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5 TRANSFORMING SOCIAL SCIENCE: Integrating Quantitative, Qualitative, and Action Research

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During the twentieth century, the social sciences have been riven by paradigm controversies—so much so that physical and natural scientists often view this apparent disarray as *prima facie* evidence that social studies do not deserve the name science. For example, behaviorist and gestalt psychologists argued past one another well into the third quarter of the century; rational choice economists and political scientists, on the one hand, and institutional economists and political theorists, on the other, have tended to turn away from one another; and physical anthropologists and quantitative sociologists can talk to one another more easily than either group can to cultural ethnologists or qualitative sociologists.

At the same time, there is a great strain in the social sciences between research success in the most respected paradigms—Empirical Positivism and Multi-Method Eclecticism (Table 5.1 and the body of the chapter provides specific referents for these terms)—and the kind of outreach research, consulting, and teaching described and endorsed in this volume. During the past half century, faculty who have taken a more socially engaged attitude in their scholarship and teaching have stereotypically been viewed as “softer,” as less research-oriented, and as less rigorous and less productive in their publishing.

Today, however, there are signs of new interpretive and participative paradigms that appreciate the ineluctable interweaving of observing, interpreting, and acting in all sciences, but especially in the human sciences. In these approaches, the human sciences are understood as developing knowledge not merely *about* anonymous, generalizable social patterns, but also *for* oneself and others in the midst of real-time social action (Heron, 1996; Reason, 1995; Skolimowski, 1994; Torbert, 1991). From the point of view of these approaches to social science (named Postmodern Interpretivism, Cooperative Ecological Inquiry, and Developmental Action Inquiry in Tables 5.1 and 5.2 and in the descriptions in the body of this chapter), the three main “difficulties” “in the way of” social science are in fact the very starting points

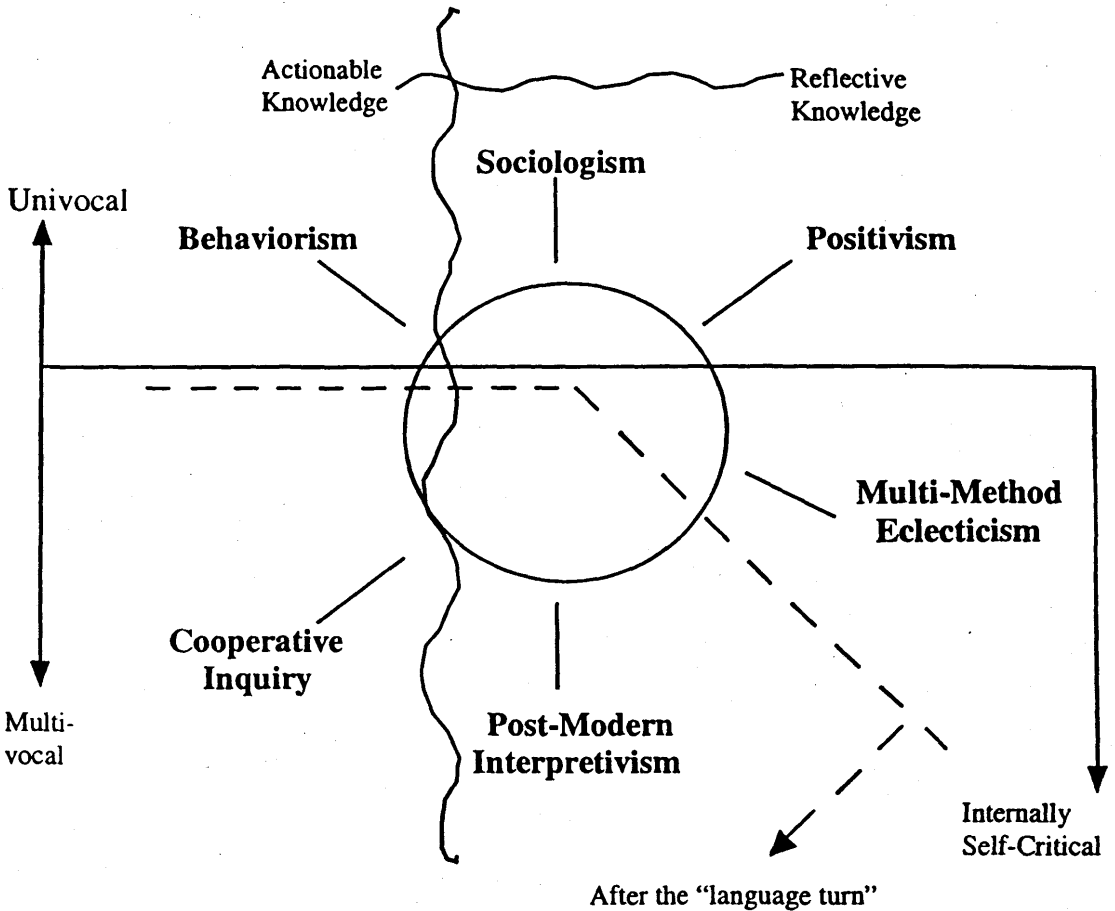
of a true social science, rather than blockages to be avoided. These three “difficulties” are that: 1) persons hold different interpretive and action paradigms at any given time; 2) clarifying how subjectivity, intersubjectivity, and (at least relative) objectivity interweave is an ongoing lifetime inquiry project for each person rather than an intellectual puzzle that some can resolve for others; and 3) paradigms transform through some as yet little known alchemy of action and inquiry.

This chapter describes a “paradigm of paradigms” that organizes seven fundamentally different, yet also interweavable, approaches to social science. The chapter ends with an invitation to each reader to join in a Cooperative Inquiry aimed at diagnosing and potentially transforming our own ways of practicing social science. In this way, the chapter highlights the challenge each of us can choose to accept to transform our own research into a bridge between knowledge and practice. Such research need not be “soft,” but rather can integrate: 1) “third-person,” quantitative rigor with regard to data collected in the past; 2) “second-person,” qualitative empathy, disclosure, and confrontation in multiple voices about participants’ meaning-making in the present; and 3) our own “first-person” action inquiries that influence future social vision, strategies, performances, and assessments within our sphere of influence.

Today, an increasing number of studies are exploring how to achieve such integration. For example, during the summer of 1998, I witnessed a prize-winning symposium at the Academy of Management that featured completed doctoral dissertations from three different doctoral programs that not only *inform* the reader, but also document the *transformation* of the researchers themselves, their families, and the organizations they researched (Bradbury, et al., 1998). Also, Fisher and Torbert (1995) describe, in clinical detail and in the multiple first-person voices of different participants, how managers can learn to act more effectively at work using the same theory that guides consultants in the second-person research/practice of catalyzing transformational changes in several organizations. Then, Rooke and Torbert (1998) offer “third-person” psychometric measures of CEOs and consultants in ten different organizations (including the organizations described in Fisher & Torbert, 1995), accompanied by quantitative measures of organizational transformation. The results show that hypotheses based on the same theory achieve statistical significance in predicting which organizations do and don’t transform. Taken together, these studies illustrate how a social theory can be validated in first-person, subjective terms (helping managers who use it to become more effective), in second-person, intersubjective terms (helping consultants work with CEOs to change organizations), and in third-person, objective, statistical terms.

