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Alternative Perspectives in the Organizational Sciences: "Inquiry from the Inside" And "Inquiry from the Outside"

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Alternative Perspectives in the Organizational Sciences: "Inquiry from the Inside" And "Inquiry from the Outside"^{1,2,3}

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"Inquiry from the inside" is characterized by the experiential involvement of the researcher, the absence of a priori analytical categories, and an intent to understand a particular situation. "Inquiry from the outside" calls for detachment on the part of the researcher, who typically gathers data according to a priori analytical categories and aims to uncover knowledge that can be generalized to many situations. Greater appreciation of the epistemological differences between these two approaches can help organization scientists select the mode of inquiry appropriate to the phenomenon under study and to their own abilities and purposes.

Within the broadly defined field of organizational science, a number of different approaches to inquiry are in evidence. Inherent in each approach are basic values, assumptions, and beliefs about the nature of reality and what constitutes valid knowledge. These have, however, remained largely tacit, and as such have given rise to questions of research validity and utility, as well as to controversy and political behavior within the field. Our aim here is to explicate some critical assumptions underlying the diverse approaches to organizational inquiry and to help bring order to what sometimes resembles a developing chaos in the organizational sciences.

Toward that end, we will identify and contrast two predominant approaches to, or paradigms of, current organizational inquiry. Following Kuhn, we

use the term *paradigm* to refer to "the entire constellation of beliefs, values, techniques, and so on, shared by the members of a given (scientific) community" [1970, p. 175] — that is, the basic configuration of beliefs, strategies, criteria, and exemplars for acquiring knowledge. Most books on behavioral and organizational research, such as those by Kerlinger (1964) and Stone [1978], outline a variety of research approaches, methods, and techniques that constitute "normal science" but do not directly deal with the fundamental issues associated with the value assumptions underlying the methods advocated. Kaplan [1964] is a notable exception, in that he directly addresses the central role of human values in the scientific enterprise. In this article we will deal with two fundamental images (or paradigms) of scientific inquiry rather than with the variety of methods and techniques within either image. A useful discussion of the notion of paradigm in sociology is provided by Ritzer [1975] and by Burrell and Morgan [1979].

We have called the two paradigms *inquiry from the outside* and *inquiry from the inside*, highlighting what we consider an essential point of contrast. Most organizational research is oriented by one or the other of these two paradigms. Although it may

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be feasible and at times preferable for researchers to blend or cycle between the two, most organizational researchers seem to have implicitly adopted some particular inquiry-guiding paradigm. We hope our comments will help raise the level of awareness concerning heretofore tacit commitments to particular modes of inquiry. To help explicate the differences, we will present the paradigms as essentially polar extremes. We recognize, however, that there may be a spectrum of approaches in which elements of both are combined.

Our fundamental purpose in contrasting the two paradigms is to increase the general level of understanding and appreciation of epistemological issues in organizational inquiry. Such an appreciation has a number of potential benefits. Articulation of the epistemological differences should foster greater awareness of the appropriateness of different kinds of knowledge for different purposes; it may thereby help legitimate the adoption of alternative and more appropriate knowledge-yielding paradigms in organizational inquiry. It should also help reduce fruitless conflicts within the field, by justifying and providing a basis for tolerance of diversity and multiplicity in research design. Greater epistemological appreciation seems to be an essential prerequisite to developing an appropriate inquiry approach whereby researchers would explicitly select a mode of inquiry to fit the nature of the problematic phenomenon under study, the state of knowledge, and their own skills, style, and purpose. Moreover, appreciation of epistemological issues has implications for the evaluation of research products. It leads to a belief that the quality of a piece of research is more critically indicated by the appropriateness of the paradigm selected than by the mere technical correctness of the methods used.

