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Action Research: Rethinking Lewin

Abstract   *Fifty years after Kurt Lewin invented the idea of action research, action research remains an umbrella term for a host of activities intended to foster change on the group, organizational, and even societal levels. This article explores both historical and contemporary definitions of action research and describes the process and goals of action research. Located in the tradition of Lewin, organizational action research involves cross-functional teams who address deep-rooted organizational issues through recurring cycles of action and reflection. A case example of an action research project involving two teams in a high technology corporation depicts the process in action.*

> Action research aims to build communities of people committed to enlightening themselves about the relationship between circumstance, action, and the consequence of their own situation, and emancipating themselves from the institutional and personal constraints which limit their power to live their own legitimate ... values (Kemmis and McTaggart, 1988: 23)

After fifty years of development, action research remains an umbrella term for a shower of activities intended to foster change on the group, organizational, and even societal levels. While most action research practitioners would agree that they are attending to institutional or personal constraints, they vary in their emphasis on different elements of the action research process to address those constraints. Participatory action researchers focus on participation and empowerment. Teacher action researchers rely on data to transform individual behaviour. Organizational action researchers focus on research and data driven decision-making. There is, in fact, no definitive approach to action research, which is part of its strength but also part of its problem. Action research has not evolved into a unified theory, but has resulted, instead, in disparate definitions and characterizations (Peters and Robinson, 1984).

This article explores both historical and contemporary definitions, development, and goals of action research while acknowledging the differences among various action research approaches. Case examples are offered to depict the process in

action. Finally, we consider the case of the manufacturing manager and propose possible approaches to intervention based on the action research framework.

Development and Definitions of Action Research

Kurt Lewin developed the action research model in the mid-1940s to respond to problems he perceived in social action (Kemmis, in Kemmis and McTaggart, 1988). Conducting research in a time of great social challenges brought about by World War II, Lewin worked toward achieving democratic inquiry within the social sciences. He believed that social problems should serve as the impetus for public inquiry within democratic communities. The war, writes Kemmis (1988), 'galvanised views about democratic decision-making processes and participation in those processes by those affected by the decisions' (p. 5). As Lewin conceived it, action research necessitates group decision and commitment to improvement.

Noting the chasm between social action and social theory (Peters and Robinson, 1984) and the lack of collaboration between practitioners and researchers, Lewin called for social scientists to bridge the gap and combine theory building with research on practical problems (Cunningham, 1993). Without collaboration, practitioners engaged in uninformed action; researchers developed theory without application; and neither group produced consistently successful results. By using the methodology of action research, practitioners could research their own actions with the intent of making them more effective while at the same time working within and toward theories of social action. The marriage between theory and action could produce informed, improved behaviour and encourage social change (Oja and Smulyan, 1989). Action researchers, then, generate context-bound, values-based knowledge and solutions from their public inquiries into system problems.

Lewin conceived of action research as a cycling back and forth between ever deepening surveillance of the problem situation (within the persons, the organization, the system) and a series of research-informed action experiments. His original formulation of action research 'consisted in analysis, fact-finding, conceptualisation, planning, execution, more fact-finding or evaluation; and then a repetition of this whole circle of activities; indeed a spiral of such circles' (Sanford, 1970: 4; Lewin, 1946). Although Lewin first formulated the definition, he left scant work to describe and expand his early definitions. Argyris, Putnam, and Smith (1987) note that Lewin 'never wrote a systematic statement of his views on action research' (p. 8). In fact he wrote only 22 pages that addressed the topic (Peters and Robinson, 1984). Perhaps because Lewin was unable to fully conceive his theory of action research before his death in 1947, he left the field open for other similarly-minded researchers to elaborate upon, and at times reinterpret, his definition. Several subsequent definitions of action research illustrate how others have changed the definition to emphasize different aspects of the process.

According to Cunningham (1993), action research 'is a term for describing a spectrum of activities that focus on research, planning, theorising, learning and development. It describes a continuous process of research and learning in the researcher's long-term relationship with a problem' (p. 4). In his view, the action research approach is broken down into a series of units that are interrelated. Cunningham's definition suggests that the methodology encompasses a wide

breadth of activities rather than one specific format. Although he reports that the process includes learning and development, he does not state explicitly whether or how action research leads to action or change and neglects mention of action research as a group process.

