

## DIALOGICAL ACTION RESEARCH AT OMEGA CORPORATION<sup>1</sup>

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### Abstract

*In dialogical action research, the scientific researcher does not "speak science" or otherwise attempt to teach scientific theory to the real-world practitioner, but instead attempts to speak the language of the practitioner and accepts him as the expert on his organization and its problems. Recognizing the difficulty that a practitioner and a scientific researcher can have in communicating across the world of science and the world of practice, dialogical action research offers, as its*

*centerpiece, reflective one-on-one dialogues between the practitioner and the scientific researcher, taking place periodically in a setting removed from the practitioner's organization. The dialogue itself serves as the interface between the world of science, marked by theoría and the scientific attitude, and the world of the practitioner, marked by praxis and the natural attitude of everyday life. The dialogue attempts to address knowledge heterogeneity, which refers to the different forms that knowledge takes in the world of science and the world of practice, and knowledge contextuality, which refers to the dependence of the meaning of knowledge, such as a scientific theory or professional expertise, on its context. In successive dialogues, the scientific researcher and the practitioner build a mutual understanding, including an understanding of the organization and its problems. The scientific researcher, based on one or more of the scientific theories in her discipline, formulates and suggests one or more actions for the practitioner to take in order to solve or remedy a problem in his organization. Dialogical action research recognizes that the practitioner's experience, expertise, and tacit knowledge, or praxis, largely shapes how he understands the suggested actions and appropriates them as his own. Upon returning to his organization, he takes one or more of the suggested actions, depending on his reading of the situation at hand. The reactions or responses of the problem to the actions or stimuli of the practitioner would embody, in the practitioner's eyes, success*

<sup>1</sup>Michael Myers was the accepting senior editor for this paper.

or failure in solving or remedying the problem and, in the scientific researcher's eyes, evidence confirming or disconfirming the theory on which the action was based. The scientific researcher may then suggest, based on her theories, additional actions, hence initiating another cycle of action and learning. To illustrate dialogical action research, this paper reconstructs some dialogues between an information systems researcher and a managing director at a European company called Omega Corporation.

**Keywords:** Action research, qualitative research, research methods, case studies, phenomenology

## Introduction

Our purpose in this paper is to propose, describe, and illustrate an approach to action research that we call *dialogical action research* or dialogical AR.<sup>2</sup> Dialogical AR, like all forms of action research, promises to advance scientific theory and, at the same time, to solve or remedy a "real world" problem. Unlike other forms of action research, dialogical AR takes notice of and addresses heterogeneity in the forms of knowledge held by the scientific researcher and the real-world practitioner, where the heterogeneity is related to what phenomenology would call "the scientific attitude" taken by the researcher and "the natural attitude of everyday life" taken by the practitioner. Dialogical AR compares the scientific researcher and the real-world practitioner to members of different ethnic groups, each with its own language and culture, where the knowledge held by one group is not necessarily better or worse than, but simply different from, the knowledge held by the other group.

Dialogical AR regards communication across the respective languages and cultures of the scientific researcher and the real-world practitioner as a

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<sup>2</sup>We avoid the acronym DAR. It already has a reserved and special meaning in the United States (Daughters of the American Revolution).

problem requiring its own intervention. In dialogical AR, the intervention takes the form of one-on-one dialogues, taking place periodically in a setting removed from the practitioner's organization. In these one-on-one dialogues, the scientific researcher attempts to see the practitioner's world through the practitioner's eyes, accepts the practitioner as an equal and does not attempt to "educate" him in scientific theory, and speaks the practitioner's language when proposing additional actions (consistent with the scientific theories in her discipline) for the practitioner to take.

The subsequent reaction or response of the real-world problem to the action or stimulus of the practitioner would embody, in the practitioner's eyes, success or failure in solving or remedying the problem and, in the scientific researcher's eyes, evidence confirming or disconfirming the theory on which the action was based. Dialogical AR that is successful would entail improvements in the real-world problem, in the researcher's knowledge (scientific theory or *theoria*), and in the practitioner's knowledge (professional expertise or *praxis*). To illustrate dialogical AR, this paper reconstructs some dialogues between an information systems researcher and a managing director at a European company called Omega Corporation.

We also posit that dialogical AR can help to resolve the rigor versus relevance dilemma that has bedeviled not only IS research in recent years, but also other domains of business-school research and, indeed, the social sciences in general. Our proposal of dialogical AR will include three criteria by which the validity or goodness of the resulting action and resulting research may be evaluated.

Our proposed dialogical AR approach is an outgrowth of an earlier research effort conducted by Pär Mårtensson, the first author of this paper. Upon Mårtensson's retrospective description of his research to Allen Lee, the second author of this paper, Lee realized that Mårtensson's calculated and research-based interventions into the daily affairs of the people at his field site constituted a form of action research. We have resisted the

temptation to write this paper as if the approach of dialogical AR had already been established and as if Mårtensson's actions at Omega can now be presented as perfect examples of it. Instead, we will use Mårtensson's experience at Omega to suggest promising ways for us to formulate the new form of action research that we call *dialogical AR*.

The next section of this paper will examine action research in general. After that, we will describe dialogical AR, including the philosophy behind it. The subsequent sections of the paper will provide illustrations of dialogical AR at Omega Corporation.

## Action Research

It is in the context of the rigor versus relevance dilemma that action research holds particular appeal. On one horn of the dilemma, university-based IS researchers have taken extremely rigorous approaches, both positivist and interpretive, so as to satisfy their own conceptions of the rigorous requirements of science; however, as is often true of basic research in any scientific discipline, the results (whether positivist or interpretive) have typically lacked relevance to professional practice. On the other horn of the dilemma, research that practitioners would deem relevant, such as the studies that consultants perform, can lack desirable qualities that scientific research typically delivers, such as validity and replicability.

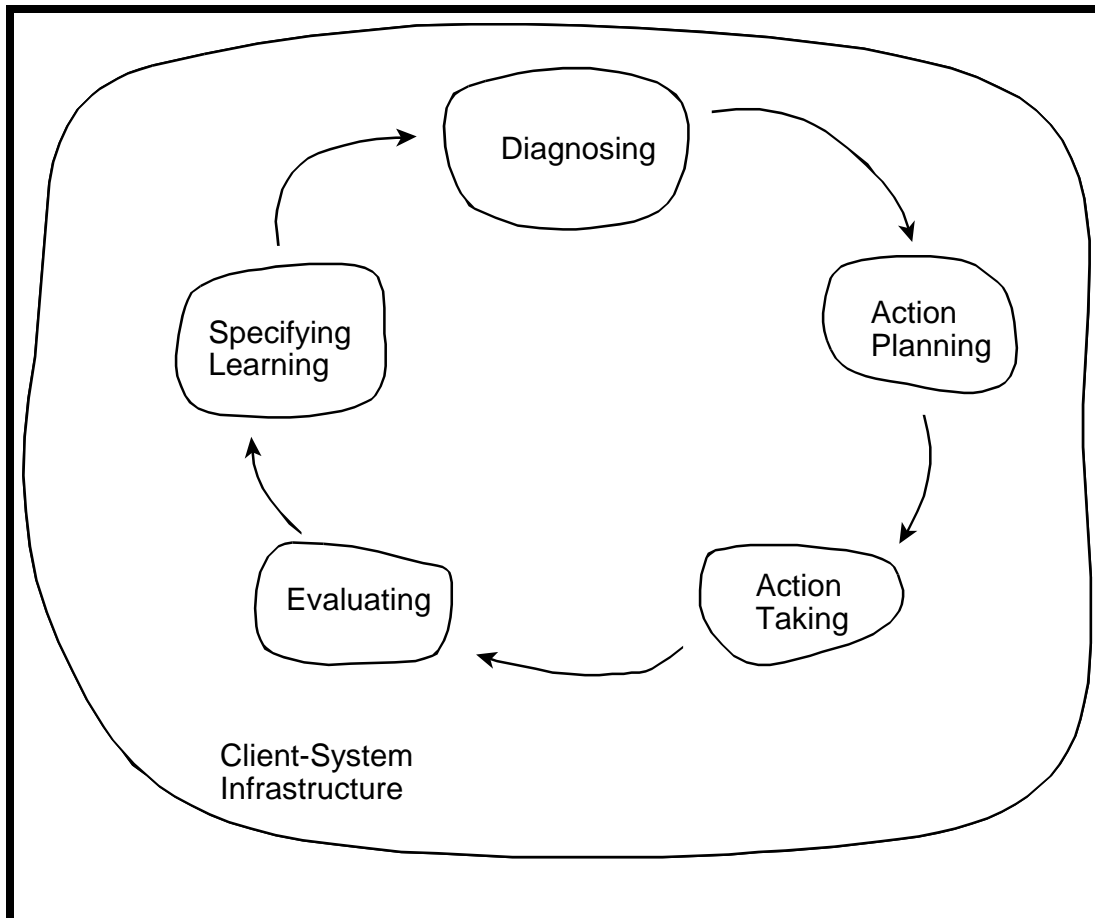
IS researchers have been particularly mindful of this dilemma. For quite some time there has been a call for research with a better balance between rigor and relevance (e.g., Keen 1991; Robey and Markus 1998). Relevance, described in such terms as interesting, applicable, current and accessible (Benbasat and Zmud 1999), is said to be valued by IS researchers, whether they conduct relevant research themselves or not (Davenport and Markus 1999). A belief among IS researchers, both positivist and interpretive, is that it is possible and desirable to fulfill the dual

directives of rigor and relevance simultaneously and thereby produce consumable academic research (i.e., rigorous academic research that practitioners find relevant and immediately useful for their managerial activities) (Robey and Markus 1998).

Emphasizing the empirical dimension of science that comes into play in both the development and the testing of a theory, action research strives to marry rigor to relevance by conducting scientific research in the setting of a real-world problem. In action research, what science would regard to be an experimental stimulus or experimental treatment simultaneously plays the role of an intervention or action aimed at remedying the real-world problem. In turn, how the real-world problem responds to the experimental stimulus can, in the best case, play the dual roles of (1) evidence confirming the scientific theory and (2) remedy mitigating the real-world problem. In simultaneously targeting a specific real-world problem and expanding scientific knowledge, action research can resolve the rigor-relevance dilemma (e.g., Avison et al. 1999). Kurt Lewin coined the term *action research* in the 1940s when he described a particular kind of research that combined the experimental approach of social science with programs of social action addressing social problems (Lewin 1946; Schwandt 1997).

The IS research literature contains excellent summaries and critical reviews of action research (Baskerville 1999; Baskerville and Wood-Harper 1998; Lau 1997). There is also literature more focused on advice to action researchers (e.g., Mumford 2001), as well as several recently published action research studies (e.g., Chiasson and Dexter 2001; Davison 2001). A key feature of IS action research is its reflective and iterative cycle, as illustrated by Baskerville (see Figure 1).

In Baskerville's action research cycle, the scientific researcher(s) and the practitioner(s) or client(s) work as members of a team, where they jointly (1) assess and diagnose the empirical situation in which they seek to intervene with an action (which would simultaneously be a remedy or problem-solving measure in the eyes of the



**Figure 1. The Action Research Cycle (Figure 1 in R. Baskerville, "Investigating Information Systems with Action Research," *Communications of the Association for Information Systems*, 1999, p. 14. Copyright © 1999 AIS. Used with permission.)**

practitioner and an experimental stimulus in the eyes of the researcher), (2) plan the intervening action, (3) take the action, (4) evaluate the action's results, (5) improve their understandings by identifying lessons learned from the experience of what the action elicited, and (6) in a fresh cycle of action research, once again assess and diagnose the empirical situation, and so forth. Because of the learning that the researcher and the practitioner each experiences, we may also describe the action research cycle as the learning cycle. Indeed, we can interpret Schön's (1983) conception of action research as emphasizing the learning dimension of action research.

Lee (1991, pp. 28-29) offers the following description of Schön's model of professional inquiry:

Schön asserts that the inquiry of practicing professionals consists of a pattern of five features (1987, pp. 27-28). The pattern may be summarized in the following way:

First, there is a situation requiring attention and intervention from the professional. The understanding that the professional uses in this situation (Schön calls it "tacit understanding" and

“knowing-in-action”) is a particular type of expertise *from which the professional's skilled actions or “moves” follow without any conscious deliberation.*

Second, in the course of applying actions to or “making moves” in the situation, the professional will occasionally, but inevitably, encounter a surprising response from the situation (“back talk”)—a response that the professional's understanding did not, and could not, prepare her for.

Third, the surprise leads to reflection, which is “at least in some measure conscious, although it need not occur in the medium of words.” During the course of the “reflection-in-action,” the professional turns her attention to the unexpected event (“What is this?”) and the understanding that failed to anticipate it (“How have I been thinking about it?”).

Fourth, with the situation still awaiting effective action, the professional continues her reflection by critically examining her understanding and restructuring it in an effort to account for the unexpected event.

Last, the reflection “gives rise to on-the-spot experiment,” in which the new understanding leads to new moves. “On-the-spot experiment may work, again in the sense of yielding intended results, or it may produce surprises that call for further reflection and experiment.”

Schön's pattern of five features fits unproblematically in Baskerville's action research cycle. With regard to the practitioner's reflection and learning, Schön's fourth feature (“the professional continues her reflection by critically examining her understanding and restructuring it in an effort to account for the unexpected event”) has its analogue in the evaluating step and specifying learning step of Baskerville's action research cycle. Dialogical AR implements both Schön's

fourth feature and Baskerville's evaluating/ specifying learning steps in a particular way: The practitioner does not reflect or learn by himself; instead, it is through a one-on-one dialogue that the researcher purposely encourages and guides the practitioner to reflect and learn (apart from and in addition to her own reflection and learning as a researcher).

Several challenges face researchers attempting to do action research. One is to find a balance that makes improvements possible both in practice and in scientific knowledge. Another challenge is to deal with the time dimension in process-oriented research—specifically, observations of phenomena whose significant events unfold over a long period of time. A third challenge is to find a suitable form of action research, as there are many different types (see Avison et al. 1999) and still no tight definition on which there is a consensus (Checkland, 1991). In this paper, we focus on the third challenge. In the next section of this paper, we provide a detailed description of the form of action research that we are proposing: *dialogical action research* (or *dialogical AR*).

## Dialogical Action Research

We describe dialogical AR by contrasting it to traditional consulting, calling attention to the features that distinguish it from other forms of action research, and exposing its philosophical underpinnings. Traditional consulting and dialogical AR take the form of their ideal types in the description that follows.

### ***Dialogical Action Research Versus Traditional Consulting***

Traditional consulting consists of a process in which (1) the consultant plays the role of the problem solver, (2) the consultant applies her already existing expertise to a real world problem in the setting of the corporation that has hired the consultant, and (3) the solution follows from the

consultant's application of her expertise to the problem. The consultant can apply an expertise resulting from her experience and tacit knowledge garnered over her own lengthy career as a manager in the same or a similar corporation. The consultant need not possess an academic, university-based, or scientific expertise. The process can be linear and sequential: in the event that the feedback from the problem's responses to the consultant's attempts to remedy the corporate problem is unfavorable, the process does not require the consultant to learn (i.e., to go back to her expertise, reflect on it, and revise it) and, indeed, the process allows the consultant to re-apply the same expertise repeatedly in the same and other corporations. Furthermore, in this picture of traditional consulting, the manager (and other members of the corporation) can be largely absent. To the extent that it must exist at all, the role of the manager can be passive, where the problem solving need not make use of the expertise of the manager (or any other member of the corporation) but only, at best, give him a role in the implementation of the consultant's expertise. Within this picture of the process of traditional consulting, there is room to include consultants who additionally possess a scientifically based expertise and managers who actively participate with the consultants in joint efforts to solve a problem in the managers' corporation; however, these features are options, not requirements, in traditional consulting.

Action research, in any of its forms, differs from traditional consulting in at least three ways: (1) the outsider who enters the corporation is a person who typically possesses and applies an expertise rooted in the academic world of one or another scientific discipline, (2) the researcher(s) and the practitioner(s) work jointly with one another as members of a team, and (3) the team seriously considers negative feedback (i.e., failed attempts to remedy the problem at hand) and seeks to revisit and revise its expertise (i.e., learn) whenever possible. In Baskerville's action research cycle, the learning unfolds in the evaluating and specifying learning steps.

## ***Distinguishing Features of Dialogical Action Research***

In his original fieldwork, Mårtensson engaged in periodic one-on-one sessions with the managing director from Omega Corporation to encourage him to think reflectively about his own day-to-day activities and to entertain Mårtensson's proposed actions. When listening to Mårtensson recount his experience at Omega, Lee saw the instantiation of two of Schutz's (1962) concepts: the *scientific attitude* and the *natural attitude of everyday life*. We weave these two concepts into four features that distinguish dialogical AR from other forms of action research.

1. *Adopting the scientific attitude*: The scientific attitude refers to a body of knowledge (academic theory, research literature) and manner of reasoning (research methods, intuition) that characterize the thinking of Ph.D.-trained social scientists as scientific, whether they subscribe to positivist, interpretive, or critical research approaches. We use the term *theoria* to refer to this body of knowledge and manner of reasoning. Pure or basic research is an excellent example of *theoria*. A scientific researcher takes the scientific attitude to make sense of her world of research, which consists of research problems as well as the particular community of scientific researchers of which she is a member. For example, a professor of information systems adopts the scientific attitude when attempting to revise her research paper in order to satisfy requirements imposed by an editor for it to become acceptable for publication. She employs both explicit knowing (as in making her paper's methodology conform better to the well known and publicly available rules of experimental design) and tacit knowing (as in navigating through the politics of the double-blind review process). In dialogical AR, the scientific researcher can deliberately adopt and deliberately suspend the scientific attitude. She adopts the scientific attitude when she is formulating and suggesting one or more actions for the practitioner to take when he returns to his organization, but she suspends

the same scientific attitude when she is attempting to communicate with the practitioner in his own language and attempting to see, from the very different perspective of the practitioner's natural attitude of everyday life, what the problems of the organization are and what he himself experiences as his organizational context.

2. *Adopting the natural attitude of everyday life:*

The natural attitude of everyday life refers to a body of knowledge and manner of reasoning (common sense and tacit knowledge) in use by a member of a naturally occurring (i.e., not created by an outside researcher) organization, society, or other social unit. We use the term *praxis* to refer to this body of knowledge and manner of reasoning. *Theoria* is not a more rigorous form of *praxis*, just as *praxis* is not a weaker form of *theoria*. Rather, they are qualitatively different categories of knowledge and reasoning, each category being distinguished by and dependent on its own social context. A practitioner takes the natural attitude to make sense of the world of his organization, to solve problems, and to navigate through the organization's politics. Regarding the natural attitude, dialogical AR does not require the practitioner to do anything in particular; in his natural state, the practitioner is already taking the natural attitude. However, dialogical AR places the burden on the scientific researcher to be aware of the presence of the natural attitude, to realize that it is different from her own scientific attitude, and to understand that she can better diagnose the practitioner's organization and its problems by trying to adopt the practitioner's natural attitude.

3. *Accepting the role played by social and historical context:*

In dialogical AR, the scientific researcher accepts that her scientific theory and scientific attitude cannot simply be transferred outside the community of scientific researchers (such as to a practitioner in an organization) because her scientific theory and scientific attitude would then be divorced from the social and historical context of the

community of scientific researchers on which her scientific theory and scientific attitude depend for their meaning. Likewise, the scientific researcher accepts that the practitioner's natural attitude and the practitioner's knowledge, whether explicit or tacit, about his organization cannot simply be transferred outside the organization—such as to a scientific researcher who has never encountered the organization previously—because the practitioner's tacit knowledge, explicit knowledge, and natural attitude would then be divorced from the social and historical context of the organization on which they depend for their meaning. The communication of scientific knowledge and practitioner knowledge, therefore, poses a major challenge, to which dialogical AR dedicates its centerpiece of reflective one-on-one dialogues.

