

PRACTICAL THEORY AND A NATURALISTIC ACCOUNT OF INQUIRY

Vernon E. Cronen

Inquiry is intrinsic to living. A flower adjusts its position to the sunlight that shines through the atmosphere. Its roots grow and move to attain a better relationship to nutrients in the soil. It contributes oxygen to the atmosphere through which the sun shines. It drops leaves, changing the soil. This is inquiry in its basic form. Ugh leaves her cave to join in gathering berries. She hears bird sounds and mimics them. She and others repeat the vocal pattern. They find that work goes easier and faster and they get a good feeling from making these sounds together. Their efficient gathering now requires that they go farther to find food and that makes the good feeling of vocalizing together more important. This, too, is inquiry. Mrs. Green goes to a peddler's cart and looks at all the fans. It's a hot day, but she has little money so she buys a 1-penny fan instead of the 5-penny kind. The next day she confronts the peddler: "I want my penny back! The fan you sold me broke as I was using it." The peddler replied, "With a 5 penny fan you wave the fan in front of your face. With a 1 penny fan you hold the fan still and wave your face." Mrs. Green does not get her penny back, but she has a more wary approach to peddlers and a different view of buying cheap. The peddler perhaps has developed a new line to use on cheap customers. More inquiry.

If inquiry is the natural practice of adjusting ourselves to the world and the world to us, how did we get into the situation in academia where it is necessary to make a special case for the value of practical work? How did practical interests come to be set against theoretical interests, and practice come to be devalued? Psychology departments frequently have conflicts between "researchers" and "clinicians." Business degrees are given by a different college than economics degrees. Some sociology departments want nothing to do with social work. Some universities have two communication departments, one applied and one theoretical.

In this paper I want to do several things. First I want to provide some brief historical notes about the theory - practice dualism. Second, I want to provide a short overview of the evolutionary - systemic perspective that inspired Pragmatist philosophers to propose a naturalized understanding of inquiry and reject theory-practice dualism. Third, I will attempt to extend the Pragmatist position by describing a kind of theory that I call "Practical Theory" (Cronen, 1995a) and distinguish it from "Practical Arts." Finally, I will offer some ideas about standards to which a practical theory should be held. I will illustrate with examples from the Practical Theory that W. Barnett Pearce and I have been developing for a number of years called "Coordinated Management of Meaning" (for brevity, CMM) (Pearce and Cronen, 1980; Pearce, 1989; Cronen, Johnson and Lannamann, 1982; Cronen, 1994,1995). I have used CMM theory because it is the one I know the most about, not because it is the only one that should be entertained. The reader will also find that my examples reflect the importance of my long relationship with members of the Kensington Consultation Centre, London, particularly Peter Lang, Susan Lang, Martin Little, Elspeth McAdam, and Christine Oliver. Their contributions are integral to all that is in this paper.

The Peculiar Theory - Practice Divide

The Derogation of the Practical.

Dewey (1929/1960) said that the dualism of theory and practice is neither original nor primitive. It emerged in the "state of culture in which it has been sketched" (Dewey, 1929/1960, p. 13.). The disparagement of practice as compared to contemplation is older than the time of Socrates. It has its roots in the ancient European and Middle Eastern disparagement of labor. Work, in much of the ancient world, was considered, "Onerous, toilsome, associated with a primeval curse, done under the pressure of necessity, while intellectual activity is associated with leisure" (Dewey, 1929/1960, pp. 4-5). Writing in the 5th century B.C.E., Herodotus observed that, "The Thracians, the Scyths and the Persians, the Lydians and almost all other barbarians," hold in more esteem, "Those who keep aloof from handicrafts, and these ideas, prevail throughout the whole of Greece" (History of the Persian Wars, II,167). Aristotle thought that the knowledge one gained from participation was not as valuable as that gained from detached contemplation. In Nicomachean Ethics he argued for the life of contemplation as the highest form (1177b1-5; 1339a6-8).

The idea that direct participation is a questionable source of knowledge was fed by the tradition of 6th century B.C.E. philosophers who were looking to find a certain foundation behind appearances. Parmenides (Reale, 1987) first argued that for knowledge to exist, there must be something unchanged that stands behind it remaining unchanged, but supporting change -- literally, "sub-stance." If all was changing, what is true one day will not be so the next. Thus, knowledge must be about the unchanging realities hidden behind appearances. That became the core of Plato's position as well. Aristotle, while rejecting Plato's ideas about "forms" in another reality, also accepted the idea that absolute knowledge was possible because there were primary unchanging substances in nature.

