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THE PARADIGM DIALOG

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The Alternative Paradigm Dialog

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It is not surprising that most persons asked to define the term *paradigm* are unable to offer any clear statement of its meaning. I say it is not surprising because Thomas Kuhn, the person most responsible for bringing that concept into our collective awareness, has himself used the term in no fewer than 21 different ways, if Masterman (1970) can be believed. Some persons view that lack of clear definition as an unfortunate state of affairs. But I believe that it is important to leave the term in such a problematic limbo, because it is then possible to reshape it as our understanding of its many implications improves. Having the term *not* cast in stone is intellectually useful. Thus I will use the term in this chapter only in its most common or generic sense: a basic set of beliefs that guides action, whether of the everyday garden variety or action taken in connection with a disciplined inquiry. Refinement of that definition can be made by each reader while progressing through the book.

In this opening chapter I propose to outline what I take to be the salient differences between traditional positivism, on the one hand, and the three paradigms that have emerged to challenge (replace? parallel?) it on the other. Of course, I have my own preference among them; it would be remiss of me not to acknowledge that preference at once. It is *constructivism*. One immediate consequence is that I recognize that what I am about to say is *my own construction*, not necessarily an *objective* (whatever that may be) analysis. Indeed, as we shall see, constructivists not only abjure objectivity but celebrate subjectivity. The reader should not, therefore, read this chapter in the mistaken notion that it represents gospel or even a widely agreed to position. I

offer it as *one* way to understand the paradigm issue. I should also point out that constructivists are relativists (a position that, I contend, can be well defended; see Guba, 1990); hence it is quite possible for me to entertain *any* construction (including, of course, a paradigm) that is proposed by reasonable and well-intentioned persons. The reader should never forget that the only alternative to relativism is absolutism. As a relativist, I will not reject any construction out of hand.

Generating Inquiry Paradigms

There are many paradigms that we use in guiding our actions: the adversarial paradigm that guides the legal system, the judgmental paradigm that guides the selection of Olympic winners, the religious paradigms that guide spiritual and moral life, and many others. Our concern here, however, is with *those paradigms that guide disciplined inquiry*. Historically there have been many such (Guba & Lincoln, 1989; Lincoln & Guba, 1985), but since the time of Descartes (1596-1650), inquirers have tended to focus on what, in its latter-day version, came to be known as positivism. Nevertheless, all these past paradigms, as well as the emergent contenders, can be characterized by the way their proponents respond to three basic questions, which can be characterized as the *ontological*, the *epistemological*, and the *methodological* questions. The questions are these:

- (1) *Ontological*: What is the nature of the "knowable"? Or, what is the nature of "reality"?
- (2) *Epistemological*: What is the nature of the relationship between the knower (the inquirer) and the known (or knowable)?
- (3) *Methodological*: How should the inquirer go about finding out knowledge?

The answers that are given to these questions may be termed, as sets, the basic belief systems or *paradigms* that might be adopted. They are the starting points or givens that determine what inquiry is and how it is to be practiced. They cannot be proven or disproven in any foundational sense; if that *were* possible there would be no doubt about how to practice inquiry. But all such belief systems or para-

digms are *human constructions*, and hence subject to all the errors and foibles that inevitably accompany human endeavors.

There are certainly many different ways to answer these questions. Descartes, obsessed with the idea that he might be gulled into believing something not true, searched for a sure foundation. (Indeed, his legendary pronouncement, "I think, therefore I am," was the only proposition that he felt that he could propose without himself immediately doubting it.) His overriding concern for certain knowledge has come to be called *Cartesian anxiety*, a *dis-ease* that is still reflected in the positivist (and postpositivist) search to find out "how things really are" and "how things really work."

The Basic Beliefs of Positivism

The phrases "how things *really* are" and "how things *really* work" are ontological creeds. The basic belief system of positivism is rooted in a *realist* ontology, that is, the belief that there exists a reality *out there*, driven by immutable natural laws. The business of science is to discover the "true" nature of reality and how it "truly" works. The ultimate aim of science is to *predict and control* natural phenomena.