Sanford (in Reason and Rowan, 1981) describes action research as a process of analysis, fact-finding, conceptualization, planning, execution, and then more fact-finding or evaluation, all followed by a repetition of the same pattern. While Sanford's definition conveys Lewin's iterative process of action research, it ignores the issue of changing the environment under study. The term 'execution' has an element of action to it, yet does not adequately address the transformative change that Lewin intended. It implies, instead, an act or performance, with the action brought upon the subject, rather than the subject as an active member of the process. The definition fails to mention the importance of the participants in the action research process and how they act as members of the change environment.

Argyris places action science clearly in the Lewinian action research tradition and emphasizes the features from Lewin's approach that are most consistent with action science in his definition of action research:

> 'Action research takes its cues—its questions, puzzles, and problems—from the perceptions of practitioners within particular, local practice contexts. It builds descriptions and theories within the practice context itself, and tests them through *intervention experiments*— that is, through experiments that bear the double burden of testing hypotheses and effecting some (putatively) desirable change in the situation. (Argyris and Schon, 1991: 86)

In this definition, the interventions are an experimental manipulation, and problem-solving is the goal. Contribution to knowledge is in the area of research on intervention. Participants learn a mode of public, democratic reflection (the action science technology) and participate in solving self-diagnosed problems.

Elden and Chisholm (1993) identify emerging varieties of action research and label action research as originally conceived by Lewin as the classical model of action research. Heller (1976) argues that those who would differentiate their work from the classical, Lewin-influenced model may in fact misunderstand Lewin. For example, Lewin focused on classical experiments over social action, but at the same time sought to understand, through this research, the deeper causes that threatened democracy, itself a social action thrust. Elden and Chisholm (1993) believe that action research is focused at increasing systems' adaptive capacity, ability to innovate, and competence in self-design. Quoting Brown, they note that action research from the Northern school tends to be focused on reform, particularly organizational reform, while action research from the Southern school is more focused on social change, and that these differing purposes have everything to do with differences in approach. Heller (1976) notes that the distinguishing feature among these methodologies may be the choice of intervention approach. The model here best fits the classical model and the emphasis on organizational development or an organizational reform agenda.

Social scientists can apply these various definitions and the action research methods to multiple situations and within practically limitless settings. Cohen and Manion (1980) explain that they can be used to spur action; to address personal functioning, human relations and morale; focus on job analysis; guide organizational

change, planning and policy making; create innovation; solve problems; or develop theoretical knowledge. We note that—when implemented with close adherence to Lewin's principles of democratic participation and social action, and cycling between analysing a situation and reconceptualizing or reframing that situation or problem—action research has significant potential to create space for organizational learning.

Response to the Traditional Scientific Paradigm

Gestaltist in origin (Foster, 1972), Lewin's arguments for action research stemmed from the limitations of studying social problems in a controlled, laboratory environment. He proposed that principles of traditional science be used to address social problems (Aguinis, 1993). Rather than study a single variable within a complex system, Lewin preferred to consider the entire system in its natural environment (the gestalt). He argued that scientists could research social phenomena 'not by transforming them into quantifiable units of physical actions and reactions, but by studying the intersubjectively valid sets of meanings, norms, and values that are the immediate determinants of behaviour' (Peters and Robinson, 1984: 115). Lewin brought together all the elements of science that had been separated rigidly in order to study social phenomena that could not be understood by using any one of those dispersed elements (Sanford, in Reason and Rowen, 1981).

Lewin believed that experimentation was an important part of any change effort. Action research was built upon the traditional scientific paradigm of experimental manipulation and observation of effects (Clark, 1976). A change is made, and the results are studied in order to inform future change efforts. Similar to traditional science, action research yields a set of general laws expressed in 'if/so' propositions (Peters and Robinson, 1984). Yet, beyond that, the methodologies diverge.

Whereas the traditional scientific paradigm reduces human phenomena to variables that can be used to predict future behaviour, the alternative paradigm, of which action research is a part, describes what happens holistically in naturally-occurring settings (Perry and Zuber-Skerritt, 1994). Unlike traditional science, action research does not attempt to set tight limits and controls on the experimental situation. The action researcher approaches the subject, whether people or institution, in its natural state (Trist, 1976).