The next section offers two cases—one very brief, the other longer—of social scientists applying the seven-paradigm model of science to their own careers. Then, the chapter offers more detail about, and exemplars of, each of the seven paradigms, along with five propositions about the demands to which an adequate, inclusive, and integrative paradigm for the social sciences will respond. As previously stated, the conclusion invites other social scientists such as you, the reader, to join in a Cooperative Inquiry about this matter.

Figure 1. *Similarities and Differences Among Six Social Scientific Paradigms*



- 1) **Behaviorism, Gestalt Sociologism, and Empirical Positivism** are shown as univocal, or one-voiced. The logic of the scientist/protagonist rules all studies conducted under the aegis of these perspectives. By contrast, **Multi-Method Eclecticism, Post-Modern Interpretivism, and Cooperative Inquiry** are each increasingly multi-voiced and increasingly self-critical and self-transforming during the course of a given study.
- 2) Whereas, **Behaviorism** and **Cooperative Inquiry** are at opposite ends of the spectrum according to the previous division, they are most alike when one divides—by the serpentine line slithering down the page—paradigms that are primarily action oriented from those that contribute primarily to a reflective understanding of the phenomena studied.

- 3) On the other hand, **Cooperative Inquiry** and **Postmodern Interpretivism** are most like one another in that both appreciate the radical implications of the language turn, the hermeneutical circle, which if followed backwards, upstream, toward origins liberates us from literal-minded enslavement in any paradigmatic assumptions. However, whereas **Postmodern Interpretivism** remains focused on texts, **Cooperative Inquiry** goes beyond the language turn to an “action turn.”

Table 5.1 *The Distinctive Aims of Seven Social Scientific Paradigms¹*

Behaviorism	<i>Control of the Other</i>	(through ‘operant conditioning’)
Gestalt Sociologism	<i>Understanding of the Other</i>	(better than that other’s self understanding)
Empirical Positivism	<i>Predictive Certainty</i>	(valid certainty)
Multi-Method Eclecticism	<i>Useful Approximation</i>	(through triangulation)
	(this and foregoing paradigms separate research from practice and focus on third-person research)	
Postmodern Interpretivism	<i>Re-Presentation of Perspectival Pluralism</i>	(without privileging the writer’s own perspective.)
	(includes first-person, double-loop research/practice)	
Cooperative Ecological Inquiry	<i>Creating Transformational Communities of Inquiry</i>	(among multi-perspectived co-committed)
	(includes first-, and second-person, single-, double-, and triple-loop research/practice)	
Developmental Action Inquiry	<i>Enacting Inquiry & Liberating Disciplines</i>	(across initially estranged cultures without shared purposes)
	(integrates 1st-, 2nd-, and 3rd person research/practice with all three loops in real-time)	

¹Each later paradigm dethrones the primacy of the previous aim, reinterprets its meaning, and addresses some of its incompletenesses, by treating it as one strategic variable among others in the service of the new, qualitatively different aim. Each

paradigm after **Empirical Positivism** becomes more inclusive of uncertain realities (rather than counting as reality only that about which one can be certain), and also more inclusive of realities that are transformed by the very act of inquiry into them (e.g., the researchers' own awareness and actions during the study).

THE PARADIGM ADVENTURES OF TWO SOCIAL SCIENTISTS

One way of embodying the bare bones of Figure 5.1 and Table 5.1 is to reflect on one's own career through the lens of the multi-paradigm model. The following pages offer the reflections of Harvard's J. Richard Hackman and Boston College's Dal Fisher on their own scholarly careers after they had read the extended descriptions of each paradigm which are presented after their cases. J. Richard Hackman began his career as an experimental social psychologist in graduate school at the University of Illinois, then worked at Yale for a generation, and has held appointments in both Business and Psychology at Harvard for the past decade:

I'm pleased that the paradigm descriptions are not hatchet jobs.

I was clearly in the Empirical Positivist mode in graduate school at Illinois when I ran hundreds of experimental groups for my dissertation, but jumped to the Multi-Method Eclectic approach almost immediately upon arriving at Yale in 1966, influenced by Argyris and Lawler; and that approach characterizes my job enlargement work.

Later I began to play in the direction of Postmodern Interpretivism, seeking, ambivalently, my clinical voice, taking literature as a genre more seriously, and doing a longitudinal case study at People's Express.

But I think I've stopped in between those two positions at a place I guess I would call Multi-Conceptual Empiricism. I guess the sociologist in me doesn't see what going all the way to pure subjectivity buys you.

Dalmar Fisher, my colleague at Boston College's Carroll School of Management, offers the following more extensive and typically self-effacing self-portrait based on the model of multiple paradigms:

The influence that brought me into the field of organizational behavior was that of Charlie Savage. Charlie was a thoroughgoing Gestalt Sociologist, who taught the old Harvard small group cases with quiet wit and puffs of the pipe tobacco that too soon killed him. His book, *Factory in the Andes*, a thick, sensitive, ethnographic description, was impressive to me. I thought, Wow, you can think in terms of imagery when you look at organizations, as when understanding a poem or novel. I was an MBA student at

BC, and had applied to a variety of doctoral programs. I added HBS to the list due to Charlie's influence.

At HBS, I remained ethnographic, doing as my first field project a study of a small sales office, replete with lots of diagrams of the subgroupings, what the norms were, critical incidents, etc. I took a seminar with Fritz Roethlisberger where he retold the Western Electric studies and praised the clinical methods of Piaget and Freud. It was the method he dwelt on. We hardly talked about the theory—though *The Moral Judgment of the Child* planted a seed in me that came to life later when I began working with Bill Torbert on human development.

Questionnaire methods and quantitative data analysis were just beginning to be employed by the HBS Organizational Behavior people at that time. I worked with Dave Moment on a study of managers in a department store. The project was quite thin on theory, had no hypotheses, and we (he) made up the methods as we went along, not a happy formative experience for me as an apprentice researcher, especially one who was in a doctoral program that didn't even have a research methods course. I didn't realize I was lacking something important in this area, and that I should do something about it. The department store project did, however, move me somewhat out of the Gestalt Sociologism paradigm, with now at least a toe into Empirical Positivism, or maybe into Multi-Method Eclecticism, in the sense that we were using two methods, albeit without rigor. Dave wrote a long, rambling manuscript about these data, replete with masses of mainly uninteresting quantitative tables, that was turned down for publication by the HBS Division of Research.