4. *Understanding the social and historical context:*

The understanding of a particular social and historical context can be acquired tacitly and naturally, as in the case of a person who becomes a member of the organization, society, or other social unit being researched,<sup>3</sup> where this would involve a lengthy process. The understanding of a particular social and historical context can also be acquired explicitly and intentionally, as

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<sup>3</sup>This pertains to scientific researchers no less than it does to managers in a corporation. For a person to become a member of a scientific community typically involves not only the cognitive or intellectual work required in a Ph.D. program, but also the socialization into the ways of being a scientist in the given scientific discipline or specialty, where the socializing typically begins with the Ph.D. student's being a research assistant (i.e., apprentice) to a senior professor, continues with experiences in gaining or not gaining acceptance at conferences and journals, and eventually comes to include the tacit knowledge with which the members of his or her particular scientific specialty are able, without conscious deliberation, to know and agree that a particular instance of theoretical or empirical research is valid and significant (or not). In his historical and sociological studies of natural scientists, Kuhn (1996) has argued convincingly that a scientific theory does not exist independently of the social forces of the particular scientific community that has developed, championed, and refined it, but can be understood only in the social and historical context of that particular scientific community.

in the case of a person who is an outsider, such as a journalist or an anthropologist who is doing an ethnography. In dialogical AR, the burden is on the scientific researcher to explicitly and intentionally acquire an understanding of the social and historical context of the organization and its problems.

In action research, the scientific researcher is typically an outsider who enters the community of one or another group of natives (who can be the managers in a corporation). To the extent that social scientists such as anthropologists and case researchers believe that an understanding of the natives and the natives' social and historical context is a necessary foundation on which to develop or select their (the social scientists') theory, it is surprising that intensive fieldwork methods have not received more explicit attention than they have in the literature on action research methods. This line of reasoning suggests that one might wonder how scientific researchers may properly discharge their responsibilities as members of an action research team if they have not yet achieved an understanding of the social and historical context where the action research is unfolding. Furthermore, to the extent that scientific researchers value rigor, it would be ironic for them to engage in action research where they neglect rigor in how they achieve their understanding of the context. In the recent IS literature, intensive research methods have received widespread acceptance and criteria for assessing the validity of intensive research have even been formulated.<sup>4</sup>

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<sup>4</sup>For a selection of articles that provide criteria for assessing the rigor of qualitative research in IS, see the *MIS Quarterly* special issue on the theme, "Intensive Research in Information Systems: Using Qualitative, Interpretive, and Case Methods to Study Information Technology." The senior editors for the special issue were Allen S. Lee and M. Lynne Markus. The special issue consisted of six articles: Gopal and Prasad (2000), Klein and Myers (1999), Nelson et al. (2000), Schultze (2000), Trauth and Jessup (2000), and Walsham and Sahay (1999).

### **Philosophical Underpinnings of Dialogical Action Research**

Requiring discussion are the philosophical underpinnings of dialogical AR. We classify dialogical AR as social constructionist. The stance follows from the earlier work of Lee. Berger and Luckmann (1966), largely building on the work of Schutz (1962), can be credited for innovating the term, *the social construction of reality*, which refers to the process by which society comes into existence both as an objective reality and a subjective reality. Lee (1982, 1987) adopts the philosophical lens of Schutz and of Berger and Luckmann in his case study of a communication breakdown between scientists and lawyers where the scientists are serving in the roles of expert witnesses in the setting of a courtroom. Although not an action research case study, it illustrates the nature of some of the features of dialogical AR mentioned above, including the importance of the respective social and historical contexts of the scientific researcher and the practitioner.

Lee observes that the scientists and the lawyers are steeped in their respective group's social and historical context, which Berger and Luckmann would label as the respective group's socially constructed reality. For the lawyers, this context includes a law school indoctrination leading to a professional degree (J.D.), the logic of legal reasoning, and organizations in the form of bar associations, courts, and corporations. For scientists, this context includes indoctrination in a graduate program leading to a research degree (Ph.D.), the logic of scientific reasoning, and organizations in the form of peer-reviewed journals and academic departments in universities. To understand scientific knowledge in the way that a scientist does, an individual becomes socialized and assimilated into the socially constructed reality inhabited by people who call themselves "scientists"—and similarly, for legal knowledge. Because lawyers, according to Lee, have not been socialized and assimilated into the same socially constructed reality as have scientists, and because scientists have not been socialized and assimilated in the same socially constructed reality as have lawyers, the two groups in his case study



experience difficulty and failure in communicating with each other. If, in order to understand scientific knowledge in the way that a scientist does, an individual needs to experience and complete a Ph.D. program (which includes assimilating not only the knowledge, but also the norms, of her scientific community), then a lawyer (who has not become a scientist) can understand such scientific knowledge no better than this individual at the beginning of her Ph.D. program. Furthermore, in the setting of a courtroom where the scientists were expert witnesses, they were divorced from their own social and historical context and, therefore, no longer enjoyed any institutional sanction for their conventions, terminology, and logic, all of which they normally and tacitly took for granted as part of their shared culture when in a scientific setting, such as a university research seminar, a dissertation defense, or a manuscript review process.

Lee's case study is useful for instantiating the broader principle that scientific knowledge is not only contextual, but even loses its meaning outside the context of the scientific community. Lee's philosophy has seven significant ramifications for dialogical AR and even action research in general.

First, the origin of dialogical AR in the phenomenology of Schutz means that dialogical AR also inherits Schutz' conception of science—a term with which he referred equally to the natural sciences and social sciences. In his framework of first-level constructs (i.e., constructs held by the people whom the social scientist is observing) and second-level constructs (i.e., constructs held by the social scientist and constituting his or her scientific theory), Schutz considered the second-level constructs constituting social science theory to be no different in logical form from the constructs constituting natural science theory, and demonstrated how the constructs of social science theory must, and can, live up to the same demands of logic and empirical testing as the constructs of natural science theory. In introducing Schutz's framework to organizational researchers, Lee (1991) has shown how both positivist and interpretive research are equal partners in scientific research on organizations. Adopting this

intellectual heritage, dialogical AR sees no conflict between positivist and interpretive approaches and is comfortable using the label *scientific* with each one.

Second, according to this philosophical stance, the contextuality of scientific knowledge serves to block attempts by a scientific researcher, engaging in any form of action research, to communicate a scientific theory to a practitioner in such a way that the practitioner could grasp and appreciate the scientific theory in the way that the scientist does. Recognizing this, our formulation of dialogical AR does *not* envision scientist-practitioner dialogue as a means by which the scientific researcher teaches or otherwise diffuses her understanding (*theoria*) to the practitioner. Instead, in dialogical AR, the scientist suggests actions to the practitioner where she realizes that the practitioner will and must come to understand the suggested actions in a way that makes sense to himself, in his own context as a practitioner. In focusing not on the scientific researcher but the practitioner himself as the agent of action, our formulation of dialogical AR recognizes the existence of the practitioner's explicit and tacit knowledge (*praxis*) and the role it can, should, and must play in the way he appropriates the scientific researcher's suggested actions so that they can fit his problem. The one-on-one dialogue in dialogical AR provides the occasion in which the scientific researcher (1) listens to the practitioner in her attempt to interpret and understand what the practitioner himself considers to be a problem requiring action, (2) gathers facts to which she could apply one or another theory, and (3) based on one or another theory, suggests promising actions to the practitioner as well as monitors his appropriation of them so that, in his pursuit of solving or remedying the problem, the action can also serve as an experimental stimulus or treatment appropriate for testing and advancing her theory.

Third, the distinction between the world of the scientific researcher and the world of the practitioner is as significant as the distinction between the cultures of two different nations or ethnic groups. Just as an anthropologist from a developed, industrialized nation would do a year-long

ethnography in order to develop an understanding of the world (the socially constructed reality) of the natives of a preliterate society, and just as an interpretive IS researcher can spend the same amount of time and effort to develop an understanding of the world (the socially constructed reality) of the managers and systems developers in a corporation, the scientific researcher in dialogical AR sees the practitioner as a member of a socially constructed reality with its own rich culture, world view, and history which constitute the context of the practitioner's *praxis*.

Fourth, given its portrayal of practitioners and scientific researchers as products of two distinct socially constructed realities, our formulation of dialogical AR harbors no expectation that the practitioner will judge, much less understand, how well the action, as an experimental treatment, confirms or disconfirms the scientific researcher's theory. Similarly, dialogical AR harbors no expectation that the scientific researcher will judge, much less understand, how well the action, as a managerial intervention, solves or remedies the real-world problem. The effectiveness of the action in solving or remedying the practitioner's problem is a matter for the practitioner, using his *praxis*, to decide, and the effectiveness of the action in confirming or disconfirming the scientific researcher's theory is a matter for the scientist, using her *theoria*, to decide. In other words, dialogical AR recognizes that (1) in order to understand and assess scientific research, an individual takes the scientific attitude, to which she gains access through the socialization process of becoming a scientist, and (2) in order to understand and assess a real-world, organizational problem, an individual takes the natural attitude of everyday, organizational life, to which he gains access through the socialization process of becoming a member of the given organization. An equivalent perspective is that a practitioner in an organization (such as a manager) or a scientific researcher based in a university is an agent of the socially constructed reality that formed him or her and, as such, is an agent through whom this socially constructed reality acts. Without the prior socialization, the individual cannot serve as such an agent because he or she has no access to the

explicit and tacit knowledge or the social and historical context that the socially constructed reality affords.

Fifth, in our formulation of action research, the division of labor that the two distinct socially constructed realities encourage (scientific research by the scientific researcher and practical problem solving by the practitioner) requires that there be one or another point of contact between the scientific researcher and the practitioner. We choose the point of contact to be one-on-one scientist-practitioner dialogues that are dedicated to (1) the scientific researcher's attempt to interpret and diagnose (through the window provided by the practitioner) the organizational problems requiring action, and (2) the practitioner's attempt to describe his experiences in researcher-friendly ways and to appropriate the actions that the scientific researcher suggests. Other plausible points of contact could be formulated, such as active participation by the scientific researcher in the organization's committee meetings or the creation of a project team of which the scientific researcher and the practitioner are members; however, because our formulation of dialogical AR is a *post hoc* reconstruction of Mårtensson's already completed field work in Omega Corporation, we will take advantage of the scientist-practitioner dialogues that took place between Mårtensson and a practitioner in a setting away from Omega.<sup>5</sup>

Sixth, we emphasize that the distinction between a scientific researcher and a practitioner is analogous to the distinction between members of two distinct ethnic groups, each with its own language and culture. We may consider the terminology and logic of the ethnic group of scientists to be the vocabulary and grammar of this ethnic group's language, and we may consider the shared scientific norms and conventions of the ethnic group of scientists to be its culture. For

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<sup>5</sup>Also contributing to our interest in scientist-practitioner dialogues was our impression of Mårtensson's scientist-practitioner dialogues as having a reflective quality, similar to the dialogue that one has with a counselor or clergy in a private office.

practitioners in an organization, their language includes colloquialisms and other terms unique to their organization, and their culture includes the norms, conventions, and common sense that they all share as a result of their shared experiences in the organization and their shared professional training and socialization (e.g., the experience of completing an M.B.A. program). Adopting a metaphor from Lee (1982, 1987), we reason that, because neither the typical manager nor typical scientific researcher is fully (or even partially) bilingual or bicultural, communication between these two "ethnic groups" can be problematic and can require attention and intervention as a problem in its own right. Regularly scheduled one-on-one dialogues in a detached setting allow the scientific researcher and the practitioner to concentrate on building a mutual understanding.