The great success of Newtonian science in the late 17th through the 19th centuries seemed to support the idea that what is needed to secure knowledge is a method that will put the inquirer in an objective position so that he or she can look behind appearances (Harre and Madden, 1975; Shotter, 1990). The success of physical science during that period suggested that all branches of inquiry could benefit from the same method. Inventions like the steam engine seemed to show that the way to improve life is to have a class of inquirers whose research teases out the underlying principles (e.g., Newton's theory), and another class who apply the principles (e.g., Watt's steam engine).

The philosophical side of the Newtonian revolution included an account of inquiry later called "logical positivism" that reached its highest development in the Vienna Circle's work (See Suppe, 1977). Positivism requires a theory neutral observation language, a theoretical language, and a means of translating one into the other (Suppe, 1977). The goal was objective truth. The observer could supposedly share the neutral observation language with any other observer. The theoretical language was strongly influenced by Frege's notion of propositional form. In Frege's view, the terms of theoretical statements can be related to objects in the world. However, the relationships between objects cannot, he thought, be directly observed. Those relationships had to be stated in propositional form. Thus, the analysis of propositions became a crucial epistemological concern (Baker and Hacker, 1984). The logical arrangement of propositions supposedly offered a "picture" (Wittgenstein, 1953) of the world, and the success of science

seemed to confirm the picture theory of inquiry. The ideal of logical form was part of a larger notion that the world was an elegant machine, rather like a very complicated clock. To understand the machine, one should take it apart and find out how and by what forces one part affected another (Suppe, 1977).

The foregoing general paradigm was carried over into social disciplines. Even some 18th century elocutionists sought to precisely define those features of a speaker's or actor's behavior that caused particular audience responses. The tradition continues today in most social disciplines.

An alternative tradition.

The tradition of Parmenides and Plato had challengers in the ancient world. Heraclitus argued that the world was constantly changing. Moreover, he argued, we are constantly changing and what we do changes us and the world (Reale, 1987). The Sophists generally opposed explanation by recourse to foundational ideas.

Aristotle, while placing the contemplative arts above all, did identify a unique kind of art, praxis, in which the goal of study was not truth (episteme), but practical wisdom (phronesis). Aristotle thought that persons' actions were intrinsically contingent and not fully determined by laws of nature. Therefore, persons who study a practical art cannot think this faculty allows them to simply apply principles and thereby produce correct advice in the way an astronomer can tell an observer to look in a particular direction to see a particular star. Practical arts are more dependent upon experience than arts like physics. According to the Oxford Etymological Dictionary, the English words practice, practitioner, practical, and the Greek word praxis share the same root as prae-ktis meaning "to perform." Aristotle made a special point of the fact that, "practice is concerned with particulars" (Nicomachean Ethics, 1141b16-17) and "is concerned with action" (Nicomachean Ethics, 1141b18). Facility in such an art creates a situated ability to perform in the moment, not simply to know a principle to be true. To make wise personal and public judgments at real moments of social activity Aristotle says, is a virtue. When made in concert with others, wise judgments are not the final decisions of the wisest citizen, but rather are contributions to a process including other intelligent citizens (Aristotle, Rhetoric, 1281a40-1282c20).

Concern for the details of life led Aristotle to specify the relationship between praxis and poesis. Aristotle was clear that free ways of life were not focused narrowly on keeping oneself alive and thus not on what is simply necessary or useful. A free life was concerned with the beautiful. Beauty in a free life included bodily pleasures, what is consumed, political deeds, and personal choices (Aristotle, Nicomachean Ethics, i5, Eudemian ethics, 1215a35).

In addition to the changeable nature of persons' actions, the contingent character of practical judgment is produced by the relationship of the knower to the known. The scientist, seeking episteme or truths about the natural world, does not change the objects of study by his or her inquiry. However, as the Greeks well knew, the study of rhetoric led to the development of new practices in oratory. If today new forms of intervention change practices in families and organizations, the objects of our own inquiry are changed by the act of inquiry. Thus, in the arts of praxis the relationship of the knower to the known is never an objective one. The knower is always a participant.

