucky.