ABSTRACT

Among recent philosophers of science, a trend has emerged that has been described elsewhere as a movement beyond objectivism and relativism. Within the field of family therapy, a parallel movement can be observed that has been promoted by the constructivist implications of contemporary cybernetics. Together, these trends have called into question traditional notions of objectivity. In this paper, research implications of the emerging alternative epistemology are proposed.

Introduction

At the 1982 annual meeting of the American Family Therapy Association, Alan Gurman organized a panel of researchers that offered two different views of how to study family therapy. More recently, Gurman has characterized these contrasting approaches as "old hat" and "new wave" research (Gurman, 1983). Proponents of these respective views (Kniskern, 1983; Tomm, 1983) have asserted that their differences are not simply a matter of emphasis regarding specific research methods used, but rather arise from fundamental differences in assumptions made about the nature of reality and how we come to know phenomena.

"Old hat" methods are more wedded to the assumption that there is a real world which exists "out there," and that if we are rigorous enough in our observations, we will be able to obtain an increasingly accurate and objective view of that world. "New wave" theorists, on the other hand, insist that, even if there is an ontologically real world, we can never have objective access to that world. Rather, all descriptions will be shaped by the perspective of the observer. While proponents of the later perspective have become increasingly active in critiquing the traditional family therapy research paradigm, little discussion has taken place regarding alternative directions for family therapy research. It is the purpose of this paper to promote such discussion.

The Constructivist View

To date, most family therapy research has been rooted to the traditional scientific notion that "objectivity" is possible (Tomm, 1983). In this view of science, a researcher's primary task is to attempt to keep his or her own biases or opinions from entering into observations of the world. Kerlinger (1973) explains:

If the scientist believes something is so, he must somehow or other put his belief to a test outside himself. Subjective belief, in other words, must be checked against objective
reality. (Kerlinger, 1973, p.11)

While researchers who use this scientific method vary in the degree of confidence they place in the feasibility of gaining an objective view of their subject matter, the premise which unites them all is the belief that there is an objective reality "out there," and that scientific progress can best be achieved by attempting to obtain more unbiased maps of reality.

In contrast to this position is one which insists that it is simply not possible to achieve an "objective" view of the world, because observations will always be influenced by the perspective of the observer. In the field of family therapy, the notion of the inseparability of the observer from the observed has been promoted by the constructivist implications of contemporary cybernetics. Keeney (1983) explains that contemporary cybernetics, sometimes called "cybernetics of cybernetics," emphasizes that observers are always part of the system they observe. The implication is that all observations involve self-reference, and any description says as much or more about the observer as it says about the subject of description.

Historically, a strong emphasis on the role of the observer in constructing "reality" can be traced to the philosophical position of radical constructivism (see note 1). Von Glasersfeld (1984), one of the more articulate proponents of radical constructivism, holds that in constructivism, "there is the realization that knowledge, that is, what is 'known', cannot be the result of a passive receiving, but originates as the product of an active subject's activity" (p. 31). Rather than seeing social phenomena such as communication or marital satisfaction as existing "out there", available for the researcher to discover and measure, the constructivist holds that "all communication and all understanding are a matter of interpretive construction on the part of the experiencing subject... " (Von Glasersfeld, 1984, p.19). This view is evidenced in Watzlawick's (1984a) statement, "Relationships are not aspects of first-order reality, whose true nature can be determined scientifically; instead, they are pure constructs of the partners in the relationship, and as such they resist all objective verification" (p.238).

The shift to a constructivist epistemology is no small one. Von Glasersfeld (1974) asserts:

> It is not a question of merely adjusting a definition here and there, or of rearranging familiar concepts in a somewhat novel fashion. The change that is required is of a far more drastic nature. It involves the demolition of our everyday conception of reality... it shakes the very foundations on which 19th century science and most of 20th century psychology has been built, and it is therefore not at all unlike the change that was wrought in physics by the joint impact of relativity and quantum mechanics. (p.2)

It is important to note the distinction between the constructivist position and the position which has been called solipsism. The solipsist view is that the world is made up entirely of our constructions, with no reference to an external world. Constructivism holds that the world of experience is neither entirely made up, nor entirely independent of an observer's activity. Keeney (1983) states,

> The notion that an external world lineally acts upon our sensorium in order to shape the description of representations is incomplete. Similarly, it is a partial view to see the entire world as made up by our prescriptions for construction. Such a belief, called "solipsism," is a reverse punctuation of the previous lineal view. It is therefore as lineal and incomplete as the traditional perspective of an objective universe. Only the direction of the arrow changes. What cybernetics pushes
us toward is a way of joining both of these views. It is the recursive connection between description and prescription, as well as representation and construction, that we are after. (pp. 49-50)

In sum, the constructivist position does not reject the existence of an independently existing external world. What is rejected is the notion that we can have direct access to that world through objective observation (see note 2).