Our discussion is divided into three parts. First, we introduce the distinction between the two knowledge-yielding paradigms through the use of a mini-case. The mini-case is based on our experience in entering a new organizational setting. It is not meant to represent an ideal, or even typical, method of conducting inquiry, but rather to provide a vivid sense of the distinctions between them. Next, we identify and systematically discuss differences between the paradigms. We conclude by highlighting implications of our thesis for conducting inquiry in the organizational sciences.

We became aware of the considerable difference between the two modes of inquiry during our recent experiences in changing jobs. When we joined the new organization, our initial experience was one of wanting to make sense of the associated confusion, uncertainty, and apparent lack of order. We felt a need to make sense of our surroundings in order to act. As newcomers, our perceptual systems were alert. We noticed things that oldtimers seemed not to notice anymore. We were there, noticing acutely, and needing to make sense of the organizational events impinging from all around. We had an immediate personal interest in finding out about the organization. We were *not* acting as laboratory scientists looking through a window at an organization from the outside. The detached, "value-free," external observer/scientists that we were trained to be became flesh and blood persons, involved in and committed to the immediate situation. We needed to know the nature of our particular organization: how it worked, how to get things done through it, how to recognize the critical features, how to avoid the personally undesirable outcomes, and what the critical language was. In short, we needed to know how to decipher the "blooming, buzzing confusion" around us in order to act intelligently [James, 1918]. (For a theoretical treatment of the experience of entering unfamiliar organizational settings, see Louis [1980].)

Several thoughts occurred to us about our experience in this situation. *First*, most managers, indeed most organizational participants in general, would undoubtedly recognize the experience just described and acknowledge it as an essential ingredient of their normal day-to-day experience. Conceivably, the more creative and productive the manager, and the more turbulent the immediate environment, the more pertinent would be this need to understand in order to act. The desire to understand the particular organizational situation in order to act intelligently and effectively is, presumably, of focal concern in the field of management.

Second, we became aware that little of the published work in the organizational sciences had much relevance for us in trying to comprehend the new organization around us. The few concepts that did shed some light — such as integration and differentiation, theory X and Y, and bases of power —

did not result from the classical "detached-observer" type of research. It seemed to us that the more detached the researcher had been in conducting organizational studies, the less pertinent the research findings were for our situation. Conversely, the writings of "practitioner theorists," such as Fayol, Barnard, Urwick, Townsend, and Bennis, acquired increased saliency.

Third, we became aware that the mode of inquiry we adopted for acquiring knowledge in our organizational situation was markedly different from the academic social science model. We were probing "in the dark" into the hidden organizational realities around us, in many directions simultaneously. It was a multisensory, holistic immersion. We did not form and test explicit hypotheses, we did not do a literature search, we had no elaborate instruments, and we did not use sample statistics or draw inferences at the ".05 level of significance." In comparison to the idealized scientific method, the process we used to make sense of our organization was a messy, iterative groping through which we gradually, though quite rapidly, built up a picture of the organizational system of which we were a part. The critical point is this: Despite our knowledge of organizational research and our training in scientific method, when "push came to shove" we adopted another process of inquiry, presumably because it was more effective. Ethnomethodology, anthropology, and clinical methods represent systematic approaches to this mode of inquiry, though they generally lack the Campbell-Stanley rigor of traditional from-the-outside science.

Fourth, we came to realize that our roles and purposes as organizational actors-who-must-observe-to-survive were fundamentally different from those of the detached-outsider researcher (as well as the participant observer of traditional ethnography). Our purpose as organizational actors was primarily in coping, action taking, and survival within our organization. In contrast, the central purpose of the outside researcher (and even the participant observer) is in understanding, informing others, and surviving in organizations other than the one under study. We were experientially and existentially rooted in the organizational system (tasks, people, technologies, culture, rewards, etc.) that we were acquiring knowledge of, whereas the traditional researcher is experientially committed to another

system (e.g., academia) and is at most a temporary visitor to the subject organization. Our inquiry, from the inside, was critically related to our own immediate organizational experience and therefore, it seemed to us, was likely to yield knowledge that was inherently more valid, useful, and relevant to the purposes of organizational participants.