Both action research and traditional science share the goal of creating knowledge. The action research participants begin with little knowledge in a specific situation and work collaboratively to observe, understand, and ultimately change the situation, while also reflecting on their own actions. The situation and environmental conditions lead the direction of the research. Traditional science, on the other hand, begins with substantial knowledge about hypothetical relationships, seeking to 'discover new facts, verify old facts, and to analyse their sequences, causal explanations, and the natural laws governing the data gathered' (Cunningham, 1993). It is exact in its measurement of cause and effect.

Another difference between traditional and action research lies in their approaches to action. While the former collects or establishes information for the purpose of learning and usually ends with the point of discovery, the latter intends to use any information to guide new behaviour. Traditional science does not attempt to offer solutions to problems (Cohen and Manion, 1980). Chein, Cook and Harding (1948)

contend that action researchers differ from scientists in that they must not only make discoveries, but must also ensure that those discoveries are properly applied. Action researchers attempt to make scientific discoveries while also solving practical problems. Aguinas (1993) notes that, nevertheless, the separation between action research and science is greater than ever.

Participants in action research programmes expect to be treated not as objects or even subjects, but as co-researchers engaged in 'empowering participation' and in 'co-generative dialogue' between 'insiders and outsiders' (Elden and Levin, 1991). In action research, truth is in the process of inquiry itself. Was it reflexive and dialectical? Was it ethical, democratic, and collaborative? Did participants learn new research skills, attain greater self-understanding, or achieve greater self-determination? Did it solve significant practice problems or did it contribute to our knowledge about what will not solve these problems? Were problems solved in a manner that enhanced the overall learning capacity of the individuals or the system?

These are the types of questions that guide action research. They are unlike those that guide most research. On the other hand, they speak to the essence of management and organizational learning.

Critiques of Action Research

Action research has been criticized as either producing research with little action or action with little research (Foster, 1972); weak when merely a form of problem-solving and strong when also emancipatory (Peters and Robinson, 1984; Kemmis, in Kemmis and McTaggart, 1988); lacking the rigor of true scientific research (Cohen and Manion, 1980); and lacking in internal and external control (Merriam and Simpson, 1984), hence of limited use in contributing to the body of knowledge. Marris and Rein (in Cohen and Manion, 1980) argue that the principles of action and research are so different as to be mutually exclusive, so that to link them together is to create a fundamental internal conflict.

Many action research studies appear to abort at the stage of diagnosis of a problem or at the implementation of a single solution or strategy, irrespective of whether it resolves the problem. Individuals seeking to solve problems in complex, real-time settings find that the problems change under their feet, often before the more in-depth iterative search for solutions suggested by action research has achieved meaningful results.

These critiques hinge on whether or not action research must contribute to knowledge in the same manner as other forms of social science research and whether or not action research must end in a resolution of a problem in order to be valid (Watkins and Brooks, in Brooks and Watkins, 1994). There is little doubt from the works reviewed in this article, as well as from the case studies of action research projects, that these critiques are more academic than practical concerns of most action researchers.

Essential Goals of Action Research

The expectation to both make and apply discoveries reflects the two essential aims of action research: to improve and to involve. The goal of improvement is directed toward three areas: practice, the understanding of the practice by its practitioners,

and the improvement of the situation in which the practice takes place (Carr and Kemmis, 1986; Brown et al., 1982). Indeed, action research is more effective when participants engage in self-reflection while they are critically reflecting on the objective problem (Brown et al., 1982). Researchers can meet the goal of improvement by taking strategic action and then examining these actions against their original hypotheses. The validity of the theory is judged by a simple criterion: whether it leads to improvement and change within the context. It must both solve a practical problem and generate knowledge.

The goal of involvement is no less important than improvement. The Lewinian approach states that participants in the environment or project are best suited to collaborate and develop hypotheses since they are grounded in the context. They know the subtle characteristics that might influence the implementation of any plan. Additionally, involvement encourages members' psychological ownership of facts; it allows for economical data collection; and teaches methods which can be used later for further development (Lippitt, 1979). In addition to owning the problem, the action researchers may acquire the skills necessary for continuous learning and problem-solving so that what is learned in the action research process is actually implemented.