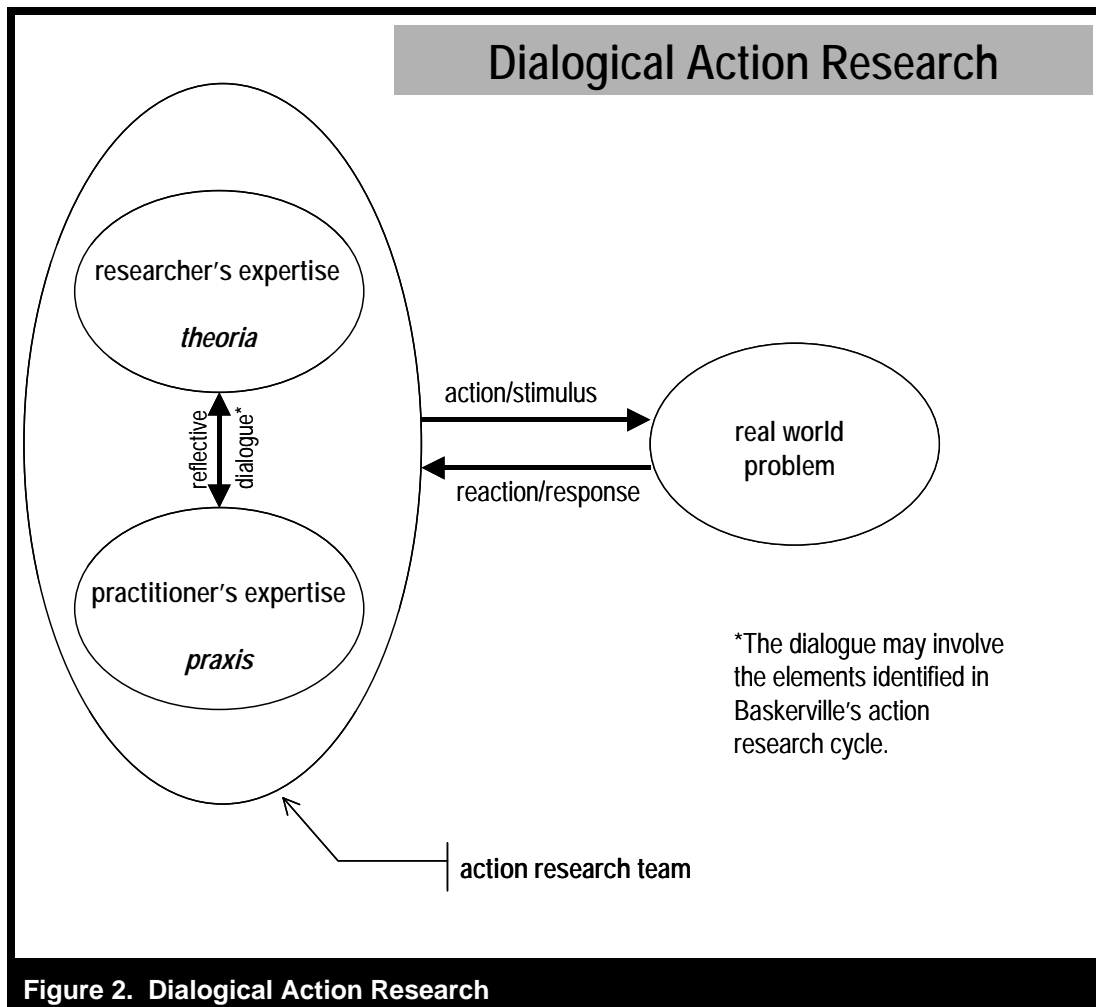
Finally, we emphasize that, in our formulation of dialogical AR, the knowledge of the scientific researcher does not have a higher status than the knowledge of the real-world practitioner. *Theoria* and *praxis* are simply different forms of knowledge. The knowledge of one ethnic group is never better or worse than, but simply different from, the knowledge of a different ethnic group. As researchers ourselves, we regard university-based scientific researchers to be "natives" as much as we regard managers in organizations to be natives. We take much the same attitude as would an anthropologist studying different ethnic groups in a developing country.

We may summarize our characterization of dialogical AR by noting that it adds the following two features to its rendering of action research: *knowledge heterogeneity* and *knowledge contextuality*. The former feature recognizes that knowledge is not monolithic. In other words, we see the researcher's scientifically based expertise (including her tacit knowledge as a scientific researcher) and the practitioner's organizationally based expertise (including his tacit knowledge as an organizational member) as being two different categories of knowledge, where the researcher and the practitioner do not necessarily share a common set of rules of logic or a common set of rules for learning from experience. The latter

feature recognizes that knowledge loses its meaning, or even ceases to exist, if removed from its social and historical context, in much the same way that the scientific knowledge of the scientists in Lee's case study found that their knowledge lost its meaning and even its sanction in the setting of a courtroom. This feature also describes the local knowledge of natives in a village (Geertz 1983) or managers in a corporation (Lee 1994a, 1994b). We make no claim that all forms of AR must recognize knowledge heterogeneity and knowledge contextuality, but our formulation of dialogical AR chooses to recognize them.

A related point is that, in dialogical AR, the researcher (e.g., Mårtensson) does not attempt to "educate" the practitioner (the managing director), but rather conducts himself as an equal and does his best to enter the world of the natives (the people at Omega Corporation) and to have dialogues situated in how they themselves saw their own world. A related aspect of dialogical AR is that, on the one hand, there is no need for the practitioner to consume "raw" scientific theories directly; however, the scientific researcher bears responsibility for seeing that the practitioner appropriates scientific knowledge in ways faithful to the spirit of her scientific research. In dialogical AR, the practitioner appropriates science in his own terms, meaningful in his own world, with the active support and collaboration of the scientific researcher who considers the practitioner's need to solve actual problems to be equal in importance to her (the scientific researcher's) need to move scientific knowledge forward.

Figure 2 shows that dialogical AR recognizes knowledge heterogeneity by splitting apart expertise into separate entities: the researcher's expertise and the practitioner's expertise. This addition is necessary and useful because expertise does not appear explicitly in Baskerville's diagram of the action research cycle. The reflective dialogue included in Figure 2 illustrates the ongoing dialogue between the researcher and the practitioner (i.e., between the two knowledge domains). This dialogue is one key element in dialogical AR and can be related to the elements identified in Baskerville's action research cycle (see Figure 1).



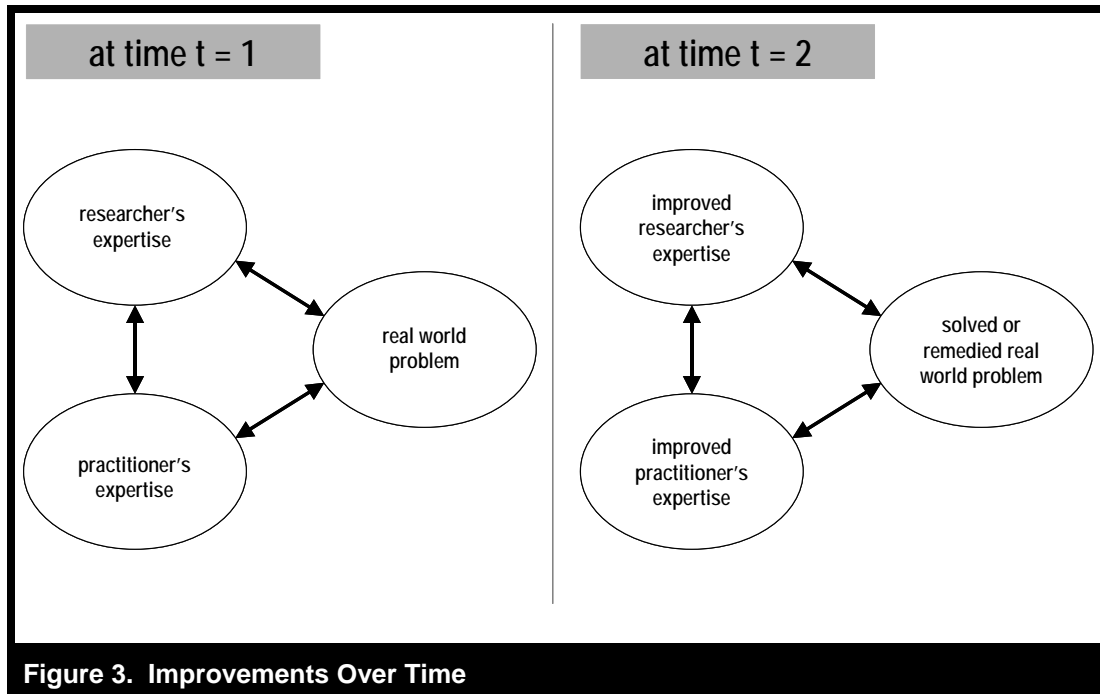
**Figure 2. Dialogical Action Research**

The action research team (researcher and practitioner) takes various types of action (stimulus) depending on the situation at hand. These actions in turn then lead to new reactions (responses) from the real world problem. This stimulus/response pattern is illustrated by the arrows between the action research team and the real world problem in Figure 2.

Figure 3 emphasizes that, over time, there must be an improvement in expertise—both the researcher's expertise and the practitioner's expertise. In Baskerville's diagram of the action research cycle, this improvement is reflected in the word *learning*. There are thus three domains for

improvements: in the researcher's expertise, in the practitioner's expertise, and in the real world problem. Figure 1 (containing Baskerville's diagram), Figure 2, and Figure 3 taken together capture the salient features of dialogical AR.