Fifth, although our "personal experience" vignette reads like an example of coping and survival, we wish to emphasize its inherent knowledge-yielding character. Inquiry and valid knowledge are fostered by coping activities, which differ from those of traditional from-the-outside science. Knowledge about organizations and management is continuously being articulated by managers (i.e., participants in organizational life). The essential difference between coping/sense making/survival on the one hand and inquiry/research/science on the other hand is essentially this: the latter requires the coping organizational actors to be willing to tell as best they can what they know and how they came to know it — and to submit it to critical discussion. In addition, the knowledge discovered through coping is directly relevant to the purposes of the organizational actors. Inquiry does not necessarily require that any formal "scientific method" be followed.

The distinctions we are making between coping and inquiry in relation to insider versus outsider are presented in Figure 1. At the right side of the figure a spectrum of possible researcher roles is presented. We surmise that the critical aspect of this continuum is the degree of immersion of the researcher in the organization — that is, the extent of experiential involvement in and existential commitment to the organization. Operationally, it may translate into the extent of physical involvement in the setting.

In summary, we had experienced a mode of inquiry in which the knowledge-seeker is immersed and functioning within the organization under study. On reflection, we became aware of critical distinctions between a mode of inquiry from the inside and the more traditional from-the-outside mode.

Two Modes of Inquiry

Inquiry from the inside and inquiry from the outside can both serve research purposes, but in different ways and with different effects. When would

| Mode | Primary Purpose of Knowledge-Yielding Activity | | Role of Researcher |
|---|---|---|---|
| | Organizational action | Organizational inquiry | |
| From the Inside ↑ ↓ From the Outside | Coping Action taking Managing Surviving | Situational learning Action research Clinical practice Case research | Organizational actor ↑ Participant observer ↓ Unobtrusive observer ↓ Empiricist ↓ Data analyst ↓ Rationalistic model builder |
| | Organizational design and engineering Controlled experimentation Social technology | Traditional positivistic science | |

Figure 1
Alternative Modes of Inquiry

either be used? We address this question by contrasting the two modes on a number of analytic dimensions, summarized in Figure 2.

We begin by comparing the *researcher's role and relationship to the setting* under the two modes of inquiry, and by identifying the epistemological and *validity assumptions* underlying the choice of role and relationship. Knowledge and understanding of an organizational situation can be acquired in two ways: (1) by studying, *from the outside*, data generated by the organization (and other organizations deemed to be similar in certain respects), and (2) by becoming a part of the organization and studying it *from the inside*. We can come to "know" the Ford Motor Company or Texas Instruments by examining annual reports, employment statistics, union announcements, questionnaire results, or observational records; or, alternatively, by functioning within these organizations for a period of time (or talking with those who do).

Inquiry from the outside is characterized by the

researcher's detachment from the organizational setting under study. The detachment derives, in part, from the assumption that the thing under study is separate from, unrelated to, independent of, and unaffected by the researcher. Astronomy provides an ideal illustration. The objects of interest are measured with instruments, the data are analyzed to determine if logical patterns seem to exist, and rational theories are constructed to integrate, explain, and perhaps predict a multitude of facts. Knowledge is validated by methodical procedure and logic. Underlying the detachment of the researcher inquiring from the outside are critical epistemological assumptions: the researcher is guided by belief in an *external reality* constituted of *facts* that are *structured* in a law-like manner. This is what Habermas [1973], after Husserl, has referred to as the "objectivist illusion."