Involvement speaks to the need for collaboration that Lewin considered vital to research. It is one critical element that distinguishes action research from other forms of social research (Peters and Robinson, 1984). The collaboration, according to Peters and Robinson, 'must take place within a mutually acceptable ethical framework governing the collection, use and release of data' (p. 118).

The interdependence of improvement and involvement addresses Lewin's concern about the schism between theorists and practitioners. Action research can produce strong links among knowledge about learning, personal knowledge, and the commitment to further strategic action (Brown et al., 1982).

The Process of Action Research

As noted, action research consists of a team of practitioners, and possibly theorists, who cycle through a spiral of steps including planning, action, and evaluating the result of action, continually monitoring the activity of each step in order to adjust as needed (Kemmis and McTaggart, 1988). The cyclical nature of action research recognizes the need for action plans to be flexible and responsive to the environment. Kemmis and McTaggart note that 'Lewin's deliberate overlapping of action and reflection was designed to allow changes in plans for action as people learned from their own experience' (p. 8).
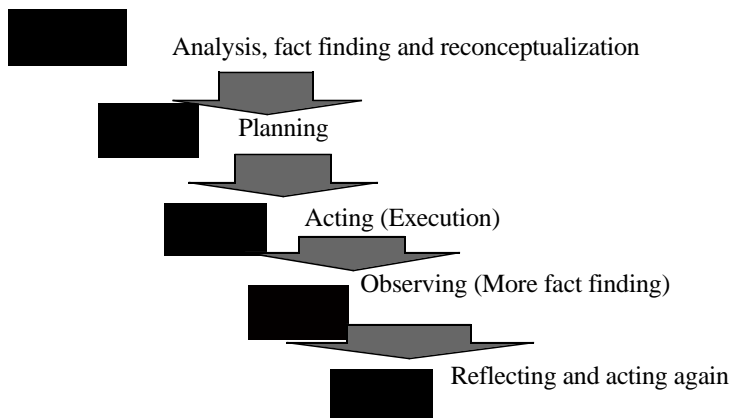
The action research team begins the cycle by identifying a problem in their particular context. Often, the outside facilitator is needed to unfreeze the group dynamics so that participants can proceed to make changes. After identifying the problem within its community, the action research team works within that context to collect pertinent data. Data sources might include interviewing other people in the environment, completing measurements, conducting surveys, or gathering any other information that the researchers consider informative. By collecting data around a problem and then feeding it back to the organization, researchers identify the need for change, and the direction that that change might take (Watkins, 1991).

Following the guideline of involvement, all team members participate in the data collection phase.

After collecting the data, action research team members analyse it and then generate possible solutions to the identified problem. In addition, the team must make meaning of the data and introduce that meaning to the organization. The feedback to the community may act as an intervention itself, or the action researchers may implement more structured actions that create changes within the system. The interventions can be considered experimental, as the action research team members next test the effects of the changes they have implemented by collecting more data, evaluating the results, and reformulating thoughts or redefining the problem in the system.

The action researchers continue moving through this cycle until they have exhausted the problem that they identified initially. Possibly, completing one cycle adequately addresses the problem; more likely, however, the team might go through several iterations of problem identification and solving before the problem is both correctly identified and fully addressed. Figure 1 presents Lewin's model of action research—phases that he originally depicted as a spiral.

Figure 1   Lewin's action research model

Analysis, fact finding and reconceptualization

Planning

Acting (Execution)

Observing (More fact finding)

Reflecting and acting again

Models of Action Research

Action researchers can draw upon many models to guide their research. Cunningham (1993) notes:

> The difficulty with any definition of action research is that the term can be used to summarise many activities which have the 'veneer' of research and action. Two researchers attempting to solve the same problem could inevitably reach different conclusions and still meet the criteria of action research within some paradigm or another. (p. 25)

Different researchers using the action research method may disagree in their approach, while agreeing on fundamental philosophies or goals. The participants in any action research undertaking ultimately choose—either consciously or unconsciously—the particular route that directs the research.