Once committed to a realist ontology, the positivist is constrained to practice an *objectivist* epistemology. If there is a real world operating according to natural laws, then the inquirer must behave in ways that put questions directly to nature and allow nature to answer back directly. The inquirer, so to speak, must stand behind a thick wall of one-way glass, observing nature as "she does her thing." Objectivity is the "Archimedean point" (Archimedes is said to have boasted that, given a long enough lever and a place whereon to stand, he could move the earth) that permits the inquirer to wrest nature's secrets without altering them in any way.

But how can that be done, given the possibility of inquirer bias, on the one hand, and nature's propensity to confound, on the other? The positivist's answer: by the use of a manipulative methodology that controls for both, and empirical methods that place the point of decision with nature rather than with the inquirer. The most appropriate methodology is thus *empirical experimentalism*, or as close an approximation thereto as can be managed.

The basic belief system (paradigm) of conventional (positivist) inquiry can thus be summarized as follows:

- Ontology: Realist*—reality exists “out there” and is driven by immutable natural laws and mechanisms. Knowledge of these entities, laws, and mechanisms is conventionally summarized in the form of time- and context-free generalizations. Some of these latter generalizations take the form of cause-effect laws.
- Epistemology: Dualist/objectivist*—it is both possible and essential for the inquirer to adopt a distant, noninteractive posture. Values and other biasing and confounding factors are thereby automatically excluded from influencing the outcomes.
- Methodology: Experimental/manipulative*—questions and/or hypotheses are stated in advance in propositional form and subjected to empirical tests (falsification) under carefully controlled conditions.

There are many ways in which this belief system can be undermined. Each of the three emergent paradigms raises its own objections and proposes its own solutions. I will examine each in turn.

The Basic Beliefs of Postpositivism

Postpositivism is best characterized as a modified version of positivism. Having assessed the damage that positivism has incurred, postpositivists struggle to limit that damage as well as to adjust to it. Prediction and control continue to be the aim.

Ontologically, postpositivism moves from what is now recognized as a “naive” realist posture to one often termed *critical realism*. The essence of this position is that, although a real world driven by real natural causes exists, it is impossible for humans truly to perceive it with their imperfect sensory and intellectual mechanisms (Cook & Campbell, 1979, p. 29). Inquirers need to be critical about their work precisely because of those human frailties. But, although one can never be sure that ultimate truth has been uncovered, there can be no doubt that reality is “out there.” Realism remains the central concept.

Epistemologically, postpositivism recognizes the absurdity of assuming that it is possible for a human inquirer to step outside the pale of humanness while conducting inquiry. Work in the “hard” sciences has aptly demonstrated that “findings” emerge from the *interaction* of inquirer and inquired into, as shown by, say, the Heisenberg Uncer-

tainty Principle and the Bohr Complementarity Principle (Hesse, 1980; Zukav, 1979). To overcome these problems postpositivists counsel a modified objectivity, hewing to objectivity as a “regulatory ideal” but recognizing that it cannot be achieved in any absolute sense. It *can* be achieved *reasonably closely*, by striving to be as neutral as possible; by “coming clean” about one’s own predispositions (as did I in the early paragraphs of this chapter) so that the reader can make whatever adjustments to the proffered interpretations of findings that seem appropriate; by relying on “critical tradition,” that is, requiring the reports of any inquiry to be consistent with the existing scholarly tradition of the field; and by subjecting every inquiry to the judgment of peers in the “critical community,” that is, the editors and referees of journals as well as their readers. Of course, the latter two requirements also make it virtually impossible for new paradigms to assert themselves, an advantage not lost on the power brokers who protect and defend the (new) hegemony of postpositivism.

Methodologically, postpositivism provides two responses to emergent challenges. First, in the interest of conforming to the commitment to critical realism and modified subjectivity, emphasis is placed on *critical multiplism* (Cook, 1985), which might most usefully be thought of as a form of elaborated triangulation (Denzin, 1978). If human sensory and intellectual mechanisms cannot be relied upon, it is essential that the “findings” of an inquiry be based on as many sources—of data, investigators, theories, and methods—as possible. Further, if objectivity can never be entirely attained, relying on many different sources makes it less likely that distorted interpretations will be made.