In contrast, inquiry from the inside carries with it the assumption that the researcher can best come to know the reality of an organization by *being there*:

| Dimension of Difference | MODE OF INQUIRY | |
|--------------------------------------|---------------------------------------|--|
| | From the Outside | From the Inside |
| Researcher's relationship to setting | Detachment, neutrality | ↔ "Being there," immersion |
| Validation basis | Measurement and logic | ↔ Experiential |
| Researcher's role | Onlooker | ↔ Actor |
| Source of categories | A priori | ↔ Interactively emergent |
| Aim of inquiry | Universality and generalizability | ↔ Situational relevance |
| Type of knowledge acquired | Universal, nomothetic: <i>theoria</i> | ↔ Particular, idiographic: <i>praxis</i> |
| Nature of data and meaning | Factual, context free | ↔ Interpreted, contextually embedded |

Figure 2
Differences Between the Two Modes of Inquiry

by becoming immersed in the stream of events and activities, by becoming part of the phenomena of study. "Being there" is essentially what Heidegger [1962] means by his term *Dasein*. Knowledge is validated experientially. Underlying the immersion of a researcher inquiring from the inside is a very different set of epistemological assumptions from those of inquiry from the outside. Fundamental to it is the belief that knowledge comes from human *experience*, which is inherently continuous and *nonlogical*, and which may be *symbolically representable*. It is close to what Polanyi [1964] has termed "personal knowledge." The danger here is normally considered to be that the findings could be distorted and contaminated by the values and purposes of the researcher. This bias has been referred to by Russell [1945] as the "fallacy of subjectivism."

The researcher's role in inquiry from the outside can best be characterized as that of an onlooker. The researcher may use a telescope, microscope, or any

other instrument; the essential feature is looking in from the outside at a selected piece of the world. At the extreme is the pure rationalist, sometimes referred to as a speculator, who needs to collect no data from the world to carry out the task of theorizing.

In inquiry from the inside, the researcher becomes an actor in real situations. The researcher must attend to the total situation and integrate information from all directions simultaneously. The relevant world is the field surrounding the individual actor/researcher.

Another difference between the two modes of inquiry is the *source of the analytical categories* around which data are organized. In a typical piece of outside research, the investigator preselects a set of categories that will guide the inquiry. Hypotheses are phrased in terms of these categories, and only those data pertaining to them are collected. The life in the organizational microcosm under study is viewed through the lens of a limited number of

categories, such as centralization and formalization, or commitment and job involvement. At the extreme, this may lead to a form of perceptual "screening," so that the researcher sees only what is being sought.

The a priori categories may have been derived from personal idiosyncrasy, from theoretical formulation, or may have emerged in previous from-the-inside research. In the case of inside research, there are no intentionally prescribed categories to constrain the researcher. Instead, important features emerge through the individual's experience in and of the situation, as figure against ground in a perceptual field. Features are noticed and identified through an interpretive, iterative process whereby data and categories emerge simultaneously with successive experience. The process represents an experiential exploration and is particularly suited to early inquiry into new research territory. Inquiry from the inside is useful for generating tentative categories grounded in the concrete circumstance of a particular situation. Such emergent categories may subsequently be used as the a priori categories guiding the more deductive, hypothesis-testing inquiry from the outside.

A further difference is the *aim of inquiry*. The aim of inquiry from the outside is to generalize from the particular to construct a set of theoretical statements that are universally applicable. The aim is to develop understanding of classes of organizational phenomena, rather than to focus on particular instances in particular settings. Inquiry from the inside, in contrast, is directed toward the historically unique situation, what Lewin [1951] called that "full reality of the whole, here-and-now individual situation." The situationally relevant products of inside research serve both practical and theoretical purposes. They can provide guides for action in the immediate situation and inputs in developing hypotheses to guide inquiry from the outside.

The different modes of inquiry are also associated with different *types of knowledge*. The aim of situational relevancy pursued in inside research is served by knowledge of the particular organization under study. This knowledge of the particular is a necessary, but not sufficient, condition for praxis. By *praxis*, we mean a knowledge of how to act appropriately in a variety of particular situations. The aim of generalizability sought by outside research is served by the development of universal knowledge,

or *theoria* [Heidegger, 1962]. Habermas [1971] informs us that the original Greek meaning of *theoria* was "looking on," in the sense of witnessing a particular public celebration. Later, it came to mean "looking on" in the sense of examining the external order of the natural world and reproducing its presumed logical form. Over time, the meaning shifted focus from the particular to the universal. Praxis, on the other hand, focuses on the particular; it is knowledge that is infused with human organization and human interest, as represented in the situation under study. In the extreme, *theoria* implies a dissociation of universal knowledge from human interest [Habermas, 1971]. And, at the other extreme, *praxis* implies a preoccupation with the idiosyncratic.