Most action researchers agree that action research consists of cycles of planning, acting, reflecting or evaluating, and then taking further action. Because various forms of action research exist, practitioners may choose one or several methodologies to inform their action. Consequently, it may be difficult to identify a 'pure' action researcher, that is, someone who follows only one particular methodology.

In addition to choosing from different methodologies, action researchers may differ in what they choose to emphasize in the action research cycle. Some emphasize experimentation, others show more concern with feedback, planning, or learning and theory building (Cunningham, 1993). Further, researchers may vary the duration of each cycle (Brown et al., 1982) depending on their particular purposes.

The professional expert model of action research (Whyte, 1991b) is based on the premise that a professional researcher contracts with an organization to 'study a situation and a set of problems, to determine what the facts are, and to recommend a course of action' (p. 9). The professional expert leads the research effort in this situation, with relatively little direction or involvement provided by organizational members. Although this model can provide answers to problematic organizational questions, it does less to stimulate learning on the part of organizational actors. Members may not gain full comprehension or ownership of their problems and underlying values and, thus, may remain unable to address them adequately without continued outside consultation or intervention.

McTaggart (1991) differentiates between action research and participatory action research—the focus of Park's article in this special issue—which he suggests is more emancipatory than much of the action research undertaken. Participatory action research presupposes a commitment that all participants actually do research for themselves. Likewise, Kemmis (1988) stipulates that participants in the environment under investigation should be involved in every stage of the action research cycle; participatory action research theorists, on the other hand, suggest that some social scientists who undertake action research projects define 'involvement' so broadly that participants actually engage minimally in the project. Participatory action research, then, serves as an extension of Lewin's original formulation, which focuses more upon involvement than participation. Action research is truly participatory when members of the particular context design and conduct the research and reflect on its nature (McTaggart, 1991). The participants engage in research that changes first themselves and then their environment.

In summary, the literature offers a variety of applications of action research. While this allows practitioners to choose an approach that meets specific needs, it also makes difficult a common understanding. The existence of several explicit models of action research interferes with the development of a consistent and unified theory of action research. Few authors agree on a definition of action research; they may include certain elements of Lewin's theory while de-emphasizing, or altogether ignoring, others. Most theorists agree on the collaborative nature of action research, yet fail to critically examine how individuals collaborate or, indeed, engage in action research. Some may acknowledge the ability of action research to improve social action, yet neglect the internal values and theories that define improvement and guide that action. The literature provides limited information on internal action research team processes, focusing instead on the intervention and its consequences. Cases are written from an expert point of view, while the perceptions of team

members usually are neglected. Finally, the literature fails to clarify the interdependence of action and research. In the section which follows, we illustrate the classical model of research through a case study of two contrasting action research teams in a high technology company.

Lewin's Model in Action, Part I: The Case of Two Action Research Projects

Southwest Technologies (ST), a multinational, high technology company, began an action research project in conjunction with the University of the Southwest (the University) in order to study quality issues within two divisions, Stripe and Star. The more specific purpose of the venture was to establish corporate action research teams to identify and address social systems-related barriers to the implementation of the divisions' total quality management programmes and to help facilitate the move toward self-directed work teams (Dickens, 1998). The 'action' task would enable ST to move toward a more democratic work culture; the 'research' task would contribute knowledge to the field of quality management in the workforce.

Stripe and Star were situated in separate buildings on the same corporate campus in the Southwest. Faculty from the local university approached the site manager to propose the formation of action research teams. Table 1 below depicts the actions taken by each team over the course of one year as they relate to the action research process described above.

While using Lewin's spiral as a basic framework, Table 1 provides much greater detail about what action research actually demands from participants. It conveys the iterative nature of action research, emphasizing that it requires both parallel and serial stages of activity (Davis and Valfer, in Clark, 1976). The table also illustrates that teams may need to re-cycle through steps that received inadequate attention or that were not resolved. Areas in which each team appeared to struggle, continuing to attempt action around a problematic step without achieving resolution, become apparent in this chronology.