As in all forms of action research, every intervention that the practitioner makes and that follows from the researcher's theory-based dialogue with the practitioner provides, in the scientific researcher's eyes, an empirical test of the theory. Interventions that yield organizational results that the researcher's theory does not anticipate would provide an opportunity for improving the theory following the researcher's and practitioner's reflec-



**Figure 3. Improvements Over Time**

tions. The theory would be continually improved, following the researcher's reflections, and new interventions would be continually made until the practitioner deems his or her problems to be sufficiently addressed. For the researcher, the product would be a theory that has been improved and that has survived the latest attempts of empirical testing in the field.

In order to evaluate an instance that pursues dialogical AR, we note that Figures 2 and 3 are suggestive of useful criteria. *Criterion I* is that the practitioner considers the real world problem facing him or her to be solved or satisfactorily remedied. *Criterion II* is that there be an improvement in the practitioner's expertise. *Criterion III* is that there be an improvement in the scientific researcher's expertise. Given the extensive literature on research methods in science, the last criterion deserves additional discussion.

Where we focus on the theory in the scientific researcher's expertise, we realize that much or all of the literature on research methods is potentially

relevant to and useable in applications of criterion III. For example, the pattern matching in the case study method of Yin (1994) provides a test of whether the researcher's theory is valid. Therefore, if there is a match between the pattern anticipated by a theory that the researcher (in a dialogical AR effort) has just refined and the pattern observed in response to the action or stimulus applied to the real world problem (see Figure 2), then the refined theory would constitute an improvement in the researcher's expertise. For another example, regarding the principle of the hermeneutic circle and Lee's (1994a) study of information richness theory and e-mail, Klein and Myers (1999) note that

if this partial understanding [of information richness theory] is related to the larger whole of the literature on the conceptual and empirical weaknesses in information richness theory, contradictions arise...[where] this becomes the starting point for a second hermeneutic circle... (p. 73)

the result of which is an interpretive theory that is consistent with the researcher's observations and that advances the researcher's literature. Hence, the criterion that there be an improvement in the researcher's expertise may take advantage of the wealth of research methods already in existence for developing and evaluating scientific theory.

## Case Study: Omega Corporation

The case study at Omega Corporation (a pseudonym) was originally conducted by Mårtensson as part of the scientific requirements for a doctoral degree and published in a doctoral dissertation (Mårtensson 2001). The field work thus took place under the academic supervision of a university professor. When searching for a suitable research site, the researcher initially contacted the managing director. Mårtensson's aim was to find an organization where it was possible to learn more about management processes in general and about an information perspective on managerial work in particular, and at the same time to help improve the situation in the organization. Initially Mårtensson contacted 11 different organizations and eventually he chose the organization here called Omega.<sup>6</sup>

Omega Corporation is part of a large service group, the Alpha Group, which operates worldwide. The Alpha Group consists of seven major business divisions and five rather autonomous subsidiaries, of which Omega Corporation is one. The Alpha Group owns 100 percent of Omega but the board of directors in Omega Corporation consists of both internal members from other parts of the group and external members. The business activities of Omega Corporation consist of retail trading, which differs from most of the other parts of the Alpha Group. Omega Corporation is located mainly in the Scandinavian countries and also in a

few other European countries. There are about 600 employees in Omega Corporation whereas the entire service group has more than 10,000 employees worldwide. Omega Corporation is one of the more profitable units of the entire Alpha Group and is therefore considered more important than would be indicated by its relative size in numbers of employees. Consistent with Omega's status in the Alpha Group is the fact that the CEO for the Alpha Group is the chairman of board of Omega Corporation. The business activities of Omega Corporation are quite independent of the Alpha Group. The managing director reports to the board of directors, but aside from this, Omega Corporation operates like an autonomous unit.

The managing director of Omega Corporation was in his mid-forties and newly appointed when the research process described here began. Before his current position as the managing director, he held several different positions within the Alpha Group for about 10 years. He is a white man with a Scandinavian background.

The management group of Omega Corporation consists of 10 people: the managing director, his personal assistant, the managers for the four geographically oriented regions, and the managers for the four departments (business development, purchasing/logistics, personnel, and finance/IS) serving the sales units in the regions.

The Omega Corporation case study can be described as a *longitudinal single-case study* (Benbasat et al. 1987; Kimberly 1976; Yin 1994). The study took place in close cooperation with the managing director of Omega Corporation and attempted to get "below the surface" in the organization. The empirical case study's foundation consists of multiple empirical sources. The most prominent source was interviews and these were supplemented with studies of different types of written documents and records, as well as with observations in various forms as described below.

*Interviews:* There was documentation from 105 interviews with the managing director and other people in the organization (mainly from the management group). About half of the interviews

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<sup>6</sup>The case-selection process and the criteria used are described in more detail in Mårtensson (2001, pp. 49-51).

were with the Managing Director. There was an attempt to create an open atmosphere during the interviews in order to make the communication as open as possible (Holstein and Gubrium 1995). The approach to interviews, including the intentions to form a relationship with the interviewees and not trying to be a neutral researcher, can be seen as a type of qualitative interviewing with three types of questions: *main questions* (to begin and guide the interview), *probes* (to complete or clarify an answer or ask for further examples), and *follow-up questions* (to pursue implications of answers to main questions) (Rubin and Rubin 1995). The documentation from these interviews consists of about 700 single-spaced pages, which are typed notes from the interviews based on handwritten notes during the interviews.

*Direct observation and participant observation:* There were field notes from time spent in Omega Corporation beyond the meetings described above. This documentation consists of about 100 single-spaced pages, which are typed notes based on handwritten notes from observations in the organization.

*Documentation:* Minutes were taken at all meetings in the management group (monthly meetings of one to two days each) during the time period (i.e., about 60 meetings and about 1100 pages in total), plus Mårtensson's written summaries based on the minutes of the meetings. Minutes from all board meetings (quarterly) during the time period (i.e., about 15 board meetings and about 200 pages in total), plus Mårtensson's written summaries based on the minutes of the meetings. The resulting total of 1300 pages were photocopied from the minutes. In addition to these pages are Mårtensson's own typed notes in the form of brief summaries of all meetings with the purpose of improving the overview of the extensive material.

*Documentation and archival records:* There were different types of internal documents (about 500 pages). There were also various public documents, such as internal magazines and annual reports. Some of the documents turned out to be of vital interest for the case study (for example,

interviews of the managing director in an internal magazine), while other documents merely were used as background material (for example, annual reports for the Alpha Group).

The interviews, playing an important role as the empirical basis for the research, were mostly semi-structured and can be described as "reality-constructing, meaning-making occasions" (Holstein and Gubrium 1995). No tape-recorder was used during the interviews. The advantage of using a tape-recorder would have been the procurement of a full description of what was said during the interviews, even if this advantage should not be overestimated (Stake 1995). The main disadvantage of using a tape-recorder during interviews would have been the respondent's serious inhibition in the case of confidential and sensitive matters (Walsham 1995). Instead of using a tape-recorder during the interviews, a tape-recorder was used immediately after a number of the interviews. Usually, the notes were rewritten directly after an interview or meeting. Here, sometimes a tape-recorder was used to go through the notes and add some oral comments. This approach was found to be useful as it made it easier to make a large number of comments orally than to capture them in written notes, and that it was useful to go back to the tapes and listen to them at a later stage when reading the notes from the interview.

There were also interviews (or meetings) that played an important role in the collection of empirical material included in the *reflective dialogue*. Mårtensson, after having spent some time in the organization, and the managing director introduced this form of dialogue as a complement to other contacts through interviews and meetings in the organization. These one-on-one sessions were held outside the organization on a regular basis and the idea was that these meetings should be valuable both for the managing director (the practitioner perspective) as well as for Mårtensson (the researcher perspective). Given the important element of reflection during this dialogue of unstructured interviews, Mårtensson named the meetings *reflective dialogue* (Schön, 1983). Usually the reflective dialogue took place in

Mårtensson's office, located in a university-affiliated research institute, and there were monthly meetings between the managing director and Mårtensson for over two years. Friday afternoons were found to be suitable times for discussion and reflection. The meetings typically lasted between one and two hours after the work of the week was finished. In this setting, the manager was divorced from the immediacy of his normal everyday stimuli, such as the ringing of his telephone, knocks on his door, e-mails, fires needing to be put out, and so forth. This means that it was easy to relax, which is important for this type of open interview situation (Atkinson 1998).

Given the empirical material described above, we now briefly describe how Mårtensson analyzed the material. He saw the empirical material in three different categories (Wolcott 1994):

- Type A: own documentation from interviews and meetings (notes from *enquiring*)
- Type B: own field notes, including descriptions of the process (notes from *experiencing*)
- Type C: documents from the organization, including own written summaries of them (notes from *examining*)

The empirical material became quite extensive and both paper-based copies of the material as well as electronic copies were kept. Mårtensson rewrote his own documentation from interviews and meetings immediately after the interviews and meetings. The next phase of the interpretation of the material was to code the empirical material (e.g., Miles and Huberman 1994; Rubin and Rubin 1995). The coding scheme used was developed during the process and started with a number of main categories; the coding scheme then evolved according to the needs perceived during the process (Rubin and Rubin 1995).

In this case, Mårtensson collected empirical material and coded it after the collection was finished, which is not in line with the suggestion by Miles and Huberman (1994). With a coding procedure at an early stage, Mårtensson perceived it to

be a risk of, intentionally or unintentionally, limiting the focus of the collection of empirical material too narrowly. Given a coding procedure at a late stage of the process, on the other hand, the amount of empirical material had become extensive. There was a risk that the coding process could become mechanical (Coffey and Atkinson 1996). In the coding process, the work was simply split into different sections (according to the chronology) and mixed with other types of work in order to prevent the coding procedure from becoming something carried out on "autopilot."

Based on the coded empirical material, Mårtensson made several interpretations and finally wrote up a chronology of the case. In this description of about 110 single-spaced pages, Mårtensson presented different perspectives existing in the Omega Corporation in order to make it possible for the reader to make his or her own interpretations of the different situations described (Mårtensson 2001). In this paper, we use two short illustrations from the case study to illustrate the methodological approach of dialogical AR.

### Example 1: Information to the Board

The first of the two examples describes a situation in which the managing director of the Omega Corporation perceived a problem concerning the quality of the *information to the board members*. He asked Mårtensson for help to improve the situation. Illustration 1 captures how the problem was perceived, improved, and solved and how the learning processes took place both from a practical and a research perspective.