While both modes of inquiry are concerned with understanding everyday happenings in organizations, they differ sharply in what they consider to be *data* and the level at which they consider issues of *meaning*. In inquiry from the inside, the aim of understanding particular situations necessitates that researchers make direct experiential contact with the organization under study. Understanding the events, activities, and utterances in a specific situation requires a rich appreciation of the overall organizational context. Context refers to the complex fabric of local culture, people, resources, purposes, earlier events, and future expectations that constitute the time-and-space background of the immediate and particular situation. Facts have no meaning in isolation from the setting. Meaning is developed from the point of view of the organizational participant. Inside research yields knowledge that is keyed to the organization member's definition of the situation, what Rogers [1951] has termed the "phenomenal field" of the person. Researchers involve themselves directly in the setting under study in order to appreciate organizational phenomena in light of the context in which they occur and from the participants' points of view.

In inquiry from the outside, the aim of developing universal principles of organizational life necessitates stripping away the idiosyncrasies of the particular organization(s) studied to reveal what is generally applicable to all organizations. The separation of the universal from the particular is accomplished through several processes. With the aid of sampling, aggregation, and other analytic techniques, the uniqueness of individual organizations is

randomized, controlled for, and otherwise "washed," revealing the kernel of presumed common truths. The validity of such efforts rests on the comparability of measurements across observations, settings, and times, as well as the completeness with which the observational procedures and situations are documented. Hence, the concern with instrumentation, specification, and precision.

Outside research is designed to be detached from, and independent of, a specific situation under study in a particular organization. The researcher determines the frequencies of, and associations among, events with respect to a set of hypothesized categories and relationships. Meaning is assigned to events on the basis of a priori analytic categories and explicit researcher-free procedures. Interpretations of the researcher are viewed as inherently confounding. The spectrum of organizational life is filtered through the researcher's preset categories; elements related to the categories are selected, coded as data, and simultaneously given meaning by the categories. As a result, data are considered factual when they have the same meaning across situations and settings. That is, they are context-free.

Related Dichotomies

Before we discuss the uses of these two contrasting paradigms of inquiry, it may be instructive to comment on the inside/outside distinction in relation to other dichotomies presented in the literature. A surprising consequence of discussing this inside/outside dichotomy with colleagues has been the wide array of parallels that it has evoked.

Included among these were Geertz's [1973] distinction between *thick* and *thin* description; Hall's [1976] *high context* and *low context*; Chomsky's [1965] *deep* and *surface* structure; Pike's [1954] *emic* and *etic*; Kaplan's [1964] *logic-in-use* and *reconstructed logic*; and the distinctions between *acquaintance with* and *knowledge about* as variously construed by James [1918], Dewey [1933], Schutz [1962, 1967], and Merton [1972]. That there is a fundamental difference between the two modes of inquiry is further suggested by the fact that in many languages there are different verbs to distinguish among different ways of knowing. For instance, French has *savoir* and *connaître*; German has *wissen* and *kennen*; and Latin has *scire* and *noscere*.

The distinction we have made has commonly (and regrettably) evoked the distinction between *ideographic* research (individual case, situational facts, and particular patterns) and *nomothetic* (general laws, universal variables, large number of subjects), originally made by Windelband and introduced later into the social sciences by Allport [1937]. Overall, the ideographic/nomothetic dichotomy has been dysfunctional for the development of the social sciences, because it carries the presumption that only nomothetic research can yield general laws. Even in the early 1930s, both Lewin and Goldstein demonstrated convincingly that nomothetic laws were at best approximations, since they can never characterize any particular event or situation. However, events occurring in the unique or particular situation *are* lawfully connected, and systematic clinical research can extricate these laws by the study of successive cases [Goldstein, 1939; Lewin, 1931].