Dave was a great help to me on my thesis, however. I went out interviewing among the product managers and others they worked with in a division of General Foods. I had no plan, no design, no hypotheses, but Dave helped me see in the interviews that the kinds of preferences the product managers' associates had for them were systematically related to where the associates were in the organization. These expectations were incompatible, so we had a role conflict situation. Egged on by Barnes to take a close look at how product managers coped more and less well with this situation, I proceeded to do just that, using ratings of the product managers made by their variously focused associates as the criterion. So I had actually managed to find some structure for this project, at least compared to the black hole of the department store study, and came out of it with a doctorate and a chapter in a book edited by Lorsch and Lawrence on effectiveness in the integrator role. The differences in frames of the product managers' associates and the product managers' success and failure in working with people holding different frames were threads I would pick up much later in working with Bill Torbert on managers' developmental stages.

I mentioned some lacks in my doctoral education, but maybe the biggest was that nobody clued me in that you should extend and exploit your work. I had some really nice results in the thesis study, all built on top of theory, instrumented with measures, and with plenty of hypotheses that could now be stated, but I never followed up on it. I think I was too dependent on someone else to prompt me to do things—not enough of an initiator—as is still true. Looks sickeningly like the diplomat stage to me.

I did follow up in a partial way by joining Bruce Baker and Dave Murphy at BC on a funded study of project management. My inclusion was based on the nature of my thesis work. It was wholly a survey project. I made a few contributions, but didn't really get into it the way I might have if we had been able to look at role sets instead of just individual project managers, and we didn't interview any of our subjects, so we were very removed from "the territory," as Fritz would have termed it.

So I spent a chunk of my life on the project management study, and then a chunk on writing an organizational communication textbook. The textbook might be called Multi-method Eclecticism. It drew on literatures of all sorts. But I never really saw it as research. I didn't feel I was discovering anything new, or that I was trying to say something new with it. If I were re-living my life, I would omit both the project management study and the textbook project and do more work on product managers in their role sets (even if there were an interplanetary law stating that you could not do something different because that might mess up history).

I am grateful that Bill Torbert rescued me from the oblivion I had fallen into. His work based on developmental theory resonated with my interests going back to doctoral study days. My first involvement was with Keith Merron on the in-basket study, a solidly (both feet in) example of Empirical Positivism, a box we might have peeked out of toward Cooperative Inquiry when we gave feedback to the participants, although we did not follow up by exploring what happened when we gave the feedback. At any rate, I felt I was back in the realms of qualitative and quantitative data analysis, new ways of looking at managerial thought and action, and scholarly writing, all in a big way, aided enormously by Bill, not to mention Keith.

Our interview study of Achievers and post-Achievers (Fisher & Torbert, 1991) might possibly be termed a developmental move to Multi-Method Eclecticism. The methods weren't numerous, but interweaving the Washington University psychometric test of ego development with the open ended interview method allowed us to discover a lot more things about Strategists vs. Achievers as managers than could possibly be seen in the in-basket data, and

some of these things were unexpected. Although we did again give feedback to our subjects on their developmental positions as measured by the Washington University test, the work cannot really be called Cooperative Inquiry, since the subjects did not participate in the formulation and conduct of the inquiry, and I have still not ventured into that kind of inquiry since that time.

The book I wrote with Bill, *Personal and Organizational Transformations* (1995), actually is in a late stage paradigm, maybe Developmental Action Inquiry. I can't really claim to have adopted that paradigm myself, however, since Bill wrote virtually all the parts of the book that invite the reader to take developmental action. I was beginning to get with this during the writing, but didn't fully. Nor did I even think of the book as "research" until, as some will recall, I was asked by Hilary Bradbury, in one of our Ph.D. seminars, what kind of research it was. I should think of more of what I do as research, e.g., teaching the new Managerial Practice sequence in the MBA program. Also, it didn't really dawn on me until after we completed the book that it could be seen as a new kind of social science writing, wherein the authors establish a dialog with the reader(s). That does look to be Developmental Action Inquiry. Perhaps I will put in a second foot.

**FULLER DESCRIPTIONS OF
THE SEVEN SOCIAL SCIENCE PARADIGMS**

The following pages offer brief developmental stage portraits of seven types of social science—Behaviorism, Gestalt Sociologism, Empirical Positivism, Multi-Method Eclecticism, Postmodern Interpretivism, and Cooperative Ecological Inquiry. These archetypal portraits have been developed by moving back and forth between a close study of the scientists studied as exemplars of each type and the action-logics characteristic of each personal and organizational stage of development (Table 5.2, below, summarizes the analogies across personal, organizational, and scientific archetypes; and Chapter 13, Table 13.4, offers more detail on each organizational action-logic.)

Table 5.2 *Analogies Among Personal, Organizational, and Social Scientific Developmental Paths*

Personal Dev't	Organizational Dev't	Social Scientific Dev't
I. Birth-Impulsive(0-6yrs)	I. Conception	I. Anarchism (Feyerabend, 1975)
<i>(multiple, distinctive impulses gradually resolve into characteristic approach [e.g., many fantasies into a particular dream for a new organization])</i>		
II. Opportunist(7-12?)	II. Investments	II. Behaviorism

(dominant task: gain power [e.g., bike riding skill] to have desired effects on outside world)

III. Diplomat ^(12-?)	III. Incorporation	III. Gestalt Sociologism <i>(table continued)</i>
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(looking-glass self: understanding others' culture/expectations and molding own actions to succeed in their [e.g., market] terms)

IV. Technician ^(16-?)	IV. Experiments	IV. Empirical Positivism
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(intellectual mastery of outside-self systems such that actions = experiments that confirm or disconfirm hypotheses and lead toward valid certainty)

V. Achiever ^(20?-?)	V. Systematic Productivity	V. Multi-Method Eclecticism
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(pragmatic triangulation among plan/theory, operation/implementation, and outcome/evaluation in incompletely pre-defined environment—single-loop feedback unsystematically but regularly acted upon)

VI. Strategist ^(30?-?)	VI. Collaborative Inquiry	VI. Postmodern Interpretivism
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(self-conscious mission/philosophy, sense of timing/historicity, invitation to conversation among multiple voices and to reframing of boundaries—hence, double-loop feedback occasionally acted upon)

VII. Magician/Witch ^(40-?) /Clown of Inquiry	VII. Foundational Community of Inquiry	VII. Cooperative Inquiry
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(life/science = a mind/matter, love/death/transformation praxis among others, cultivating interplay and reattunement among inquiry, friendship, work, and material goods—continual triple-loop feedback and feedforward is sought, among intent [inquiry], emancipatory strategy [friendship], action [work], and effects [material goods])

VIII. Ironist ^(50?-?)	VIII. Liberating Disciplines	VIII. Developmental Action Inquiry
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(full acceptance of multi-paradigmatic nature of human consciousness/reality, including distances/alienations among paradigms, such that few recognize paradigm differences as cause of wars, few seek paradigm disconfirmation and transformation, and few face dilemma/paradox of 'empowering leadership': that it must work indirectly through ironic words, gestures, and event-structures that invite participants gradually to attune themselves to listen for and play with single-, double-, and triple-loop feedback)

IX. Elder?

IX. ?

IX. ?

Behaviorism—Behaviorism emanates from an *assertive, physical quest for reliable, unilateral control* through “operant conditioning” of an *unembarrassedly objectified and atomized external world*. Its preferred method is *laboratory experiments* (maximizing the scientist’s unilateral control over variation). Hence, also, its nominalist presumption of isolatable “stimuli” and “responses.” Its choice of experimental subjects (rats and pigeons) who are unlikely to interpretively reframe the experiment, or refuse to cooperate, if tangible rewards are offered, masks the limits of the method. This approach has been particularly applicable and successful with populations who share its assumptions about the world and who inhabit total institutions (prisons, asylums, and young children in orphanages).