Despite the enthusiasm of some family therapy scholars regarding constructivist ideas, the majority of social science researchers continue to employ research methods based upon notions of "objectivity." Von Glasersfeld (1981) posits that this may be so because there is a fear that giving up the belief of observer-independent, 'objective' facts would also mean giving up science. Keeney and Morris (1985a) have argued, however, that our view of science is too narrow, and that there is room in science for multiple methods of exploration. Keeney laments that "our bias toward the reductionistic and quantitative paradigm of logical positivism has too often relegated other methodologies to second or third-class status" (cited in Schwartz & Breunlin, 1983, p. 27). Donald Campbell (1975), himself an author of a widely used experimental design book based upon the traditional research epistemology, has strongly criticized such rigidity, asserting that "The epistemic arrogance of behavior and social scientists is perhaps as much an obstacle... as is the epistemic arrogance which traditional religionists exhibit in their claims of revelation and absolute certainty" (p. 1120).

Family therapy theorists who are in the new wave tradition maintain that the picture is changing, albeit slowly. Tornmr (1983) writes: "... it has become increasingly obvious that we tend to create and see that which we are looking for... There is now clear acknowledgement of the role of the scientist in constructing his or her own theoretical models" (pp. 39-40). Similarly, Keeney and Morris (1985b) assert that social science is experiencing a shift "from a monological paradigm where the observer is not allowed to enter his/her descriptions, to a dialogical paradigm where descriptions reveal the nature of the observer" (p. 549). Their conclusion, which seems to represent the general position of "new wave" researchers, is that if we are to continue on the cutting edge of science, we must recognize alternative strategies of research - each with its own rules and ideas about discovery and verification. "Psychotherapists will then not speak of the scientific method, but will speak of scientific methods or even more generally of a wide variety of formal methods of inquiry" (Keeney & Morris, 1985b, p. 550).

As constructivist notions have demanded more attention in the field, questions have arisen concerning the implications of the new epistemology for family therapy research. Among the chief of these questions are the following: "If we give up the possibility of objective knowledge, how is the relative legitimacy of two competing theoretical constructions to be determined? Are we to assume that any construction is as good as another?" Up to this point, little has been said regarding these questions in the field of family therapy. However, such questions have been central concerns of recent philosophers of science. While few of these philosophers have explicitly identified themselves with the constructivist tradition, we believe that their arguments are relevant to the questions being raised in our field regarding the research implications of constructivism.

**Beyond Objectivism and Relativism**

Philosophers of science have long questioned the idea of objectivity. Summarizing recent developments in the philosophy of science, Richard Bernstein (1983) writes:

When we stand back and view the cumulative results of the postempiricist philosophy and
history of science, we realize that there has been a major transformation in our understanding of science, when compared to older rationalist, empiricist, and logical empiricist images of science. (p.60)

Bernstein notes that a common theme can be seen in the writings of philosophers and historians of science as diverse as Kuhn, Feyerabend, Rorty, Habermas, Gadamer and Arendt. This theme he describes as "the demise of Cartesianism that has dominated and infected so much of modern thought" (p. 71). He explains:

The Cartesian dream or hope was that with sufficient ingenuity we could discover, and state clearly and distinctly what is the quintessence of scientific method and that we could specify once and for all what is the meta-framework or the permanent criteria for evaluating, justifying, or criticizing scientific hypotheses and theories. (p. 71)

Bernstein notes that contemporary philosophers of science are rapidly losing faith in the Cartesian dream. Speaking specifically of the human and social sciences, Bernstein states that philosophers are now arguing that there are no hard facts of the matter and that "it is an illusion and a deep self-deception to think that there is some overarching framework, some neutral descriptive language, some permanent standards of rationality to which we can appeal in order to understand and critically evaluate the competing claims that are made" (p.3).

It is often assumed that the alternative to objectivism is relativism, the position that any view is as good as another. However, relativism has been soundly rejected by recent philosophers of science. Richard Rorty, himself considered by many to be a relativist states:

Except for the occasional cooperative

In sum, the view of science emerging from the work of many recent philosophers of science is one that moves beyond both objectivism and relativism. The notion of objectivity is rejected, but so is the idea that there can be no rational means by which the relative legitimacy of competing views can be determined. We return to the central question: How then, can relative legitimacy be determined?