The ends of practical arts, that for the sake of which they are studied, follow from their subject matter and from the position of the practitioner of these arts. The only reason to study such arts is to make life better for people in their joint activities. Thus, all practical arts intrinsically have a moral end. This is evident to therapists, mediators, consultants and other practitioners but is sometimes ignored by academic researchers who treat application of their work as a problem for others outside the academy.

After Aristotle, the issue of certainty remained an important concern in ancient philosophy. One of the most interesting of the ancient skeptics is Carneades (214-129 B.C.E.). Carneades rejected both the Platonic doctrine of certainty, and the radical skeptical doctrine that knowledge was based on no more than subjective perception. He advanced a position very close to Dewey's ideas about warranted assertability to be discussed later in this paper. In a move also consistent with the later Wittgenstein (1969), Carneades said that doubts must occur because of situated observations that lead us to doubt something. The goal he said was to establish the highest level of conviction. That, he said, depended on 3 criteria (see Stough, 1969). These were first perception, but not single perceptions. Rather he meant multiple perceptions that could be crosschecked. The second was the consistency of perceptions. Finally, perceptions had to be tested. This does not guarantee truth, but does provide rigorous criteria for giving assent.

The Darwinian Challenge to the Received View.

Newtonian mechanism provided the dominant paradigm for inquiry until Darwin's theory of evolution provided an alternative. Oriented to the living world rather than the physical world, it suggests alternative ways to think about human doings. In the hands of American Pragmatist philosophers it provided a way to understand human activity in a non-deterministic, non-reductionist way.

Darwin's understanding of evolution rejects a world of fixed, bounded elements affecting each other by causal universal laws. While Darwin did propose universal principles of fitness, survival, and the passing on of traits, these did not causally determine how evolution must proceed. Many ways to be "fit" are created inside the process of evolution, including the ability to cooperate and care for members of the group. Chance also plays a role. As research on the Burgess Shoal amply illustrates, elegance of design does not guarantee success, and perfection is an evolutionary dead end (Gould, 1980; 1989).

An evolutionary development does not simply respond to the environment. It is multifaceted and opens new evolutionary possibilities (Gould, 1980). The logic of organisms' functioning, and thereby their role in the evolutionary process is created inside the process itself. Consider the Panda's "thumb." It is the evolutionary consequence of a strangely shaped wrist bone that developed a protrusion, then a joint and a muscle to move it.

The idea of an immanent logic created in the process of evolution is an idea with wide ranging consequences. This means that the inquirer cannot work in a reductionistic way even though there is continuity in evolution. It is important to know something about basic cellular functions to understand any living thing. However, that knowledge will not be enough to understand how plants transform sunlight into energy, or how mammals' respiratory systems work. The logic of mammalian respiration is not present in sponges in simplified form.

A system is characterized by complex mutual interactions between its parts, and by the mutual interactions between it and its environment (other systems) (Sadovsky, 1983). Typically, any system can be regarded as a part of a larger system while its elements can be regarded as systems of a lower order. Koestler (1978) coined the term "holonic" to describe this kind of organization. The term comes from combining the Greek holos (whole) and the suffix -on (part). This sort of organization means that parts of a system cannot be independently studied. Features of a system co-evolve. They literally inform other features.

The evolutionary understanding requires that a conception of inquiry be responsive to a world in the making. That is why William James (1890/1950) cautioned against committing the "psychology fallacy" (p. 196). To commit the psychology fallacy is to assume a static world of finished objects, each with a distinctive essence. In such a static world it would make sense to assume that principles adequate to understand a finished product are adequate to understand the process of formation. Moreover, the idea of a static world of objects leads to analysis that can only recognize how the past creates the present. In a dynamic world, an essential part of the meaning of any material object, utterance, movement, or ability is the way it points into the future creating new affordances and constraints (James, 1912/1996). Suppose a manager talks about her "leadership responsibilities." To understand what she means by leadership responsibilities requires exploring what Wittgenstein called her "grammar" of leadership. By that he meant the rules she uses for how utterances, movements, feelings, and perceptions can be sensibly related. Exploring her grammar includes how she has come to do what she does with others, and how her use of those abilities create possibilities for the future with those she manages.

Darwin's understanding, very roughly sketched above, has little in common with the mechanical clock analog. Nature is not an elegant machine that changes only by wearing down. Even the boundaries between parts of a system have a two-faced quality. They demarcate, but they are also the means by which a living thing is connected to the world on which it depends.