Second, and perhaps more important, postpositivism recognizes that many imbalances have been allowed to emerge in the zeal for achieving realistic, objective inquiry. A major part of the postpositivist agenda has been devoted to identifying these imbalances and proposing ways of redressing them. It is believed that, if they can be redressed, positivism, in its new postpositivist clothes, can be made useful once again. There are four imbalances; of course, not all postpositivists would agree that all exist and certainly not that they are equally critical.

(1) *The imbalance between rigor and relevance*. In more traditional terms this is the inescapable trade-off between internal and external validity. The greater the control established to achieve internal validity, the less the generalizability of the findings, for, in the final analysis,

laboratory results are generalizable only to another laboratory. The imbalance, created by excessive emphasis on context-stripping controls, is redressed by carrying out inquiry in more *natural* settings. The reader should note that the term *naturalistic* inquiry, often used in the past to denote what, in this book, is called *constructivist* inquiry, is not equivalent to this postpositivist proposal; the term *naturalistic* is identified with a *paradigm*, while the term *natural* is identified with a *methodology*, the *doing* part of a paradigm.

(2) *The imbalance between precision and richness.* Precision is critical to a science that defines its major goal to be prediction and control. That the press for precision should lead to an overemphasis on quantitative methods—that epitome of precision—is not surprising, particularly in view of the impressive array of mathematical and statistical methods that are available. This imbalance is redressed by including more qualitative methods. The reader should again note the confusion engendered by this use of the term *qualitative methods* (or, if one chooses, ethnographic, phenomenological, or case study methods). The term *qualitative* is a methods-level term, not a paradigm-level term. The call for qualitative methods is by itself *not* a call for a paradigm shift.

(3) *The imbalance between elegance and applicability.* The press to predict and control places great emphasis on the statement of formal theories—and preferably, broadly based, reductionistic (“grand”) theories. The development and testing of these theories characterize much of scientific activity. But such grand theories, while abetting generalizability, often are not found to “fit” or “work” (Glaser & Strauss, 1967) in local contexts. Locality and specificity are incommensurable with generalizability. This imbalance is redressed by “grounding” theory in local circumstances, that is, conducting the inquiry so that theory is the *product* rather than the *precursor* of the inquiry.

(4) *The imbalance between discovery and verification.* Discovery, that is, the process by which a priori theories and their implied questions and hypotheses emerge, is not a formal part of the conventional paradigm. Discovery is merely a precursor rather than an integral part of the scientific process, whose purpose is solely *verification* (falsification). But this position is immediately seen to be absurd when one considers that most of the important advances of science have been made via the creative discovery route rather than by the more mundane and plodding verification route. Clearly both processes are necessary; it is not only unfair but also extremely shortsighted to reserve the mantle

of science only for verifiers. This imbalance is redressed by defining a *continuum* of inquiry, which ranges from “pure” discovery at one end to “pure” verification at the other. The reader should note that the earlier tendency to relegate paradigms other than postpositivism to the discovery end has been replaced with a more ecumenical stance that seems to recognize that both processes can go on in all paradigms. But it should be clear that making this adjustment has nothing to do with paradigm differences; it simply recognizes that positivism, if not postpositivism, made an error in its earlier assessment.

We may note then that the basic belief system of postpositivism differs very little from that of positivism. We may summarize the stances as follows:

- Ontology:* *Critical realist*—reality exists but can never be fully apprehended. It is driven by natural laws that can be only incompletely understood.
- Epistemology:* *Modified objectivist*—objectivity remains a regulatory ideal, but it can only be approximated, with special emphasis placed on external guardians such as the critical tradition and the critical community.
- Methodology:* *Modified experimental/manipulative*—emphasize critical multiplicity. Redress imbalances by doing inquiry in more natural settings, using more qualitative methods, depending more on grounded theory, and reintroducing discovery into the inquiry process.