We think that the strongest answer to this question is implicit in the writings of Thomas Kuhn (1962, 1970, 1977). Kuhn argues that the legitimacy of any view should be determined by applying the same criteria we always have used in making such decisions. There are a number of criteria for evaluating theories that have been quite universally accepted throughout the history of science. Among these are the criteria of accuracy, consistency, scope, simplicity, and fruitfulness. The problem is not so much one of which criteria are to be applied, but one regarding the procedure by which they are applied in making decisions about the legitimacy of theories. Unfortunately, there is no universal procedure for uniformly applying these criteria. Scientists who share the same criteria continuously make different choices in the same concrete situation. Kuhn writes, "there is no neutral algorithm for theory choice, no
systematic decision procedure which, properly applied must lead each individual in the group to the same decision" (1962, p. 200). In other words, the accuracy, consistency, scope, simplicity, and fruitfulness of a theory cannot be determined through objective data gathering.

Kuhn maintains that the criteria for theory choice serve as values that influence choice rather than rules which assure that all scientists will make the same choice. Theory choice is an open process in which general criteria are applied uniquely by individual scientists in diverse situations. The way each individual scientist applies the general criteria will depend upon the individual's specific history, values, and life situation. However, this is not to say that theory choice is an arbitrary or irrational process. Kuhn insists that any individual who wishes to be taken seriously must defend his choice by citing reasons and arguments that are sensible to the scientific community at large. In sum,

"Theory choice is a judgmental activity requiring imagination, interpretation, the weighing of alternatives, and application of criteria that are essentially open. But such judgments also need to be supported by reasons (reasons which themselves change and vary in the course of scientific development). This is not a deficiency but an intrinsic characteristic of this judgemental process that rational individuals can and do disagree without either of them being guilty of making a mistake. While the 'balance of argument and counterargument in support of conflicting judgements can sometimes be very close indeed' (Kuhn, 1962, p. 157), in the course of further scientific development, the force of the arguments in support of one of these conflicting judgements does become decisive for the community of relevant scientists." (Bernstein, pp. 56-57)

Implications for Research

The most basic point in the preceding argument is that, since individuals often legitimately differ on how to apply general criteria in evaluating theories in specific situations, theory choice is always an individual matter. An individual cannot "take someone else's word for it". Rather, each scientist must individually weigh the evidence, making the decision that makes most sense to him or her. Scientists can profitably attempt to obtain some degree of consensus, because there is general agreement as to the criteria to be used in evaluating theoretical constructions (See note 3).

Research is generally seen as one method used by scientists to persuade one another regarding the legitimacy of their theoretical constructions. We think that research can (and should) continue to fulfill this function. However, some changes in the way that research is conducted and reported may be warranted if one takes the constructivist theory of knowledge seriously.

In a typical research report in the social sciences, a researcher will argue that he or she has discovered some data that supported the legitimacy of a theory. A problem is that the reader does not get to see the data until after it has been been organized by the researcher. In fact, the term "data" is often meant to refer to the results of a statistical analysis, rather than the "raw" sensory data. As Gergen (1982) has noted, "Empirical research in the sociobehavioral sciences does not furnish observations. That is, the audience for research reports is never exposed to ongoing events; one never gains first-hand experience with the research process itself" (p. 103).

In order to organize the raw data into chunks which can be statistically analyzed, the researcher is generally required to draw a host of distinctions, organizing the data to fit into his or her conceptual categories. We are not saying that this is bad. We think it is inevitable. One must organize the world in specific ways in order to make sense of it. Our point is that, as researchers,
we might benefit from more clearly showing each other how we have drawn distinctions in organizing the world of experience. Many times we are not aware of the distinctions that we ourselves draw in organizing perceptions of data. In the view of research we are proposing, an essential activity of the researcher would be examining his or her own patterns of organizing experience, and then exposing them for scrutiny. Rather than simply presenting a summary of how the data was organized and what was found after organizing the data, the researcher might show the process of how the data was organized, allowing readers to decide for themselves the legitimacy of that particular way of organizing experience.