This example has shown that communication is not just an occasion for satisfying the function of communicating in the sense of passing information in different directions, but also an occasion for serious employee development. This in turn pointed to the need to place information and communication in its wider organizational contexts. Vertical communication processes involve aspects



**Illustration 1. Information to the Board**

<i>The Practitioner Perspective</i>	<i>The Researcher Perspective</i>
<p>The managing director became aware of the fact that the board members were unhappy with the reports, in the form of memoranda that the board was receiving from the management group members. The managing director received complaints from board members about this. Board members also complained about the distance between them and the management group as being so great as to constitute a barrier. The managing director, then in his first year on the job, wanted to make a difference to the problem that the board members themselves voiced about the information they were receiving from the management group members: “<i>The information to the board has been damn unsatisfactory, both regarding contents and form</i>” (Board Member A) . “<i>Blah-blah...soon I won't manage to get through this anymore</i>” (Board Member B). The managing director framed the situation as a communication problem.</p> <p>The practitioner’s expertise or <i>praxis</i> pertaining to the flows of information in the organization can be described in terms of a <i>conduit metaphor</i>. He saw information as flows in various directions in the organization and the particular problem at hand concerned the vertical flow from the members of the management group to the board members. Furthermore, his <i>praxis</i> can be described as a form of <i>rationalism</i>, where he pictured the management group members as the occupants of the slots in an organization chart, and where communication involved the flow of information up, down, and across the hierarchy (according to the conduit metaphor).</p>	<p>Mårtensson posited, to himself, the scientific theory of media richness theory (MRT) (e.g., Carlson and Davis 1998; Daft and Lengel 1986; Ngwenyama and Lee 1997) for the purpose of diagnosing the situation. Mårtensson diagnosed the problem as one resulting from a lean medium (paper text and memoranda).</p> <p>From the researcher perspective, the core of the perceived problem in the Omega Corporation was captured in the frame of MRT. The focus for the problem was related to the medium used for the communication between the management group and the board.</p> <p>Mårtensson did not use the term <i>media richness theory</i> in his dialogue with the managing director, but instead conveyed insights and potential actions consistent with it.</p>
<i>Dialogue and Action</i>	
<p>In the reflective dialogue between the managing director and Mårtensson, they discussed the problem at hand. From Mårtensson’s perspective, the management group members own presentations of information could offer richer presentations, in accordance with the scientific media richness theory. From the managing director’s perspective, the idea about media richness fit his intuitive idea that if members of the management group would give their own presentations to the board, the management group members’ own presentations of information would improve the quality of the information. These two perspectives illustrate <i>knowledge heterogeneity</i> and how the practitioner and researcher can, through reflective dialogue, forge a mutual understanding between them.</p>	

<p>In their reflective dialogue, Mårtensson and the managing director of Omega Corporation devised the action in which the management group members would present, in person at board meetings, their issues and recommendations to the board. The action was taken in order to improve the information to the board.</p>	
<p><i>The Practitioner Perspective</i></p>	<p><i>The Researcher Perspective</i></p>
<p>The managing director observed that the quality of the content and form of the information did improve sufficiently to satisfy the board members. However, the managing director was additionally quite surprised to observe, in the management group members, a major boost in their <i>esprit de corps</i> and a new sense of commitment to their own projects. Upon their presentations, in person, at the board meetings, the management group members realized the extent of the significance of their work to Omega Corporation.</p> <p>From the practitioner perspective, the impacts and consequences of the action taken went beyond just the communicative. The social impacts regarding the members of the management group included the members' being better rewarded (it was an honor to be asked to present to the board) and they were becoming better integrated into the corporation. Yet another social impact of the action taken was their move (seriously and wholeheartedly) to voluntarily choosing to better involve themselves as stakeholders in the process of improving the management group.</p>	<p>Mårtensson concluded that the empirical result of better communication confirmed MRT. However, Mårtensson recognized that the empirical results included the emergence of additional phenomena that his application of MRT did not allow him to anticipate. These additional phenomena were the consequences of the action, where they included not only better communication, but also an apparent major improvement in the work processes of the management group members.</p> <p>From the researcher perspective, the results of the action taken were consistent with MRT, but also went beyond it. It was found that richness is not limited to richness of information or richness of media, but also richness of quality working life for the "authors" of the information presented (in this case, the members of the management group presenting their issues to the board). Previously, the information richness or media richness could be described as a function of certain factors related to the information and medium. Beyond that, one could now see how quality-of-working-life richness (QWL Richness) could be seen as a function of information richness or media richness. Expressed differently, IR or MR = f(...) changed into QWL Richness = f(IR or MR).</p>
<p><i>Dialogue and Action</i></p>	
<p>Mårtensson, using the X-Model (see Appendix A), facilitated the managing director's move from a mainly task-oriented perspective to one equally considering a human-oriented perspective. A result was that the managing director came to see that he was holding a mainly task-oriented view of the organization, as if the organization had or should have well designed and coordinated parts and as if the normal situation was one of a machine's operating smoothly.</p> <p>By applying a meta-model (the X-Model), Mårtensson facilitated dialogue that helped the managing director to further develop his <i>praxis</i>. Mårtensson did not use the term <i>X-Model</i> or use any scientific research terminology. Instead he conveyed insights and possible actions consistent with the X-Model. The setting for the reflective dialogue (i.e., outside the corporate setting and at the researcher's home office) was important as it helped the managing director to reflect without the usual interruptions he encountered in his executive offices.</p>	

<i>The Practitioner Perspective</i>	<i>The Researcher Perspective</i>
<p>In order to account for not only the task-oriented matters but also the human-oriented matters, the managing director came to picture the management group members more as members of a team. In the team metaphor, communication is not merely the flow of information up, down, and across a hierarchy, but instead is purposely shared by team members in a way to facilitate each other's contribution for the good of the whole as well as for each individual team member's subjective need for dignity, approval, and respect.</p> <p>From the practitioner perspective the new <i>praxis</i> depicted the information to the board more than just channeling information. Instead it saw information from members of the management group to the board more as a social process where authors of pieces of information were involved.</p>	<p>In order to account for not only the better communication observed between the board members and the management group members, but also the latter's greater <i>esprit de corps</i> and sense of commitment, Mårtensson devised a new theory, vertical interaction theory, of which MRT could be a subset. The focus here is expanded from communication alone to social interactions. One difference that the social interactions (not restricted to communication alone) makes is that, for a person participating in the social interactions, the better communication can subsequently lead to the received information's reacting with the person's own view of her position in an organizational context, thereby enabling her to see and enact her work in a way that is better integrated with the organizational context.</p> <p>From the researcher perspective, the scientific theory was expanded from a focus on communication processes alone to social interactions in vertical communication processes and how these are treated in managerial activities. The social interactions between people located at different levels of the organizational hierarchy can be new and different to a person previously accustomed to social interactions routinely experienced with others mostly at his or her level. Social interactions between higher and lower levels (vertical interactions) both require and afford the seeing and enacting of communicating in ways different from the earlier developed ways with others at the same level (horizontal interactions).</p>
<i>Dialogue and Action</i>	
<p>As a result of the reflective dialogue between Mårtensson and the managing director of Omega Corporation, the managing director then started to deliberately use invitations to give presentations to the board as a step promoting the development of the management group and the interactions between members of the management group and the board. For Mårtensson, this action involved moving the management group members to account explicitly for what he himself knew as vertical interactions. For the managing director, this action was based on his understanding that personal participation in the board meetings would improve each management group member's sense of dignity, approval, and respect, thereby promoting both an individually based and team-based <i>esprit de corps</i>.</p> <p>From the researcher's perspective, the new understanding was seen through the frame of vertical interactions, and from the practitioner's perspective, the new understanding was seen through the frame of <i>esprit de corps</i>, each frame originated from different contexts. These two frames illustrate the <i>knowledge contextuality</i> and no attempt was made to diffuse a specific theory from the scientific frame to the practitioner frame because of the differences in context.</p>	

Furthermore, the managing director started to ask certain people explicitly about details where his ulterior motive was to reveal the importance that he attached to the people whom he asked, regardless of whether he actually needed the requested details. From the practitioner perspective, there then occurred an intuitive understanding of the complexity involved in the communication processes. This in turn meant that communication was no longer seen only as flows of information, but also as important aspects of the social interaction. From the researcher perspective, the actions taken were part of the process of trying to better understand vertical communication processes in a managerial context. This meant that both the specific contents, as well as the meta-communication aspects, needed to be understood in the processes.

Mårtensson and the managing director jointly anticipated the result of better communication to the board as well as the materializing of the *esprit de corps* in the management group.

<i>The Practitioner Perspective</i>	<i>The Researcher Perspective</i>
<p>The managing director observed that board members expressed satisfaction with the information they received from the management group. The board members expressed that they felt that the distance between them and the management group was reduced to the point where it was no longer a barrier. To the managing director, all of this evidence was feedback consistent with his evolving <i>praxis</i>.</p> <p>From the practitioner perspective, the managing director was pleased to find a greater commitment and involvement among the members of the management group. He was also pleased to find that the board members were more satisfied with the information and the communication with the entire management group. The managing director observed further strengthening of the team spirit in the management group, greater commitment of management group members to their respective projects, and better quality of work overall in the management group. The new situation was also highly appreciated by members of the management group. One of the management group members made the following statement: <i>"The nearness to the board has increased with [the new managing director]. I had a presentation for the board which was planned to take 20 minutes but was expanded to more than one hour."</i></p>	<p>Mårtensson observed further improvement in communication as well as further materializing of team spirit in the management group.</p> <p>From the researcher perspective, the observations highlighted the meta-communication aspects of the vertical communication processes and were consistent with vertical interaction theory.</p>

of social development and are not only a channel for information (cf the conduit metaphor used above). The reflective dialogue that took place outside the organization helped the managing director to identify, in ways understandable to himself, the social development effects involved in the vertical communication processes.