The Basic Beliefs of Critical Theory

The label *critical theory* is no doubt inadequate to encompass all the alternatives that can be swept into this category of paradigm. A more appropriate label would be “ideologically oriented inquiry,” including neo-Marxism, materialism, feminism, Freireism, participatory inquiry, and other similar movements as well as critical theory itself. These perspectives are properly placed together, however, because they converge in rejecting the claim of value freedom made by positivists (and largely continuing to be made by postpositivists).

Because they are human constructions, paradigms inevitably reflect the values of their human constructors. They enter into inquiry at choice points such as the problem selected for study, the paradigm within which to study it, the instruments and the analytic modes used, and the interpretations, conclusions, and recommendations made.

Nature cannot be seen as it "really is" or "really works" except through a value window.

If values *do* enter into every inquiry, then the question immediately arises as to what values and whose values shall govern. If the findings of studies can vary depending on the values chosen, then the choice of a *particular* value system tends to empower and enfranchise certain persons while disempowering and disenfranchising others. Inquiry thereby becomes a *political act*.

Given that counterclaim, one might expect critical theorists (ideologists) to reject a realist posture. For if there is a real state of affairs, then it seems unreasonable to argue that value positions that inquirers might take could influence it. Moreover, a *real* reality requires an objective epistemological approach to uncover it—as positivists and postpositivists have claimed all along. But, for whatever reason, critical theorists (ideologists) have elected to believe in an objective reality—as the phrase commonly used by them, "false consciousness," readily demonstrates (because it implies that there is a "true consciousness" somewhere "out there," or, more likely, possessed by the inquirer or some better-informed elite). The task of inquiry is, by definition, to raise people (the oppressed) to a level of "true consciousness." Once they appreciate how oppressed they are, they can act to *transform* the world. The close parallel between *transforming* the world and *predicting and controlling* it should not be lost.

Thus there appears to be a logical disjunction: a *realist* (but probably with the postpositivists, a critical realist) ontology coupled with a *subjectivist* epistemology—subjectivist because inquiry acts are intimately related to the values of the inquirer. The move to a subjectivist epistemology no doubt represents a forward step, but, so long as that epistemology is enlisted in the service of a realist ontology, it seems to lose much of its force.

At the *methodological* level, critical theorists (ideologists) seem more consistent. If the aim of inquiry is to transform the (real) world by raising the consciousness of participants so that they are energized and facilitated toward transformation, then something other than a manipulative, interventionist methodology is required. Critical theorists (ideologists) take a dialogic approach that seeks to eliminate false consciousness and rally participants around a common (true?) point of view. In this process, features of the real world are apprehended and judgments are made about which of them can be altered. The result of effective, concerted action is transformation.

Given this view, we may summarize the basic belief system of the critical theory (ideological) paradigm as follows:

Ontology: critical realist, as in the case of postpositivism
Epistemology: subjectivist, in the sense that values mediate inquiry
Methodology: dialogic, transformative; eliminate false consciousness and energize and facilitate transformation

The Basic Beliefs of Constructivism

It is my belief that proponents of both the postpositivist and the critical theory (ideological) paradigms feel that there can be an accommodation between their positions and, indeed, with conventional positivism. Constructivists, on the other hand, feel that the positivist (and postpositivist) paradigms are badly flawed and must be entirely replaced. Among the more telling arguments are these (Guba & Lincoln, 1989; Lincoln & Guba, 1985):

(1) *The theory ladenness of facts.* If empirical tests are to be valid as arbiters of propositions (hypotheses and questions) put to nature by inquirers, then it is essential that theoretical and observational languages be independent. The "facts" that are collected must be *independent* of the propositional (theoretical) statements. But philosophers of science now uniformly believe that facts *are* facts only *within* some theoretical framework (Hesse, 1980). Thus the basis for discovering "how things really are" and "really work" is lost. "Reality" exists only in the context of a mental framework (construct) for thinking about it.

(2) *The underdetermination of theory.* No theory can ever be fully tested because of the problem of induction. Observing one million white swans does not provide indisputable evidence for the assertion, "All swans are white." There are always a large number of theories that can, in principle, "explain" a given body of "facts." Thus no unequivocal explanation is ever possible. There can be many constructions, and there is no foundational way to choose among them. "Reality" can be "seen" only through a window of theory, whether implicit or explicit.