B. F. Skinner (1953, 1971; Argyris, 1971) can be considered an archetypal behaviorist who unflinchingly made the underlying philosophical assumptions of the Behaviorist worldview explicit. The special brilliance of the greatest lab, experiments—such as the Asch experiments on conformity and the Milgram experiments on obedience to authority—is that they reveal the underlying lateral and hierarchical social pressures, structures, and presumptions through which this paradigm of unilateral control works in the human world, thereby raising the question whether, how, and when the human world works otherwise. Global finance capitalism, with its single, clear, nominalist-type, second-by-second measure of shareholder value in the stock market, is a macro example of this action/research paradigm at work in our everyday world.

In my own field of management and organization studies, Frederick Taylor took an essentially Behaviorist approach to the study of making labor in factories more efficient at the turn of the twentieth century. As is characteristic of Behaviorist studies, Taylor unquestioningly asserted unilateral control over his blue collar subjects (indeed, he chose as subjects those most amenable to such control, Morgan, 1997).

Gestalt Sociologism—Gestalt Sociologism (a neologism intended to remind us of gestalt psychology, qualitative field studies in sociology, ethnography, and the case study tradition in schools of business, education, and law) emanates from an *appreciative, emotional quest to understand wholistically the overall pattern* of subjective beliefs, values, and rituals of given “other” cultures. Hence, its preferred method of *non-interventionist, ethnographic field observation*. Hence, also, its essentialist presumption of integrative ideas, norms, and selves (Cooley, 1956; Mead, 1934). And hence, its concentration on ideographic case studies of human groups.

The special brilliance of the greatest such studies—such as Mead’s *Coming of Age in Samoa* (1960), or White’s *Street Corner Society* (1981)—is that they encourage counter-studies and critiques (Kirk & Miller, 1986), which render them controversial. Then, through the contrast between study styles and between our own culture and the alien culture they depict, they reveal the underlying mechanisms, categories, and presumptions through which our own encultured understanding

works. In this way, implicitly if not explicitly, they raise questions over time about the validity of our own cultural assumptions.

In management studies, in the 1920s, Elton Mayo, Fritz Roethlisberger and others at the Harvard Business School engaged in the famous Western Electric studies, taking a Gestalt Sociological approach to understanding the culture of groups of workers at the Hawthorne plant (Roethlisberger, 1977). They also participated in developing the Gestalt Sociological case study method of instruction that lasts to this day at the Harvard Business School, Tuck, Colgate-Darden, and other schools of management.

Empirical Positivism—Empirical Positivism emanates from a *critical* (but not hermeneutically self-critical), *intellectual quest for valid certainty* about *deductively logical, universally generalizable, empirical propositions* (Cook & Campbell, 1979; Hunt, 1994). This paradigm is not necessarily identified with a particular method, but it privileges randomized sample, experimental, hypothesis testing studies, along with computer modeling of intelligence, because of the crisply clear quantitative, binary certainty about distinctions between confirmation and disconfirmation of hypotheses.

The special brilliance of the greatest such studies—such as Herbert Simon's theoretical and empirical demonstrations of the concept of "bounded rationality" in economics and administrative science—is that they show the limits of deductive rationality itself (Hammond & Ritchie; 1993, March & Simon, 1958; Simon, 1947, 1957, 1969, 1989, 1991; Turkle, 1991). The special danger of such work is that it obscures the very possibility of a constitutive, analogical, emancipatory rationality that reaches beyond the inductive, the deductive, and the instrumental. For example, the content of Simon's propositions about rationality may obscure the very type of constitutive rationality that Simon's work itself also is, as well as alternative constitutive rationalities (e.g., those of each of the other developmental stages). The special "cleverness" of work like Simon's is that it uses the Empirical Positivist paradigm, language, and precision to point toward the triangulating, "satisficing" logic of Multi-Method Eclecticism, while simultaneously capturing, in the concept of "bounded rationality," the paradigmatic plight of all the developmentally early paradigms. Such "bounded rationality" is today characteristic not just of children's psychology, but also of over 90% of all adults. (Torbert, 1991).

Simon is himself viewed as a management scholar. As management schools increased their emphasis on research during the 1960s and 1970s, quantitative Empirical Positivism, like Simon's work, increasingly became the dominant paradigm, as indicated, for example, by the very high percentage of quantitative articles in the leading journal of the field, *Administrative Science Quarterly* during that period (Van Maanen, 1998).

Multi-Method Eclecticism—Multi-Method Eclecticism emanates from a *practical quest to increase* validity, understanding, applicability, and *percentage of the variance explained*, along with an aborning suspicion that different methods and measures may yield *incommensurable* results. This approach recommends *triangulation* among quantitative and qualitative methods. It is currently fashionable

and in flower in the managerial disciplines (e.g., Bartunek, Bobko, & Venkatramen, 1993; Dyer & Wilkins, 1991; Eisenhardt, 1989).

A brilliant example of Multi-Method Eclecticism is Karl Weick's early work in collaboration with Campbell, Dunnette, and Lawler (Campbell et al., 1970), *Managerial Behavior, Performance, and Effectiveness*, based on a "multitrait-multimethod matrix." "Disagreement between different observers," they say, "should not necessarily be viewed as a mark of unreliability . . . but should instead be viewed as a possibly valid indication that differing aspects of the manager's behavior are being accurately perceived and reported" (p. 115).

Of course, still another possibility in a case of disagreement among observers such as Weick and his colleagues had earlier observed, is that the disagreement may result from differing interpretive schemes of the observers, a possibility that opens toward the next paradigm: Postmodern Interpretivism. As we shall see, Karl Weick is playing a role in legitimizing this paradigm as well, with his 1995 book *Sensemaking*.

Postmodern Interpretivism—Postmodern Interpretivism emanates from a *self-consciousness* encountering the dilemmas of accounting for the radical *subjectivity and fragmentariness of perspective* that embraces every languaged perception and conception. No matter how validly and elegantly the strange, object-ing reality at issue is clothed in the statistical, methodological, and theoretical constructions of the earlier, pre-participative social sciences, the Postmodern Interpretivist (e.g., Denzin & Lincoln, 1994; Macey, 1993) wishes to deconstruct the implicit, presumed neutral background of the objects foregrounded in any study, as well as the background of the researcher and of the writing, and to foreground multiple interpretive voices about the reality at issue (Fine, 1994, is an excellent brief exemplar, as is Chapter 8 in this book).