Actually, this point has been made by other individuals associated with constructivism. Keeney (1983) has written, "To understand any realm of phenomena, we should begin by noting how it was constructed, that is, what distinctions underlie its creation" (p. 21). Keeney and Morris (1985b) maintain that "research becomes a task of re-examining (i.e. re-searching) what one did to construct a particular reality" (p.548). Varela (1976) summarizes:

> When you realize that whatever you see reflects your properties, instead of putting so much intent, so much energy, investing so much, in a particular content, you turn back and focus on your capacity to do such a thing as a distinction. So the capacity to compute a reality becomes much more interesting than the content of the reality. No so much intent thus on the something, but on the process of doing what we do to arrive at the something. (p. 30)

In sum, the process we are suggesting is one in which researchers retrace the distinctions they have drawn in constructing any view of the data, so that the reader may do likewise. In a sense, the reader is taught the process of constructing a view. Once readers learn the particular way of drawing distinctions proposed and illustrated by a researcher, they can begin applying the set of distinctions in their own daily experiences. Readers will decide the legitimacy of the set of distinctions as they try it out for themselves. Although most readers will apply the same general criteria in deciding the legitimacy of any particular way of constructing experience, each will apply the criteria uniquely. Criteria of choice influence the decision of readers rather than dictate the choice to be made.

While any research report could be improved by more clearly exposing the reader to the data being studied, it may be that some kinds of data will be more useful than other kinds. For example, a reader may benefit more from having access to ongoing sequences of interaction rather than decontextualized pieces of data that have been selectively elicited by the researcher. Ideally, the reader would witness the same events as the researcher. Having studied the data carefully, the researcher would propose to the reader a particular method of drawing distinctions upon the data. The intent of the researcher would be to develop and present a theory concerning a pattern or structure that may meaningfully organize the observable data. In general, the quality of a research report might be determined by how fully the researcher allows the reader access to the research process.

To a certain extent, this method has been used by teachers of therapy for decades. Readers are presented with a transcript of interaction and simultaneously offered a commentary indicating how the teacher/researcher draws distinctions or organizes the data to make sense of it. Readers are left to determine the legitimacy of the specific way of sense-making. And they are in a good position to do so, because they have been presented with the actual ongoing interaction as well as a prescription for drawing distinctions.

One of the more recent research endeavors of this type within the field of family therapy has been
conducted by Bradford Keeney and Jeff Ross (1985). Keeney and Ross describe research their report as "an invitation to try on a pair of constructivist lenses . . . a request to construct a particular way of knowing systemic family therapies" (personal communication, 1984). They give careful attention to describing how they as researchers enter into their descriptions of what transpires in therapy. Specifically, they illustrate how their theoretical maps, which they call "laws of therapeutic form," and "cybernetics of multiple communication," influence their observations of communication in therapy. The map called "laws of therapeutic form" involves viewing therapy in terms of how it constructs and manages semantics (i.e., meaning) and politics (i.e., social organization). The "cybernetics of multiple communication" is a map which enables one to construct a view of how therapeutic interventions address the cybernetic complementarity of stability and change.

Using transcripts of therapy sessions conducted or supervised by several leading family therapy practitioners (such as Haley, Boscolo and Cecchin, Fishman, Silverstein, and Weakland), Keeney and Ross (1985) examine how the processes of communication in therapy may be seen to differ systematically across the various systemic therapies when viewed through a specific set of distinctions. For example, Keeney and Ross demonstrate how a therapist acting according to the "Milan" strategy can be seen as communicating a message of stability regarding the family's semantics about the problem, while communicating a message of change regarding the political organization of the family. In contrast, a therapist acting according to the Milan strategy can be seen as communicating a message of stability regarding the political organization of the family, while communicating a message of change regarding the way the family semanticizes about the problem.

Keeney and Ross avoid implying that they are researching how communication in therapy is "actually" different in the sessions of these various practitioners. Rather, they illustrate a way of constructing a view of how the communication in these sessions may be seen to differ. Thus, Keeney and Ross provide a method of re-constructing (i.e., re-searching) communication in therapy. Keeney and his associates have extended this approach (Keeney with Silverstein, 1986) and recently have called it "cybernetic ethnography" (Keeney & Morris, 1985). Ethnographic research methods may be particularly useful to the constructivist researcher since ethnographic descriptions are presented "in a way that the readers can decide for themselves whether or not to believe the ethnographer's account of what it is that a particular group of people are doing at any time" (McDermott, Gospodinof, & Aron, 1978, p. 245).