The American Pragmatist philosophers made the first and still the most comprehensive effort to build an understanding of human inquiry along the lines of evolutionary biology. Darwin clearly placed the human being inside the process of evolution. As such we should expect that our distinctively human abilities to adjust, adapt and change our social lives will be extensions of, but not reducible to, evolutionary biology. Work in the Pragmatist understanding of inquiry culminates in Dewey's (1938) *Logic: The theory of inquiry*. That work returns us to an understanding of the inquirer as engaged in the very processes studied. It treats human inquiry as a natural part of life aimed at improving our condition by mutual adaptation and accommodations in the world. Dewey's ideas reconnect social inquiry with Aristotle's ideas about the arts of praxis and their moral dimension. It places us in a contingent world wherein we try to make the best judgments we can. It will not be a world governed by a transcendental logic. Instead we will need to investigate the logics of inquiry that persons, including professional inquirers, co-create in the process of situated activity.

A Naturalistic Account of Inquiry and Inquirers

When human beings inquire they use means that are unique to them as human beings, but those means are also extensions of natural processes. According to John Dewey (1929/1960; 1938) professional inquirers' "instrumentalities" such as ways of thinking, definitions,

propositions, microscopes, and the like are extensions of the house cat's ability to make a nesting place for her kittens and a chimp's ability to roll a leaf to gather ants. Hypotheses, models, and descriptions are formalization that extend the natural process of inquiry. By firmly connecting inquiry with natural activity necessary to life, Dewey built a case for what he called the "experimental attitude" (Dewey, 1929/1960; 1938).

By that he simply meant judging ideas by their consequences. The experimental attitude is an extension of a young lioness's discovery that if she hides behind a blind a certain distance from her prey she can chase it down before her energy is exhausted. The abilities a lioness acquires by her genetic inheritance and hunting experience are her instrumentalities for survival. She does not survive in order to have a good theory of hunting. The outcomes of hunting are multiple. Catching prey is not only bringing down, say a Wildebeest. Doing so adjusts her relationship to other lionesses, her cubs, and the dominant male. All of these relationships are necessary for her and her species to survive. Moreover, the way lionesses hunt has co-evolved with the way other species observe and move.

In the world of human social action the multiplicity of connections embraces not only an instrumental, but also what Dewey (1925/1958; 1934) called the "consummatory" dimension of experience. The latter refers to the creation of moments that have the feeling of finality, or a moment of elegant "fit" embracing form and feeling in a unifying moment. Creating such moments is the overt object of listening to Beethoven's 9th symphony. However, such moments are also constructed in everyday experience. Examples include intimate moments a couple creates that enhances their relationship, and the joy of finding an elegant solution to a problem that moves us to a new way of thinking. Dewey (1934) observed that art, like language, gives human life greatly expanded flexibility of action and range for reflection. Inquiry is profound for the professional inquirer and for others involved when it produces aesthetic experience that opens new possibilities for experience.

In human action outcomes are multiple and changeable. Dewey argued that ends are always "ends-in-view" (Dewey, 1925/1958). When my wife and I first took our 2 year old daughter to a gymnastics program, our end-in-view was to help her avoid injury by learning how to land--she loved to jump off of high places. As her abilities developed our reasons for encouraging her in that sport evolved greatly. Similarly, in the course of inquiry, we may change our ends-in-view as the situation is better understood and as it changes in response to our own action in it.

The Inquirer in the Process

In a naturalistic understanding, the inquirer does not stand apart from the phenomena of interest in order to create a picture of it. Rather, the inquirer acts into the world using various instrumentalities to make a situation better. For Pragmatists experience is not primarily a psychic matter and it is only secondarily about material objects (Dewey, 1925/1958). Experience is formed in the meeting of persons' abilities with the actions of others in the material world. It is, therefore, neither objective nor subjective (Bernstein, 1983). Language is a very important tool for the human inquirer. Language is not a way of re-presenting internal experience, it is a way of acting into the world. Language is continuous with thinking and informs the ways we think

(Davidson, 1974/1984; Wittgenstein, 1953; Dewey, 1911/1933; 1916/1944; Cronen, 1995; Cronen & Lang, 1995). The meaning of utterance is realized in the responses it evokes (Wittgenstein, 1953). The inquirer tests her or his way of acting into the world by examining its usefulness for going on.