The Pfeffer-Van Maanen debate during the early 1990s about the future of management scholarship pits an early, single-frame "Pfeffer-digm" against Van Maanen's Postmodern Interpretivist rhetoric (Frost, Pfeffer, Van Maanen, 1995; Pfeffer, 1993; Van Maanen, 1995). At best, this multi-voiced debate about the future of management and organization studies will open the field to a more significant challenge than either party in the debate identifies—namely, the attempt to delineate and practice a social science that situates all of us as aspiring action inquirers, rather than dividing data collection, reflection, and action from one another.

New types of validity are constructed by Postmodern Interpretivists. For example, Lather (1993) suggests that social scientists commit to developing *reflexive validity*, *ironic validity*, *rhizomatic validity*, and *situated validity*. *Reflexive validity* is raised when a text attempts to challenge its own validity claims. In the case of this text, for example, note the abstract, relatively unillustrated voice of the "description" of this and the other paradigms (as is typical of a great deal of Postmodern Interpretivist writing!). I attempt to correct for this level of abstraction by offering the two cases in the earlier section, as well as by offering examples of research studies based in the Cooperative Inquiry and Developmental Action Inquiry paradigms in Chapters 9 and 13.

Ironic validity is raised by inviting further interpretation by readers. Hopefully, in this text the earlier comments by Hackman and Fisher encourage other readers to

apply this seven paradigm model to their own careers (see also Chapter 13 where different voices comment on the original text of that study).

Rhizomatic validity is raised when a text presents multiple voices defining the situation differently. For example, my colleague, Dal Fisher, commented on these paragraphs, prior to the inclusion of these short examples for each of these unfamiliar types of validity: "Can't help on this one, since I don't understand even a fragment of it. I guess I can suggest fewer terms (many fewer) and more illustration of actual works."

Situated validity is raised when a text includes not just a disembodied voice, but an embodied, emotional, reflective voice. For example, one response I have to Fisher's comment and the brief illustrations it has engendered in these paragraphs is "I love Dal's and my differences." Many of the chapters of this book explicitly include the first-person voice of the author.

The reader will note that at present these criteria of validity are stated in nominal terms (a text either does or does not address them). As they become more common, we can expect ordinal criteria of better and worse ways of meeting each validity challenge—indeed, Denzin (1995) and Behar (1997) begin to formulate ways of judging the efficacy of the use of first-person authorial voice and experience in studies.

Postmodern Interpretivism strongly implies the need for a first-person research/practice (e.g., Weick, 1995), but to date this requirement is more often stated in third-person, abstract terminology than practiced in first-person accounts interwoven with second- and third-person research in the midst of ongoing practice. See Bravette (1997) for a striking exception, where she not only includes her own (changing) voice throughout, but also draws her family into a cooperative inquiry.

Cooperative Ecological Inquiry—Cooperative Ecological Inquiry emanates from a *commitment to creating real-time communities of inquiry that bridge subjectivities and differences of perspective and support peaceful, ecologically-sensitive personal and organizational transformation* (Bradbury, 1998; Spretnak, 1991; Torbert, 1976). This kind of cooperative inquiry (Bradbury, 1998; Cooperrider & Srivastva, 1987; Heron, 1996; Reason, 1995) occurs in real time with partners also committed to integrating action and inquiry (to integrating first- and second-person research/practice) and to generating increasing mutuality (the condition for full voice, trust, critique, and transformation). One enters into this kind of "betting-one's-whole-life" exploration with others through the recognition that one does not first learn the truth, then act upon it, but rather that research itself and our lives as wholes are actions. Thus, we act before we deeply care about truth, we act as we seek truth (and as our sense of the truth we seek transforms), and we seek truths that will inform, not just a reflective concept of the world and future plans, but present awareness and action (MacMurray, 1953; Reason, 1995; Torbert, 1981). Social constructivism is an epistemological position consistent with this paradigmatic approach (Gergen, 1994).

The difficult and important questions come to be seen as how—in the midst of participating intersubjectively in specific situations—to listen, experiment, and seek disconfirmation (Argyris, Putnam & Smith, 1985) in a timely fashion (Torbert,

1991). Chapter 9 illustrates this process in great detail. Likewise, the primary question becomes not how to create an off-line community of inquiry among scientific writers and journal editors, but how to create a real-time community of inquiry within one's family, at work, or within voluntary organizations to which one belongs (as Chapter 8 illustrates).

For example, Margaret Mead (1972), Gregory Bateson (1972), and their anthroposophico-autobiographical daughter, Mary Catherine Bateson (1984, 1990) have not only been distinctive social scientists in their own right, but have also collaborated with one another as a "family of inquiry" in a variety of ways, including trans-conventional relationships. A scene when the male, paternal Bateson questions in a friendly way whether he and his daughter should violate the incest taboo, and she responds in a friendly but conclusive way that she does not wish to, is a particularly powerful demonstration of the real-time practice of second-person inquiry, mutuality, and disconfirmation.

Developmental Action Inquiry—Developmental Action Inquiry emanates from a growing appreciation that different persons, organizations, and cultures are complex, chaotic interweavings of the six prior paradigms (Alexander & Langer, 1990; Cook-Greuter, 1999; Kegan, 1994; Lavoie & Culbert, 1978; Miller & Cook-Greuter, 1994; Pondy & Mitroff, 1979; Torbert, 1987; Wilber, 1995). No one of these paradigms will win the paradigm-war once and for all. Indeed, this very definition of the situation is illusory: not martial arts and paradigm wars, but the arts of healing and inter-paradigmatic conversation and work become a beckoning and shareable (but not easily shareable) purpose. An interweaving of first-, second-, and third-person research/practice, with single-, double-, and triple-loop feedback (see Table 5.2 and Figure 5.2) makes such inter-paradigmatic conversation and work sustainable.