In sum, the method of research demonstrated by Keeney and Ross involves showing the reader transcripts of therapy sessions along with a prescription for organizing the data. One could extend this method by actually showing the reader videotapes of clinical sessions along with prescriptions for organization of the process. Rather than filling our journals with written summaries of the "results" obtained in process studies, we might consider "video journals" where the reader is actually exposed to the process being examined, along with the researcher's prescriptions for organizing or making sense of the process. Again, this has been effectively done in the clinical world, but has rarely been called research.

Conclusion

An important shift occurs in the sort of research being suggested in this paper. The burden of responsibility for determining the legitimacy of any particular way of constructing reality is moved from the researcher to the reader. Traditionally, the researcher is expected to proceed in an unbiased manner to determine whether a theory holds up to rigorous investigation or not. In a research report, the researcher gives a summary statement about the process and end results of
the research, and then asks the reader to believe that a particular hypothesis is supported by a research process that the reader has not seen.

Ironically, however, it seems that the reader, if he or she happens to be a clinician, tends not to listen to the researcher. In 1983, Schwartz and Breunlin conducted a series of interviews, asking prominent family therapy researchers and clinicians their views regarding the relevance of research for clinical practice. They summarize:

Most of the practitioners we spoke with reported that they rarely read research papers because they found most of them to be of little relevance to their work... The picture of research that emerged was of an inaccessible domain of knowledge, which might contain something of value, but which usually seemed hopelessly remote from the experience of the clinician. (p. 24)

Referring specifically to therapy outcome research, Alan Gurman has noted,

Clinicians get attracted to a brand of family therapy for reasons that have little to do with empirical evidence... The assumption is that if the data says that Therapy A is better than B, the open-minded and caring clinician doing B will start doing A. That assumption is preposterously naive. (quoted in Schwartz and Breunlin, 1983, pp. 24-25).

In sum, it seems that clinicians are not willing to take the pronouncements of researchers seriously. We think this is appropriate. Perhaps intuitively, each of us suspects that we cannot really "take someone else's word for it." We all want to trust our own judgements.

We think its time to move research in a direction that more fully encourages readers as well as researchers to experience the research process. The result is likely to be a renewed sense of community, where everyone realizes that no one individual is in a better position to pronounce legitimacy than another. Francisco Varela has envisioned the potential of such a community:

If everybody would agree that their current reality is a reality, and that what we essentially share is our capacity for constructing a reality, then perhaps we could agree on a meta-agreement for computing a reality that would mean survival and dignity for everybody on the planet, rather than each group being sold on a particular way of doing things. (1976, p.31)

Notes

(1) The philosophy of radical constructivism has a history which preceeds the formal articulation of cybernetics in the 1940's. Von Glasersfeld (1984) notes that, "Doubts concerning the correspondence between knowledge and reality arose the moment a thinking individual became aware of his own thinking" (p.25). It seems that constructivism first became a coherent philosophical tradition in 1710, articulated by Giambattista Vico (von Glasersfeld, 1984). Recently, however, constructivist philosophers have recognized that cybernetics provides the most defensible argument for their philosophical position. Silverman (1974) has noted that in order for the constructivist position to be viable, the constructing system must be composed of a hierarchical arrangement of negative feedback loops. He maintains that "Without a proposal of hierarchies of feedback loops, which do the constructing, constructivism would appear to be a mystical conception inapplicable to any branch of science" (p.106). Silverman concludes that cybernetics is thus critical to the validity of the constructivist position.

(2) Discussion thus far has been limited to a summary of the epistemological premises of the constructivist position. It is beyond the scope of this paper to
elaborate the arguments supporting the constructivist view. This has been done elsewhere in detail (Keeney, 1983; Maturana, 1976, 1978; Maturana & Varela, 1980; Powers, 1973; Richards & von Glasersfeld, 1979; Smock &von Glasersfeld, 1974; Varela, 1979; von Foerster, 1981; Watzlawick, 1984c).

(3) In the view being proposed here, there is nothing intrinsically "foundational" or necessary about these criteria. Kuhn arrives at these criteria simply by observing that: (1) We all hold certain views of the world as being more legitimate than others, although we may vary on the degree to which we are convinced of relative legitimacy of the views, and the degree to which we are open to be persuaded otherwise; (2) Individuals use specific criteria in theory choice (One cannot not use criteria in choosing to assert one theory as more legitimate than another); and (3) Certain criteria can be identified that are nearly universally accepted. That these criteria are generally accepted does not mean that they are necessarily "true" or "correct." It does, however, give us a common reference point that can be used in carrying on science.

REFERENCES