(3) *The value ladenness of facts.* Constructivists concur with the ideological argument that inquiry cannot be value free. If "reality" can be seen only through a theory window, it can equally be seen only through a value window. Many constructions are possible.

(4) *The interactive nature of the inquirer/inquired-into dyad.* Even post-positivists have conceded that objectivity is not possible; the results of an inquiry are always shaped by the *interaction* of inquirer and inquired into. There is no Archimedean point. And if there is such an intimate interconnectedness in the physical sciences, how much more likely is it that the results of social inquiry are similarly shaped? This problem of interaction is devastating to both positivism and post-positivism. First, it renders the distinction between ontology and epistemology obsolete; what can be known and the individual who comes to know it are fused into a coherent whole. Further, it makes the findings of an inquiry not a report of what is "out there" but the residue of a process that *literally creates them*. Finally, it depicts knowledge as the outcome or consequence of *human activity*; knowledge is a *human construction*, never certifiable as ultimately true but problematic and ever changing.

Given this critique, it is apparent why constructivists feel that an entirely new paradigm is needed. *Ontologically*, if there are always many interpretations that can be made in any inquiry, and if there is no foundational process by which the ultimate truth or falsity of these several constructions can be determined, there is no alternative but to take a position of *relativism*. Relativism is the key to openness and the continuing search for ever more informed and sophisticated constructions. Realities are multiple, and they exist in people's minds.

Epistemologically, the constructivist chooses to take a *subjectivist* position. Subjectivity is not only forced on us by the human condition (as the postpositivist might admit) but because it is the only means of unlocking the constructions held by individuals. If realities exist only in respondents' minds, subjective interaction seems to be the only way to access them.

Methodologically, the constructivist proceeds in ways that aim to identify the variety of constructions that exist and bring them into as much consensus as possible. This process has two aspects: hermeneutics and dialectics. The hermeneutic aspect consists in depicting individual constructions as accurately as possible, while the dialectic aspect consists of comparing and contrasting these existing individual (including the inquirer's) constructions so that each respondent must confront the constructions of others and come to terms with them. The hermeneutic/dialectic methodology aims to produce as informed and sophisticated a construction (or, more likely, constructions) as possible. Simultaneously the methodology aims to keep

channels of communication open so that information and sophistication can be continuously improved. Constructivism thus intends neither to predict and control the "real" world nor to transform it but to *reconstruct* the "world" at the only point at which it exists: in the minds of constructors. It is the mind that is to be transformed, not the "real" world.

We may thus summarize the constructivist belief system as follows (retaining the threefold organization for the sake of contrast despite having argued that, in constructivism, the ontology/epistemology distinction is obliterated):

- Ontology:* *Relativist*—realities exist in the form of multiple mental constructions, socially and experientially based, local and specific, dependent for their form and content on the persons who hold them.
- Epistemology:* *Subjectivist*—inquirer and inquired into are fused into a single (monistic) entity. Findings are literally the creation of the process of interaction between the two.
- Methodology:* *Hermeneutic, dialectic*—individual constructions are elicited and refined hermeneutically, and compared and contrasted dialectically, with the aim of generating one (or a few) constructions on which there is substantial consensus.

What is the Paradigm Dialog About?

I must stress again that what have been outlined on the preceding pages are *my* constructions about the nature of four paradigms—conventional positivism and three contenders for its "crown": post-positivism, critical theory (ideology), and constructivism. We are, nationally and internationally, engaged in a major debate about which of these is to be preferred. It is my own position that a struggle for primacy is irrelevant. As a constructivist I can confidently assert that *none* of these four is *the* paradigm of choice. Each is an alternative that deserves, on its merits (and I have no doubt that all are meritorious), to be considered. The dialog is not to determine which paradigm is, finally, to win out. Rather, it is to take us to another level at which *all* of these paradigms will be replaced by yet another paradigm whose outlines we can see now but dimly, if at all. That new paradigm will not be a closer approximation to truth; it will simply be more informed and sophisticated than those we are now entertaining. The reader is invited to enter into that dialog as she or he reads the following pages.