Even this level of detail, however, fails to capture the tensions, revisions and experimentation inherent in the process. Action research is not a methodology that can be implemented in discrete, orderly steps, as much of the theoretical literature suggests. Rather, it can go forward, backward, and all directions at once. Both teams became paralysed or helpless. In this instance, the Stripe team got bogged down trying to identify a project that met with management approval and we see the cycling again and again through planning and reflection with little or no action. On the other hand, the Star team moves methodically through goal setting to action but is then arrested in the middle of the process when they present their preliminary findings to management. At this point, both management and the team decide that the team does not have authority to address the problems identified. What becomes clear in these chronicles is that each step reveals new information and new demands that have the potential to affect the outcome of the action research process.

Lewin's Model in Action, Part II: The Case of the Manufacturing Manager

The case addressed by each of the articles in this special issue provides an opportunity to illustrate how action research might be used to intervene on a

Table 1   The action research project at Southwest Technologies

Stripe action research team	Star people effectiveness team
Planning	*Planning*
• forming the team	• outlining goals
• learning action research	• forming the team
• selecting an area for research	• studying empowerment
• agreeing on action	• adopting action research
	• exploring the purpose of the team
	• seeking authority
	• facing conflict
	• agreeing on action
Acting	*Acting*
	• collecting the data
Reflecting	*Reflecting*
• discussing team processes	• reflecting on team and data collection
• confronting issues of membership and	processes
leadership	• organizing and analysing the data
• discussing team objectives	• coping with change
• discussing team processes	• reconsidering our authority
• organizing the data	• organizing our feedback
• reporting to managers	• reconsidering our authority and purpose
• analysing the data	• preparing for the QST presentation
	• presenting data to upper managers for
	reflection
Acting	*Planning*
• creating individual projects	
Reflecting	
• discussing team objectives	
• discussing team processes	
• discussing team purpose and objectives	
Planning	
• seeking authority	
• sharing our experiences	
• agreeing on action	
Acting	
• collecting the data	
Reflecting	
• organizing and analysing the data	
• presenting the data to upper managers for	
reflection	
Planning	

problematic organizational situation. Here, we see an interaction during a meeting between team members and management that leaves the participants dissatisfied with one another and with the outcome of the meeting.

The case of the manufacturing manager suggests several weaknesses and constraints

within the team's functioning, as observed from the lens of action research. If action research intends to produce social change and practical solutions in a democratic forum, then we must ask how we can democratize this group. We look at ways to involve participants and improve the situation in a way that balances research and action.

How then would action researchers respond to the case? One possibility is to explore the issue of sanction—the necessary endorsements and permissions to act which are essential to action research. Does the team indeed have organizational sanction to proceed? If it once did, does it still? What is the nature of the sanction that the team has—what can it do, for how long, to whom? One paradox evident in this case is that a team may have the stated authority to act and still not feel an internal capacity to act. That is, they may experience a mandate without also experiencing empowerment to fulfil that mandate.

Another key observation is the role of management in sanctioning the project. As Goodman and Clark (in Clark, 1976) contend, 'It is very difficult both to collect good data and to employ the data usefully without the broad support of the client system' (pp. 174–5). Foster (in Clark, 1976), Clark (1976), Greenwood, Whyte and Harkavy (1993) and Seashore and Bowers (1963) all report that continued sanction is imperative to the enactment of the action research process. While the teams intended to be self-sufficient, they could not proceed without management approval. This case demonstrates again the critique that many action research teams yield research with little action.

We are intrigued by the juxtaposition of sanction and sanctuary—perhaps there is a way that a team that has not been sanctioned to take action also lacks sanctuary or safety. Certainly the thoughts of the team leader suggest this when he thinks, 'You keep cutting us off at the knees'. An action researcher might explore learned helplessness and empowerment issues with the team members and the manager within the context of sanction.

We have said that the two goals of action research are to involve and to improve. Team members must consider their own involvement, as well as the degree of collaboration with their manager. How can they involve the manager in a dialogue to identify a mutually acceptable improvement objective and then continue to involve him or her in subsequent iterations of the action research process? If involvement leads to psychological ownership, then what does the manager need in order to take ownership of the organization's project? Who is part of the system that must be involved? If this stakeholder has not been a part of the process, who else may also need to be involved in order for the team to have the necessary endorsements to proceed?