Most commonly and naturally, the similarity between from-the-outside inquiry and *positivism* has been noted. There are many varieties of positivism [Susman & Evered, 1979]; we acknowledge a close correspondence between the kind known as logical empiricism and our description of inquiry from the outside. In one respect, our contribution here is to systematically articulate the positivistic mode of inquiry both by direct description and by contrast with a recognizable alternative.

Our notion of from-the-inside inquiry has evoked a much wider range of analogies. It has been characterized as antipositivistic, phenomenological, ethnomethodological, experiential, existential, ideographic, participative, anthropological, qualitative, dialectic, pragmatic, subjective, intensive, soft, and unscientific. Each of these terms represents a "high context" notion [Hall, 1976], and each is difficult to define with either brevity or precision. Although the notion of inquiry from the inside undoubtedly has attributes of each of these orientations, we refrain from equating it with any one of them.

The key feature of our description of from-the-inside inquiry is the physical (and therefore experiential) immersion of the researcher within the organizational setting under study. We believe the critical feature that characterizes the various inquiry paradigms is the degree of physical and psychological immersion of the researcher, and that

other distinctions commonly discussed derive from this.

Implications for Research Practice

As in everyday life, we in the organizational sciences need both ways of knowing and both kinds of knowledge to advance our understanding of organizational phenomena. Most social scientists, however, have typically espoused one or the other mode of inquiry. Inquiry from the inside is widely used by anthropologists, organizational consultants, case writers, and in practicum and apprenticeship programs, as well as by the FBI. In contrast, inquiry from the outside is the basis for most articles published in the organizational sciences. Notable exceptions include the studies by Barnard [1938], Trist and Bamforth [1951], Mintzberg [1973], Pettigrew [1973], and Van Maanen [1973].

We might speculate on the reasons for the preference in our field for outside research. Perhaps it stems from a desire to have our field be considered a *true* science, which has led us to emulate the hard-science model of research. Despite the success of this model in the physical sciences, its limitations for the social sciences — particularly the management sciences — have become increasingly apparent and of concern in the past decade [see Lindblom & Cohen, 1979]. Research from the outside systematically overlooks critical features that often render the results epistemologically valueless. Such features include the definition of human *action* in specific settings, the actor's particular *definition of his situation* (world, field), the *human interest* (motives, purposes) of the organizational actor, and the *historical context* of the situation. Such shortcomings can be overcome by inquiry from the inside.

Inquiry from the inside, however, may appear to be so fuzzy that its findings often have dubious precision, rigor, or credibility. But, in turn, these shortcomings can be overcome by inquiry from the outside.

Organizational inquiry is currently characterized by two broad approaches. One is methodologically precise, but often irrelevant to the reality of organizations; the other is crucially relevant, but often too vague to be communicated to or believed by others. We need to find ways to improve the

relevancy of the one, and to improve the precision of the other. It follows that we need to identify and refer to exemplars of good research — research that is both methodologically precise and grounded in real-world phenomena.

In addition to improving the quality of both modes of inquiry, researchers should explore ways of combining them, with the aim of securing the strengths of each while avoiding their respective deficiencies. Ways in which this could be done include:

Do both and aggregate Research studies in the organizational sciences require that both approaches be simultaneously pursued, either by different researchers or by a single researcher. Each mode offers distinctive advantages, suggesting circumstances (type of problem, state of knowledge, unit of analysis, researcher's purpose) in which one may be the more appropriate. Inside research is more useful for exploring organizational phenomena and generating tentative concepts and theories that directly pertain to particular organizations. By yielding in-depth knowledge of particular situations, it also more directly serves practitioners' needs. Outside research is more suited to theory testing and developing universal and timeless-truth statements.