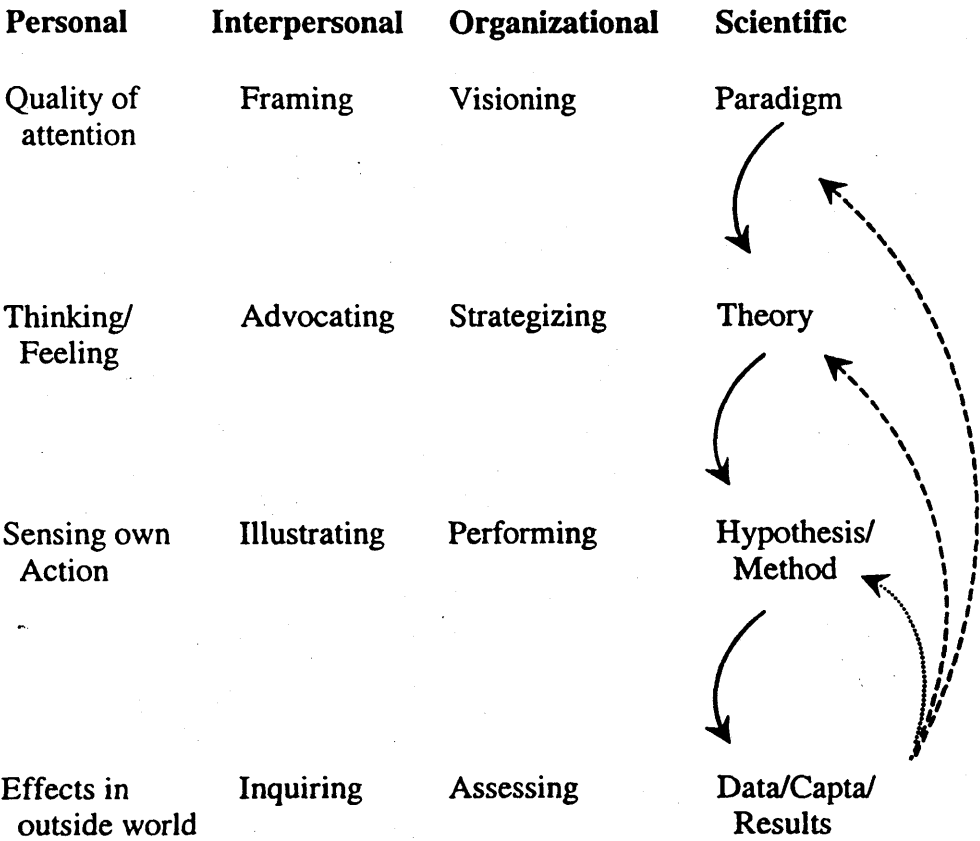
In third-person research/practice of this kind, Ironist leadership creates Liberating Disciplines (see Figure 5.2, below, as well as Table 13.4) that introduce organizational members to the interplay of first-, second-, and third-person research/practice, such that they can gradually elect to practice in these ways, thereby challenging both themselves and the initial leadership to further voluntary, mutual transformation. In my work with colleagues, we aim to exemplify the Developmental Action Inquiry paradigm (while discovering from study to study how incomplete our sense of it is!). We have long combined experimental laboratory studies (Merron, Fisher & Torbert, 1987; Torbert, 1973), with clinical interview and observation studies (Fisher & Torbert, 1991; Torbert & Rogers, 1972), and with intervention studies (Fisher & Torbert, 1995; Rooke & Torbert, 1998; Torbert, 1991), all in real-time organizations that we are co-constructing with the other research participants.

From the integrative Developmental Action Inquiry perspective, each paradigmatic perspective, when it is taken in recognized complementarity to the other action-logics, is a positively powerful, beneficial, and valid analogue of the preeminent features of a situation at different moments. By contrast, each paradigmatic perspective becomes demonic to the degree that it is asserted as the only legitimate kind of truth in all moments. "An active consciousness holds all ideas lightly" (Marshall, 1995).

Earlier paradigms tend to emphasize their revolutionary dissimilarity from the paradigms prior to them. In contrast, Developmental Action Inquiry highlights

the contrapuntal rhythms, cross-scale interruptions, and interventions in developmental movement from one paradigm to another, whether in single conversations or in whole lives (Torbert, 1989). All types of validity testing described in earlier paradigms are accepted as conditionally appropriate, depending upon the degree to which one's current aims correspond with the purpose of truth seeking in that paradigm. Finally, however, in Developmental Action Inquiry, generalization to all moments is recognized as occurring: 1) voluntarily; 2) one person at a time, and 3) "slowly" within that person (i.e., over a lifetime), as she or he practices awareness-expanding action inquiry at more and more moments.

Figure 5.2. Single-, Double-, and Triple-Loop Enactment and Feedback
In Personal, Interpersonal, Organizational, and Scientific Research/Practice across Four Territories of Experience



FIRST-, SECOND-, AND THIRD-PERSON RESEARCH/PRACTICE

I have been using the unfamiliar terms first-, second-, and third-person research/practice until now without offering any extended description of what I

mean, leaving it to the reader's intuition and the context to generate clues. The notion of the relatively unfamiliar later paradigms can come a little clearer through explicating these terms a bit further.

In the most general sense, first-, second-, and third-person research/practice are kinds of research and practice in real time that we adults can potentially conduct in the midst of our daily practices of working, loving, and wondering. Initially, one is likely to regard some actions, such as asking someone a question, as a kind of research, and other actions, such as telling a subordinate what to do, as a kind of practice. Later, one increasingly recognizes how each action is both a practice that influences what happens next and research that leads one to confirm or disconfirm what one knew before. First-person research/practice in general includes all those forms of research/practice that any one of us can do by oneself by dividing and otherwise stretching one's attention (Torbert, 1991) to encompass all four territories of experience shown in Figure 5.2. Second-person research/practice includes all times when we engage in supportive, self-disclosing, and confronting ways with others in shared first-person research/practices and in creating micro-communities of inquiry among those present. (Such inquiry does not go on forever on any given topic because the question of what actions are timely when is itself an ongoing key issue.)

Third-person research/practice can be of two very different sorts. The first sort, which is by far the most common (and is characteristic of the early paradigm types of social science up through Multi-Method Eclecticism), does not really qualify as research/practice at all because it conceptually and operationally segregates research from practice, as well as treating first- and second-person research practice as pre-scientific or unscientific. The second, and much more rare, kind of third-person research/practice, characteristic of Developmental Action Inquiry, also begins by developing impersonal structures (whether survey instruments or an organizational design) for persons initially unknown to the initiators of the organizing process. In all other respects, however, the aims of "true" third-person research/practice differ from bureaucratic organizing and positivist research. First and foremost, the actual tasks defined by true third-person research/practice structures *require* that, over time, participants transform toward engaging in first- and second-person research/practice that tests their personal and interpersonal assumptions, if they are to become increasingly effective participants in the organizing process.

Because the previous paragraphs offer long, abstract of definitions, let us turn to a more concrete illustration of how these ideas relate to one of the institutions that directly touches all of us in one way or another—the health care system (or should we in the U.S. in 1999 call it the "health care chaos"?). A general definition of health-enhancing first-person research/practice may be something like "pro-active, self-chosen exercise—whether mental, emotional, or physical—engaged in with an ongoing sensitivity to the pace that suits oneself." No amount of doctors' care and medicine can keep us healthy for long without this sort of first-person research/practice. We are beginning to learn that a second critical element in making our health and our life as a whole better or worse is the daily character of our second-person research/practice—our associational activities at work, with our family, and during our leisure (Karasek & Theorell, 1991). At present, however, medical schools strongly emphasize third-person research and encourage the best students to become specialists who focus on third-person research, rather than to

become managed care generalists who integrate first-, second-, and third-person research/practice and who can lead their clients toward an appreciation of their own daily first- and second-person research/practices (Howe, 1996).

Having offered a brief definition of each type of research/practice and a very brief illustration of how the three tend *not* to interweave in our current health care institutions, let me now offer a slightly fuller description of each.