If we view this first example in light of Figure 2, the researcher's expertise included media richness theory and the practitioner's expertise included knowledge about specific problems related to the information being presented to the board. In the reflective dialogue (vertical arrow in Figure 2), the managing director and Mårtensson discussed different possible actions. One example of action was the invitation extended to the management group members to present their issues to the board (arrow pointing right in Figure 2). As a result of this, there was a boost in the management group members' *esprit de corps* (arrow pointing left in Figure 2). Through actions resulting from the reflective dialogue, the perceived real world problem was eventually solved. In light of Figure 3, this example illustrates how the researcher's expertise improves over time (e.g., new understanding of vertical interaction), the practitioner's expertise improves over time (e.g., a broader view of information flows in the organization), and the real world problem is improved (e.g., the information to the board is improved).

The three evaluative criteria are satisfied in this example. There were several real world problems that the dialogical AR solved (hence satisfying criterion I). There were developments and improvements in the practitioner's expertise (hence satisfying criterion II) as well as in the scientific researcher's expertise (hence satisfying criterion III). Where this example could stand some improvement would be the application of additional evaluative criteria for assessing the validity of the researcher's resulting expertise—in particular, Mårtensson's vertical interaction theory.<sup>7</sup> The explicit application of, for example,

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<sup>7</sup>As for where the additional evaluative criteria might be necessary or helpful would be in the activity where the scientific researcher is in the process of improving his or

some or all of Klein and Myers' (1999) seven principles or other appropriate criteria proposed in the other articles in the *MIS Quarterly's* special issue on intensive research could only improve the scientific status associated with the resulting vertical interaction theory.

## Example 2: Control of Projects

The second illustration describes a situation in which the managing director, at a later stage, perceived problems concerning the possibility of *controlling projects* running in the organization. The total number of projects had increased and a large proportion of the projects involved aspects of information technology. The reflective dialogue played a significant role in solving the problems about the projects, as will be briefly described in Illustration 2. The illustration will also highlight the learning that took place.

This example has shown that the project control process benefitted from being placed in a wider context. By looking at problems in project control not only through the lens of project control, but also through the lens of issues regarding the broader managerial agenda, it was possible to reveal new factors influencing the control process. The reflective dialogue helped the manager and the researcher to see new patterns in the situation at hand. From a researcher perspective, this facilitated the visibility of links between different theoretical areas. From the practitioner perspective, the manager was helped in the process of solving the perceived problem (i.e., the new understanding was seen through the frame of handling a large number of tricky projects). The two frames originated from different contexts and no attempt was made to diffuse a specific theory from the scientific frame to the practitioner frame because of the differences in context (cf *knowledge contextuality*).

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her theory to account for any unexpected responses from the last round of actions or stimuli that were applied.

**Illustration 2. Control of Projects (With or Without Information Technology)**

<i>The Practitioner Perspective</i>	<i>The Researcher Perspective</i>
<p>The managing director saw that the number of projects in the organization was growing. He perceived a problem in getting an overview of the large number of projects. He said: <i>“Projects are delayed and people do not report on the delays until very late. This is not good.”</i> At one point in time there were 77 projects that were running and that were reporting to the management group.</p> <p>The practitioner’s expertise or <i>praxis</i> was dominated by a form of rationalism where activities could be broken down into different discrete projects, like parts of a machine. A significant proportion of the projects involved information technology in some way (18 out of the 77 projects). The main reason behind the increased number of projects was that the managing director appreciated a project-oriented way of organizing various activities. When the number of projects increased, however, the managing director perceived a problem in obtaining an overview of all projects. Besides this, people in the organization became tired of projects. One of the management group members said: <i>“People are enormously tired of projects. ‘One more project and we’ll throw up’ is a common reaction in the organization.”</i></p>	<p>Mårtensson, in his own thoughts, posited a scientific theory, which he referred to as project control theory (see Kirsch 1996, 1997; Ouchi 1979) for the purpose of finding suitable ways of controlling a large number of projects. In this body of theory, different modes of control are described (behavior control, outcome control, clan control, self control) and how these can be combined. Mårtensson diagnosed the problem as one resulting from poor ways of controlling projects in the management group.</p> <p>From the researcher perspective, the core of the perceived problems in the Omega Corporation were seen through the frame of project control theory and the focus was on finding new forms for controlling the growing number of projects in the organization.</p> <p>Mårtensson did not use the term <i>project control theory</i> or use any scientific research terminology. Instead, he conveyed insights and possible actions consistent with the body of theory.</p>
<p><i>Dialogue and Action</i></p>	
<p>In their reflective dialogue, Mårtensson and the managing director jointly devised the action where a template for project control would be introduced for project presentations in management group meetings. All project presentations should follow the same template in order to give a better overview and thereby improving the quality of the project control. The template had a number of specific headings (status according to plan regarding time; status according to plan regarding resources; key concerns; etc.) that every project presentation should cover in order to focus the presentations. Many of the headings were linked to outcome control in terms of project control theory. There were no revolutionary new items to cover in the presentations, but so far the project leaders had been allowed to make their own form of presentations of the projects.</p> <p>The action was taken as an attempt to facilitate an overview of a large number of projects reporting to the management group. From the practitioner perspective, the template for projects was seen as a way of improving the quality of the presentations of projects in management group meetings. From the researcher perspective, the change of the project presentations in management group meetings was seen as an attempt to improve the manager’s control of the project portfolio, in accordance with theory. <i>Knowledge heterogeneity</i> was illustrated in the two perspectives offering two different categories of knowledge.</p>	

<i>The Practitioner Perspective</i>	<i>The Researcher Perspective</i>
<p>The managing director judged that the quality of the project presentations in the management group meetings improved sufficiently, in that the possible overview of the large number of projects improved. The managing director sometimes had to interrupt people when they presented their projects in accordance with the project plan because, in the managing director's eyes, they only gave a brief summary of the project. The managing director made the following comment after such a specific situation: <i>"It was not popular but important and efficient."</i></p> <p>However, the managing director noticed that there was not always enough time for discussions on all projects in the meetings. That is, the allocated time at the management group meetings was not always sufficient to allow all planned project presentations. He also noticed that there was often not enough time to discuss the projects involving information technology.</p> <p>From the practitioner perspective, the feedback from the action taken was that the project presentations in the management group meetings were improved, which pleased the managing director. He also noted that even if the template for presentation was the same for all projects, there seemed to be one type of project that was more often neglected than others, namely IT-related projects. The managing director made the following statement: <i>"The IT-issues may have been neglected lately. There is not time enough to give priority to everything."</i></p>	<p>Mårtensson concluded that the template for project presentations was consistent with theory for giving a better overview of the projects. Mårtensson also recognized that the nature of the projects played a significant role in the process for control of the projects in the management group meetings. That is, it seemed to play a significant role what type of project is if it was enough time to handle the project at the management group meetings. IT-related projects seemed to be more often neglected than projects of other types.</p> <p>This did not contradict previous scientific theory, but pointed to the possibility of linking project control theory to agenda formation theory.</p> <p>From the researcher perspective, the feedback that some projects still were more neglected than others suggested the relevance of theories on agenda formation. This allowed interpretations where not only forms of control were anticipated, but also mechanisms for the formation of the managerial agenda. This meant that rather than contradict the previous theory, the feedback suggested links between the scientific theory and other theoretical areas.</p>
<i>Dialogue and Action</i>	
<p>In the reflective dialogue, Mårtensson this time facilitated the dialogue using examples drawn from agenda formation theory (e.g., Dutton 1986). This theory reveals and describes how different factors influence what items that are included on the agenda or not. Linking project control theory with agenda formation theory helped the managing director reveal mechanisms explaining why some projects were not included on the managerial agenda, while other projects were.</p> <p>Mårtensson facilitated the managing director's move from a project control focus, to one also taking agenda formation mechanisms into consideration. A result was that the managing director came to see that there was a need to improve the preconditions for including IT-related projects on the agenda in the management group.</p>	

<i>The Practitioner Perspective</i>	<i>The Researcher Perspective</i>
<p>In order to account for the IT projects not getting enough attention at the management group meetings, the managing director started to look for reasons that could account for the different priorities given different issues on the agenda.</p> <p>From the practitioner perspective, the developing <i>praxis</i> recognized the process when projects were presented and discussed in management group meetings, not only as forms for control of the projects, but also as issues on the managerial agenda. By looking at the perceived problem from this point of view, the managing director saw the importance of the mechanisms and driving forces for inclusion or exclusion of issues on the agenda.</p>	<p>In order to account for the links to mechanisms for issues on the agenda, Mårtensson related project control theory and agenda formation theory to each other. Instead of only focusing on different ways of controlling the projects, there was now also a focus on revealing mechanisms behind what projects were given attention at the management group meetings.</p> <p>From the researcher perspective, the original scientific theory (about project control) was expanded and linked to another scientific theory (about agenda formation). Not only did different forms of control and how these were combined matter, but the setting in which this took place proved to be of importance. The different factors influencing the formation of the agenda gained significance.</p>
<i>Dialogue and Action</i>	
<p>As a result of their reflective dialogue the following action was taken: The managing director took the initiative to increase the IT competence among the members of the management group. A first step in this process was to arrange for a training camp in IT for the entire management group. It turned out that several members (including the managing director) thought IT issues were difficult to deal with, which may have been one explanation for the difficulty finding time for the presentation of IT-related projects. <i>"They [IT-related issues] are very tricky"</i> was a comment made by the managing director.</p> <p>For Mårtensson, this action was seen as a step in changing the mechanisms behind the agenda formation in terms of changing the pre-knowledge about IT projects. This in turn was anticipated to increase the likelihood that these projects were included on the managerial agenda. Mårtensson and the managing director jointly anticipated the result of increased IT knowledge among members of the management group.</p> <p>From the practitioner perspective, there then occurred an appreciation of the importance of understanding why some projects were given more attention than other projects in the management group meetings. As IT knowledge was identified as one factor influencing the agenda formation regarding IT-related projects, action was taken regarding this aspect. From the researcher perspective, the action taken was part of the process of understanding how project control could be understood in relation to formation of managerial agendas.</p>	
<i>The Practitioner Perspective</i>	<i>The Researcher Perspective</i>
<p>The managing director observed that IT projects were then given a higher priority in management group meetings. The managing director also observed that the framing of the discussions regarding IT projects then changed by focusing more on business opportunities from the projects,</p>	<p>Mårtensson observed the knowledge factor playing a significant role in the formation of the agenda for the management group meetings. These observations were consistent with agenda formation theory. Some of the members of the management group showed a significant interest</p>



as compared to earlier situations where there was a focus on delays and budget overruns in the projects. For example, the minutes from a board meeting stated: *"We will use IS/IT in an active, creative and cost efficient way to support and develop our business."*

From the practitioner perspective, the managing director was pleased to see that the attention focused on the IT-related projects was increased. He was also pleased to find that the discussions on the IT projects partly changed in nature as the increased IT knowledge facilitated other and more initiated discussions in the areas.

in the IT project and it was possible to discern a *"fun-factor"* influencing the formation of the managerial agenda (i.e., people spend more time on issues that appeal to their personal interests).