Based on the thought, 'Whew, he finally came to our meeting. He's been invited to every session', group members might identify the manager's lack of involvement as a serious constraint. The response to this identified problem, then, is to create ways for the manager to be involved. In this case, simply inviting him to meetings has not been sufficient. Team members have the opportunity to reflect on their own efforts at involvement to date and must own up to the fact that they have been ineffective partners in the project. Group reflection might lead participants to acknowledge that they have failed at involvement and to generate new options. They must not only look at ways to involve the manager, but also at ways to involve themselves in involving the manager. Team members could request a commitment from the manager to attend specific meetings; they could, themselves, commit to briefing the manager thoroughly—through electronic mail, memos, phone calls, or short

meetings—on a regular basis. They could solicit from the manager his own ideas about the best way to involve him.

Action research requires that a group have a specific goal. Cunningham (1993) notes that a problem that is too general cannot be tested. It is possible in this case that 'identifying ways that each of us can help eliminate non-value-added work in our area' is too general a goal upon which to act. The case does not delineate action steps surrounding non-value-added work (NVAW). At this point in the team's existence, team members are compelled to reconsider their goal. This meeting gives them the opportunity to co-create with the manager a goal that meets his needs as well as theirs and to collaborate on actions they might pursue. When the manager tells the group that the goal of eliminating non-value-added work is not a good idea, he may show little respect for the thought and research that the team members have dedicated to their task; but it also illustrates that the manager does not 'own' the goal of eliminating NVAW. Most importantly, the team has the opportunity to question whether or not the goal of eliminating NVAW will indeed make a significant improvement in the organization.

The team's plan to develop individual projects intimates that they might not be able or willing to work with each other. When team members decided to develop individual projects, they may have colluded to inhibit teamwork and collaboration. Kemmis and McTaggart (1988) argue that 'action research is not individualistic. To lapse into individualism is to destroy the critical dynamic of the group' (p. 15). Smith and Berg (1988) state that 'in order to be a group, a collection of individuals must integrate the large array of individual differences that the members represent' (p. 90). Yet in this case, we see more indications of individualism than teamwork, more distrust than trust.

Action research intends to foster learning about one's self and one's environment. In this case, however, we actually see no evidence of learning. As the case is written, it appears that the team has done little besides decide to act on NVAW in the previous six months. Have team members, in fact, learned anything in the six months that they have been together? If they have, they could use this meeting as an opportunity to share their new knowledge with their manager. If they have not, then they need to acknowledge this and make a decision to disband or to reframe their approach.

In conclusion, this case offers many possibilities for action research interventions. Most notably, team members and the manager can increase their efforts at involvement and secure organizational sanction for their activities. The members might be more specific in their goal definition and ensure that everyone 'owns' the goal. After the team members begin doing these things to improve their group, they can return their attention to improving their organizational environment—selecting a problem, collecting data, studying the data, experimenting, providing feedback, implementing changes, and continuing this cycle until they have accomplished their project. The case well illustrates the interdependence of group or involvement strategies with the improvement aims of action research.

Conclusion

Lewin's approach to action research, the classical model, conceived of a process whereby we would attain deeper and deeper understanding of a phenomenon

through cycles of fact-finding or research and of taking action to implement what was learned in the research. Taking action is itself an experimental treatment on an organization or a community and can be studied to see whether or not the system or problem is transformed. Each of the variants discussed in this special issue has its roots in this Lewinian model. Participatory research has embraced the social change theme that underlies much of Lewin's work. Action learning focuses on transformation through individual and collective reframing of the problem—what Lewin called reconceptualization. Action science looks deeply into individual actions for their reflection of the underlying social perspective—whether more authoritarian or democratic in Lewin's terms—and through fact finding (Argyris' directly observable data) works to make explicit these tacit social perspectives and thereby to transform them (reconceptualization). Developmental action inquiry focuses on the readiness or developmental level of the individual or system to take action, to make a change. Collaborative inquiry emphasizes the power of asking questions and of collaboration. While these approaches no longer emphasize the hypothesis testing in the positivist tradition found in Lewin's work, there is nevertheless a thread that connects back to Lewin. Somehow we think he would have applauded the evolution and reinterpretation of his ideas evident in these pages.

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