First-Person Research/Practice—As stated above, first-person research/ practice in general includes all those forms of research/practice that each of us can only do by and for ourselves, by dividing and otherwise stretching our attention. This includes a variety of forms of writing—for example, journal or diary keeping, episodic or comprehensive memoir or autobiographical writing (Alderfer, 1989; Bedeain, 1993; Harrison, 1995; Min, 1993; Raine, 1998; Ramsey, 1995), and the recording of dreams or role plays of future scenarios (and these can all become sources for second-person and third-person research/practice as well; Torbert & Fisher, 1992; Fisher & Torbert, 1995). First-person research/practice also includes the varieties (and there are many) of meditation and prayer, either as distinct activities in a distinctive setting, or in the midst of everyday outer activities (see Schmidt-Wilk, Alexander & Swanson, 1996, for a whole tradition of retrospective, third-person research on the effects of regular first-person meditation). Furthermore, first-person research/practice can include chanting, asking a question of the *I Ching* (the ancient Chinese “Book of Changes”), or Tarot cards, and movement (e.g., t’ai chi, Dervish whirling, Gurdjieffian movements), or otherwise physically exercising in an awareness-widening fashion. It can include craft or artistic work engaged in, not primarily for the sake of the end product, but equally for the experience of awareness-discovery during the activity itself. An occasional, frequent, or continual effort to re-contact the four territories of experience, as represented in Figure 5.2, and to determine from feedback whether we are acting with integrity (saying what we mean, doing as we say, and having the effects we intend) is one way of expressing the aim of first-person research/practice.

Second-Person Research/Practice—Second-person research/practice includes all times when we engage in supportive, self-disclosing, and confronting ways with others in shared first-person research/practices. Another way of putting this is that second-person research/practice includes all conversations where those present share an intent to learn about themselves, about the others present, about a shared activity, and/or about the relationships that are forming, transforming, or dissolving. This can, but in empirical terms only rarely does, happen today, in a therapeutic or consulting relationship; between friends or lovers; among team members at work, at school, or at play; in a theatrical production or improvisation; between a doctor, lawyer, or other professional and the client; and, of course, between a master/teacher and one or more apprentice/pupils. Twelve-step meetings can be said to be intended to be second-person research/practices that support the first-person research/practice of non-addictive behavior. If such conversations are audio- or videotaped, then the resulting tapes can be used in further first-person research/practice, second-person research/practice, or third-person research/practice. (Again, Chapter 9 offers an in-

depth illustration of a particular effort at conducting such second-person research/practice.)

Second-person research/practice is characterized by alternations between rehearsal and performance, periodic feedback among the participants about their perceptions of themselves and others present and periodic “feedforward” about what vision and strategies ought to guide continuing action. As first-, second-, and third-person research/practice become increasingly artful, continual, and mutually coordinated, they increasingly generate not only single-loop learning (the loop between Assessing and Performing in Figure 5.2, i.e., how to change performance to achieve a goal more effectively), but also double-loop learning (the loop between Assessing and Strategy, i.e., how to transform one’s overall action-logic, whether “one” be person, relationship, or organization), and triple-loop learning (the loop between Assessing and Visioning, i.e., how to transform one’s present awareness; Austin, 1996; Bartunek & Moch, 1987; Nielsen, 1993, 1996; Torbert, 1973; Torbert & Fisher, 1992).

At its best, second-person research/practice gradually transforms hierarchical aspects of the relationship toward more peer-like qualities (or else simply concludes the engagement, if it was purely professional). This transformation toward increasing “I-Thou” partnership is the normative direction of second-person research/practice because peers are most empowered to challenge, support, balance, and understand one another, that is, to conduct valid research together (Buber, 1958; Grudin, 1996; Heron, 1996; Jourard, 1968; Kramer, 1995; Rank, 1978; Reason, 1994, 1995; Rogers, 1961; Srivastva & Cooperrider, 1990; Torbert, 1991).

Third-Person Research/Practice—Third-person research/practice develops impersonal structures for persons initially unknown to the initiators of the organizing process. In all other respects, however, the aims of “true” third-person research/practice differ from bureaucratic organizing and positivist research. The actual tasks defined by third-person research/practice structures *require* that participants engage in first- and second-person research/practice (expanding their awareness and exercising increasing creativity and choice), in order to accomplish the goals and help maintain integrity among purpose, strategy, performance and outcome. In short, third-person research/practice organizes not only to achieve outcomes, but also to help organizational participants increasingly develop the capacity to see, confront, and transform incongruities among the four territories of experience at the person, team, and organizational levels. Thus, even though subordinate/participants are initially expected to conform to the pre-defined structures, they are simultaneously encouraged and educated to confront them, if they appear to be incongruous with the organizational mission (which is itself held open to inquiry). In other words, true third-person research/practice structures create dilemmas and choices for participants, not just constraints, based on information about relationships among strategic priorities, actual performances, and outcome assessments. Only such Liberating Disciplines (see Table 13.4 and Torbert, 1998) create the increasing mutuality and peer-likeness that both supports and results from personal, group, organizational, and epistemological transformations. The Ironist leadership alertness and the appropriate vulnerability required to be willing and able to generate such third-person research/practice is, of course, rare and can be generated only through long and continuing experience of first- and second- person

research/practice (for example, see Torbert, 1991; Fisher & Torbert, 1995; and Rooke & Torbert, 1998).

FIVE PROPOSITIONS TOWARD AN INTEGRATIVE SOCIAL SCIENCE PARADIGM

By way of summarizing the immense distance between Empirical Positivism and Developmental Action Inquiry, I offer five propositions about central concerns of the Developmental Action Inquiry approach that are simply not treated in Empirical Positivism.

Proposition I *An adequate, inclusive, integrative paradigm for the social sciences will show the relationship among three broad types of social research and knowledge: 1) quantitative forms of research and knowledge; 2) qualitative, interpretive forms of research and knowledge; and 3) action-oriented research and knowledge to be practiced in real-time social living.*

Proposition II *An adequate paradigm for the social sciences will permit those working within it to recognize that different cultures, organizations, and individual persons work within different paradigms (indeed, with close self-observation, any given inquirer will find that she/he bounces back and forth among different paradigms at different moments).* For coherent understanding and work to occur under these circumstances, *inter-paradigmatic communications* and *uncoerced paradigm transformation* are necessary (Benhabib, 1986; Moon, 1991). An adequate paradigm for the social sciences (and for intercultural organizations and executives in a global society) will be a paradigm of paradigms that highlights the possibilities for transformational, liberatory rationality and dialogue, while simultaneously recognizing the current empirical preponderance of merely instrumental and strategic rationality in human discourse (Habermas, 1984, 1987; Johnson, 1991). Such an integrative paradigm will teach its practitioners how to respect the dignity of each paradigmatic approach and voice, how to construct multi-paradigmatic research, and how to invite transformation among researchers, practitioners, and organizations in real-time research and action.