From the researcher perspective, the understanding of the agenda formation processes was furthered. The link between different forms of project control and agenda formation mechanisms was also highlighted in the process that took place in the management group of the Omega Corporation. The findings from the change that aimed at improving the pre-knowledge in IT and the consequences from this were consistent with agenda formation theory.

If we view this second example in light of Figure 2, the researcher's expertise included project control theory and the practitioner's expertise included knowledge about specific problems related to project control in Omega. Through reflective dialogue (vertical arrow in Figure 2), the managing director and Mårtensson discussed several alternatives and decided to introduce a template for project presentations (arrow pointing right in Figure 2). Based on reactions to this action (arrow pointing left in Figure 2), the action research team (i.e., Mårtensson and the managing director) found a need for improving the preconditions for including IT-related projects on the agenda. This was a result of a reflective dialogue in which Mårtensson had used expertise about agenda formation theory. The action to improve the preconditions for handling IT-related projects (arrow pointing right) helped to solve the real world problem. Seen in light of Figure 3, this example illustrates how the researcher's expertise improves over time (e.g., a new understanding of the link between project control and agenda formation), the practitioner's expertise improves over time (e.g., the need to improve the preconditions for handling IT-related projects in the management group), and the real world problem improves (e.g., the control of the large number of projects is improved).

In solving or remedying problems pertaining to managing a seemingly excessive number of projects and to paying proper attention to the IT-related projects, the dialogical AR example satisfied criterion I. In effecting developments and improvements in the practitioner's expertise, especially acquiring IT knowledge in many instances, the dialogical AR satisfied criterion II. In expanding project control theory and in linking it to agenda formation theory, the dialogical AR effected an improvement in the scientific researcher's expertise, hence satisfying criterion III. Like the previous example, this example could stand some improvement in the application of additional evaluative criteria for assessing the validity of the resulting expertise.

## Concluding Discussion

Reflective dialogues outside the organization can help the manager to reflect on, learn from, and remedy managerial problems in the organization. The researcher can use theories (without mentioning them explicitly in dialogues with the practitioner) to help further the understanding of processes in the organization. The physical setting for the dialogue can make a difference to

the outcome. In this case, the reflective dialogue that took place outside the organization offered a setting regarded as invaluable to both the practitioner and the researcher. Also, the use of reflective dialogues facilitates the building of a mutual understanding between the researcher and the practitioner.

The action researcher has the option to directly involve herself in the activities in the organization where a problem is to be solved or a situation is to be improved. No less important is that, in dialogical AR, the researcher declines this option and instead chooses the different option of involving herself in one-on-one dialogues with a practitioner so as to foster learning for the researcher and the practitioner. In this dialogue, the researcher plays a facilitating role, drawing on one or more theories from her own world of scientific research. This explicit recognition and handling of the different practitioner and researcher perspectives is fundamental to dialogical AR. This, in turn, implies the explicit recognition and handling of heterogeneous forms of knowledge. This also implies shifts between heterogeneous forms of knowledge.

The reflective dialogue gave the managing director an opportunity to reflect on his work, and gave Mårtensson as a researcher an opportunity to learn more about managerial work. The reflective dialogue provided an occasion for the presenting both the managing director's perspective and the scientific researcher's perspective, and thereby aided reflection and learning.

For the managing director, the reflective dialogue was an occasion to

- take time to reflect on the work, something that is often not given priority if not planned
- discuss and try new ideas with a person who is outside the organization and hence offers an independent perspective
- learn from the external or outside perspective

For Mårtensson, the reflective dialogue was an occasion to

- learn more about the practitioner's situation (in this case, to learn about managerial work)
- learn from an internal perspective and learn more about how the practitioner thinks
- take advantage of empirical material that extends over a lengthy period of time and hence allows for rich scientific theorizing

In the beginning of this paper, we pointed to three challenges that face researchers attempting to do action research:

- to find a balance that makes improvements possible both in practice and in scientific knowledge
- to deal with the time dimension in process-oriented research
- to find a suitable form of action research

We said we would focus on the third challenge, which we have done by suggesting and describing a new form of action research. Despite the focus on the third challenge, our research suggests how we might briefly touch upon the other two challenges as well. With regard to the first challenge, dialogical AR strikes a balance between practice and scientific knowledge through (1) its explicit recognition of both *theoria* and *praxis*, (2) its recognition that they are not better or worse forms of each other but that they carry equal significance, and (3) its recognition that a dialogue between the two forms of knowledge can promote improvements in each of them. As for the second challenge, the traditional difficulty of engaging in field work (i.e., long periods of participant observation) is resolved by using the windows, provided by private one-on-one dialogues in a detached and neutral setting, through which the unfolding events in the organization may be recounted and re-examined. The reflective dialogue offers new ways of managing the time spent in the research project. The researcher can at some points in time stay in touch with the action research activities mostly through the reflective dialogue, and spend less time directly involved in the actions taken in

the organization. This means that dialogical AR opens up the opportunity for more flexibility in terms of time spent in process-oriented research projects.

Regarding implications for practitioners and researchers, dialogical AR can be applied in different areas in the field. One example<sup>8</sup> is that the method could be a potentially interesting way to approach issues in knowledge management, such as uncovering and developing tacit knowledge in individuals, transferring knowledge, and developing organizational social capital. In this area, the shift between the different dialogues described above could play an important role to reveal mechanisms that would otherwise be difficult to capture.

What kinds of skills and knowledge are needed by the researcher who wants to use this method effectively? At Omega Corporation, the dialogical AR project was carried out by Mårtensson, a doctoral student at that time, albeit a doctoral student with prior business experience, under the supervision of a university professor. One important characteristic for a successful use of dialogical AR is the interest in, and ability to, facilitate the reflective dialogue. This also implies the awareness of dialogues taking place on different levels: both the specific dialogues related to actions in the organization, and the reflective dialogues on these actions. As with most different methodological approaches, it is important to find approaches that are compatible with the researcher-personality types. There are no particular needs for the approach described and discussed here compared to many other qualitative methodological approaches, except for the particular focus on the dialogues.

Dialogical AR, as proposed, described, and illustrated in this paper, can be seen as an approach rooted in combinations of several dimensions of *both...and*. First, there is the co-presence of both the knowledge of the scientific

researcher (*theoria*) and the knowledge of the real-world practitioner (*praxis*). This highlights *knowledge heterogeneity*. Second, dialogical AR emphasizes the use of *reflective dialogue* in combination with *other dialogues* in the organization (i.e., the dialogue covers both action and reflection). Third, both *knowledge heterogeneity* and *knowledge contextuality* are important. This means that the co-presence of *praxis* and *theoria* is crucial, as well as the social and historical context of the situation. Fourth, dialogical AR aims at helping to resolve the rigor-relevance dilemma. In dialogical AR, one goal is to advance scientific knowledge and another goal, pursued simultaneously, is to remedy or solve a specific real-world problem.

A final point worth emphasizing is that, thanks to the advances in, as well as the growing acceptance of, intensive research methods, a single-site field study can indeed be done in one or another way deemed scientific, whether the researcher prefers the style of interpretive or positivist science. Today it is known and accepted that qualitative single-site case studies can be performed not only to develop theories but also to conduct empirical tests of theories. Action research can take full advantage of these methods in order to deliver the rigor required by research desiring to be called scientific. In remedying or solving real-world problems at the same time, action research would also be delivering the relevance that practitioners rightly expect from theory. Dialogical AR is but one form of action research that can deliver both rigor and relevance.

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<sup>8</sup>We want to acknowledge one of the anonymous reviewers for this idea.

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## Appendix A

### The X-Model

The X-Model is a general model for describing task and person (relationship) aspects of processes (Lundeberg 1993). In the X-Model, two fundamental levels related to people and task are described. The model basically says that all processes include both person-related and task-related aspects. There is input to the process in the form of person preconditions and task preconditions. The process in itself consists of behavior aspects and task-related aspects. There is output from the process in the form of person outcomes and task outcomes. Figure A1 illustrates the X-Model.

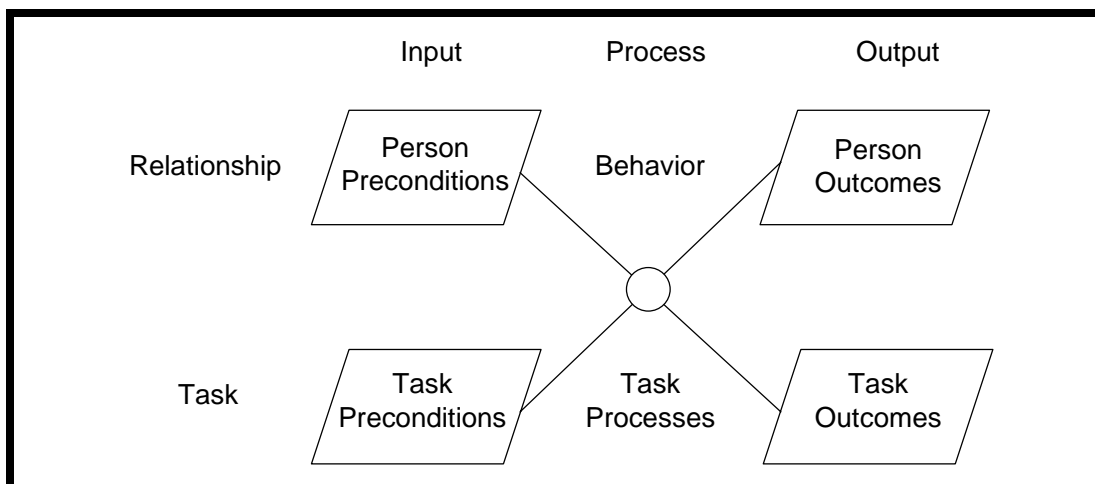


Figure A1. The X-Model

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