The choice of mode will no doubt depend on the researcher's personal training, cognitive style, and preference. A researcher who scores high S on the Jungian typology scale (sensing, S, vs. intuitive, N) and who has had extensive training in statistical inference techniques is not likely to engage in inquiry from the inside. Similarly, a researcher who scores high N on the same Jungian scale and who has extensive training in anthropology is unlikely to embark on inquiry from the outside. Other factors, such as the prevailing reward structure, the particular referents and exemplars that the researcher has available, and the prevailing intellectual vogue, will also influence the choice.

One of the requirements for doing both and aggregating, however, is that good research of either kind should get published with equal facility. This requirement is not currently being met, there being a strong bias toward inquiry from the outside.

Alternate between the two modes In contrasting the two modes of inquiry, we have attempted to

discuss the natural limitations associated with different ways of knowing. In light of these limitations, we believe that to continue the single-minded use of one mode of inquiry that has characterized research in our field for more than a decade will produce feeble results — that is, results that are precise but irrelevant. Our ability to grasp the breadth, depth, and richness of organizational life is hampered by allegiance to a single mode of inquiry. Our efforts to develop comprehensive pictures of organizational phenomena are handicapped when only one (either one) mode of inquiry is sanctioned and practiced.

A somewhat stronger approach than aggregation within the field (through journals) is that of alternating between modes. A researcher, or group of researchers, may continuously move back and forth

between the two modes, selectively using the relative advantages of each as appropriate. A view is presented in Figure 3 of the cycling between theory generating and theory testing, to suggest one way in which the two inquiry modes may be synergistically linked. Used in tandem, the two modes may help to overcome the natural deficiencies of each.

Develop a new kind of science What is meant by the term *science* has been in continuous evolution for several centuries. During the late 1800s, a number of scientists (most notably Marx [see Bernstein, 1971], Pierce [1931], Husserl [see Kockelmans & Kiesel, 1970], and Dilthey [1914]) came to realize that there were major epistemological problems in