Proposition III *An adequate paradigm for the social sciences will recognize that human beings are active seekers of knowledge in the midst of action, not merely passive consumers of pre-digested knowledge in a reflective mode* (even though, tragically, mainstream science and education obscure this reality, so that many people treat themselves as solely or primarily passive consumers of knowledge). In the active, inquiring mode, persons seek not just knowledge of what is generally true in the world outside ourselves, but also what is uniquely true at the present time about ourselves-in-action-with-others. In the active, inquiring mode, an observant participant will listen for his or her own first-person voices and for others' distinctive second-person voices, exploring how these interweave with third-person

knowledge and language. Thus, an adequate paradigm of social science will describe the methods and action competences required for valid scientific inquiry in the midst of action in which one is an observant participant. Such a paradigm will not only cultivate (relatively) valid empirical knowledge and theoretical constructs (as both the social and the natural sciences currently attempt to do). It will also cultivate action inquiry skills such as writing, speaking, event structuring, and listening skills that encourage one's readers or interlocutors to initiate and inquire as well. Most of all, such a paradigm of social science will cultivate primarily, not cognitive schemes that serve as reflective answers, but rather an inquiring awareness in the midst of action.

Proposition IV *The type of theory that will characterize an integrative social science paradigm useful in the midst of action not only seeks descriptive validity as generalizable to events of the past, but also seeks two other types of validity: existential validity as widening/deepening the action inquirer's awareness in the here-and-now; and prescriptive validity as normatively ethical and politically timely for guiding actions intended to shape the future.* To achieve these three apparently divergent aims, one seeks an *analogical theory of timely development toward greater awareness, mutuality, free choice, and accountability.* This analogical theory reminds one to seek a more than thought-bound awareness at any time one remembers it, and applies across self, others, groups, organizations, industries, and nations. (Torbert, 1991).

Table 5.2 and Figure 5.2 are both examples of analogical theories. Figure 5.2 shows a theoretical model of four "territories of experience" (explained in greater detail in Chapter 13) and suggests what analogous qualities manifest each territory at the intra-individual, the interpersonal, the organizational, and the scientific scales. The model has potential descriptive, existential, and prescriptive validity (see Fisher & Torbert, 1995). For example, it is existentially valid in that, at all moments when one remembers it, one can remind oneself to widen one's awareness beyond the thinking territory, to one's present sensation and the outside world, as well as "back" toward the pre-cognitive source of awareness itself (of course, guidance from persons who have been exploring such widened awareness can be useful, see Torbert, 1991). The developmental theory in Table 5.2 shows how persons, organizations, and scientific inquiry can analogically develop the capacity to sustain the kind of four-territory action inquiry envisioned in Figure 5.2. Applying this theory in real-time to oneself and the other persons, groups, or organizations interacting can help one invent and produce timely actions.

Proposition V *An adequate inclusive and integrative paradigm for the social sciences will envision a key role for irony, drama, and fiction in social truth-seeking and truth-telling (as the fictional future scenario in Chapter 4 illustrates).* For, if persons, organizations, and cultures in fact operate at a given chronological time at different points in developmental time and therefore within different, relatively incommensurate paradigms which, for the most part, do not recognize the legitimate existence of alternative paradigms, then inter-paradigmatic messages will tend initially to be mis-interpreted within the receiving paradigm as wrong or as inadequately formed messages. Only if a message is "sculpted" ironically (see

Lather, 1993, on ironic validity) will it appeal to the receiving paradigm enough for the recipient to work through its apparent inconsistencies until the recipient begins to appreciate that it in fact opens up a new world which includes the recipient's old world within it as a subset. In the meantime, because one's sense of one's life-project as a whole is at stake in paradigm differences, the truth-search between paradigms has a dramatic, passionate quality to it, rather than a bureaucratic, dispassionate quality. Whether or not one explicitly puts it to oneself that one is so doing, to sacrifice one action-logic for the possibility of another is inevitably a risky, scary death-and-rebirth transformation. Reason and data will play crucial roles as they do in contemporary social science, but this will be a warm-blooded and wet-lipped affair, not a cold-blooded, dry one.

All of our points of view, including those that claim to treat nothing as reality except what is empirically verified, are fictions (from the Latin *fictio*—a shaping) that we adopt and fashion. Persons can come to recognize increasingly, through observant participation in their own and others' paradigmatic transformations that they play an active role in constructing the worlds they experience. According to the developmental theory represented in Table 5.2, persons begin to cultivate this recognition intellectually at the Strategist stage and begin to develop the quality of will that can detach from and commit to a given paradigm on a moment-to-moment basis only as they evolve toward still later action-logics (Fisher & Torbert, 1995). Put simply, no journal article following early paradigm logic is going to play a major role in teaching us how to work and love and inquire in new way. But this multi-voiced book, or a good novel that interweaves third-person science, first-person autobiography, and second-person fiction, may. The logic of this argument has brought me personally to the point of committing to write a novel as my next attempt at a significant contribution to our field, despite having to start from scratch in order to learn how to do so. (Several years into the effort, I am finding that the cliché about old dogs learning new tricks applies here; although, in the case of paradigm change, a more apt illustration may be "old caterpillars learning to become new butterflies." And, as I am in my late fifties, I can assure you that the notion of aging and dying is no mere exotic metaphor!)

CONCLUSION

This chapter has described seven patterns of doing social science and illustrated them through the reflections of two social scientists. Then, it has enlarged on the process of interweaving action and inquiry by introducing the notion of first-, second-, and third-person research/practice and by offering five propositions about the characteristics of a social science that can integrate quantitative and qualitative methods into one's own action inquiries amidst one's significant others and the organizations in which one participates.

One might proceed next to analyze how this multi-paradigm vision of our field compares to some other 'synoptic visions.' (For example, one could compare it to Zald's 1993 proposal to reconceptualize the foundations of the management field to include a humanistic, enlightenment model as well as an engineering, causal model

or to Mitroff and Kilman's 1978 fourfold, Jungian division of science into Analytical Scientists, Conceptual Theorists, Conceptual Humanists, and Particular Humanists). Or, one might analyze the interwovenness of several of the paradigms in the work of certain social science 'giants' like Simon, Foucault, or Argyris. Another tack might be to explore to what degree the very interesting autobiographical work of a number of scholars in the management field (Alderfer, 1988, 1989; Bedeain, 1993; Berg & Smith, 1988; Sjoberg, 1989) qualifies as first-person research/practice. All of these and other sorts of work suggest themselves on the basis of the multi-paradigmatic, developmental perspective outlined in this paper.

Another way to continue the exploration of these ideas is for the reader to begin testing their relationship to his or her own research/practice. For example, scholars may reflect on their own careers to date and their future aspirations through the lens of the multi-paradigm model, much as Hackman and Fisher illustrate at the outset of this chapter.

Of course, many of the other chapters of this book also offer excellent illustrations of early explorations in personal, interpersonal, organizational and interorganizational research/practice.

ENDNOTES

¹ I will be glad: 1) to receive any such autobiographical reflections and commentaries (torbert@bc.edu); 2) to share my own with you (see my website [www2.bc.edu/~torbert]); and 3) to send you a copy of the psychometric measure of personal developmental stage, get it professionally scored, and send you feedback on the results (I will detail the procedure and cost if you contact me).

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