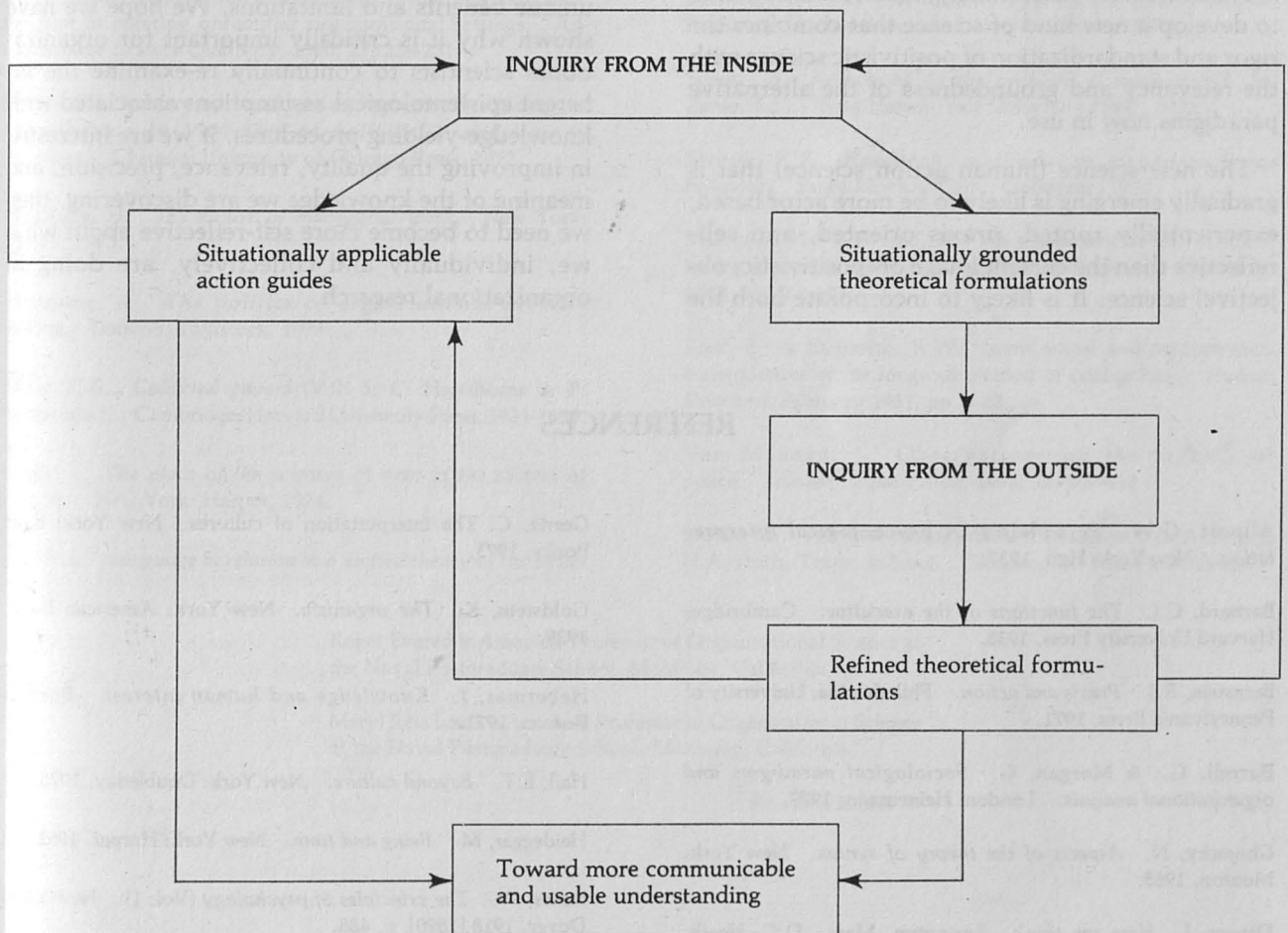


Figure 3
Linking the Modes of Inquiry

applying the physical science model of Science to the social realm. Dilthey delineated the nature of the "cultural sciences" (based on historicity and interpretation) to contrast with the material sciences. The distinction between the two realms is most systematically addressed by Radnitzky [1973], who contrasts logical empiricism with hermeneutical dialectics.

Since 1900, a number of prominent social scientists have attempted to transcend the epistemological deficiencies of the traditional (from the outside) scientific method. These include Weber [1951], Lewin [1931, 1951], Piaget [1974], Schutz [1970], and Habermas [1971]. Each writer has taken a different tack in attempting to reconnect universal knowledge with particular knowledge. However, the issue remains substantially unresolved. We need to develop a new kind of science that combines the rigor and standardization of positivistic science with the relevancy and groundedness of the alternative paradigms now in use.

The new science (human action science) that is gradually emerging is likely to be more actor based, experientially rooted, praxis oriented, and self-reflective than the current image of (positivistic, objective) science. It is likely to incorporate both the

American "pragmatic" thinking of Peirce, James, Dewey, and Mead, and the German "critical" thinking of Marx, Dilthey, Husserl, Weber, Heidegger, Godamer, and Habermas. It will probably develop from inquiry from the inside and bridge toward the precision and generalizability of inquiry from the outside.

At present, however, there remain differences of the most fundamental kind between the two modes of inquiry. The problem of constructively linking these two modes (and hence the two types of knowledge) is of major significance to the organizational sciences. We hope that this article will contribute to the dialogue that aims to relate research more closely with human action.

We have tried to present a balanced view of the two modes of inquiry and to portray fairly their unique benefits and limitations. We hope we have shown why it is critically important for organizational scientists to continually re-examine the inherent epistemological assumptions associated with knowledge-yielding procedures. If we are interested in improving the quality, relevance, precision, and meaning of the knowledge we are discovering, then we need to become more self-reflective about what we, individually and collectively, are doing in organizational research.

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