Language gives the human inquirer unique possibilities. It provides a complexity and flexibility of experience. It also facilitates reflective intelligence. One can speak or write and then reformulate the utterance in various ways thereby expanding the possible ways to act. The increased ability to reflect allows for much more consideration of alternatives before testing them. When language is used to create theory, it functions as part of the inquirer's ability to act into the world. The complex form of a theory is an extension of a child's pointing to the oven and giving the self-instruction for that situation, "Hot, don't touch!"

Identifying the Situation-In -View

Dewey says that we inquire into what he called a "situation." By that he meant those elements of a natural or social system that are in a relationship of disequilibrium or disintegration. Dewey's position is, however, too strongly indebted to the notion of homeostasis for our current understanding, and perhaps not even a good fit for evolutionary biology in his own time. Change is not always the result of a problematic situation. Every change opens and closes opportunities for further evolutionary developments and these are not simply responses to difficulties. Managers today often want consultants help to identify and extend the best features of current practices so that the organization can better work creatively in the future. It would be better to say that in the process of inquiry we make determinations of what related elements need to be included for any purpose of inquiry and call that the "situation-in-view." Identifying the situation-in-view is a provisional judgment. Further inquiry may lead to including new elements and disregarding others. For example, a family therapist may decide that neighbors or grandparents are so involved in the situation that they need to be added to the inquiry.

In this evolving approach, determinations of the situation-in-view could not be based entirely on the results of prior studies. Even if our reason for studying a case is because of a larger interest in, say, gender and power in the work place, we would need to raise that question for each case in terms of the particular practices, relationships, achievements, and feelings involved. Because no two cases are identical, such inquiry would allow us to explore the bit of social talk, "power and gender in the workplace" in richer ways by investigating its meaning in various contexts of use. If we assume an emergent world of situated local constructions, then multiple studies are needed to understand a percept with respect to the varied situated actions in which it evolves and survives.

Determining the situation-in-view is a procedure based on the idea that systemic organization is not holistic (Burke, 1994). All parts of a system are related, but not all are caught up in the problem, or equally affected by the interactions of interest. Some parts of a system remain stable for periods of time while others change (Gould, 1980). For example, the warehouse unit and physical plant staff of a school need to exist for there to be classroom education. However, it may not be necessary to include the physical plant staff in order to help teachers find new ways of managing disorder in classrooms.

Situations-in-view must be understood to include the inquirer. The inquirer cannot be

outside the system. The only choice to make is what kind(s) of relationship(s) one chooses for the purposes of inquiry. If an inquiry concerns creating possibilities for new patterns of interaction in a city commission, the consultant would have to take into account his or her relationship to the system at various points in the process, and what the relationship should be when the consultant finishes that piece of work. Family therapists are concerned with how a clinical relationship terminates so that a family is not "clinetized," that is, left continually dependent upon an outsider professional.

Work with texts presents a special kind of definition of the situation in view. A text is not going to change. It is fixed and bounded. The situation in view in such interpretive and critical work is the problematic relationship between the text and the enquirer who wants to relate to it with a richer, more useful understanding.

The Formation of "Percepts" and "Objects" in a Complex World

Inquiry into a situation-in-view requires the identification of its features. From a naturalistic view of inquiry, that means forming ideas about what to look at and the meaning of those identifications. This process is not simply linear, it just appears that way sometimes in research reports. Inquiries dealing with situated action often decide to attend in different ways and understand events differently during the process of inquiry.

Charles Saunders Pierce (1905, quoted in Burke, 1994) argued for a more dynamic understanding of how identifications are made. He said that definitions are limited. A student of a physical science learns the meaning of an element when she or he is guided in identifying it among other phenomena. That includes examining formal definitions, descriptions, modes, etc. In addition, the scientist manipulates the object of interest in various ways. She or he reads about and observes how a particular identification plays a role in various contexts of inquiry. The result is that the scientist has an emerging "percept" of the element (Pierce, 1905 quoted in Burke, 1994). Formal definition is only one among other useful tools (Dewey, 1938).

In social inquiry the process is similar, although our forms of "manipulation" are different. We could, for example "manipulate" a manager's account of leadership by asking how it can be observed in this situation and that. We can ask questions that test our understanding of the manager's percept, as well questions designed to introduce some ambiguity and openness to the manager's understanding of leadership.

The percepts taking form are always meeting of the experience the inquirer brings to an event with materials of the event including those formed by the actions of the inquirer. What any kind of theory does is inform (literally, in-form) the ability inquirers bring to the activity of forming percepts in the complexity of action. William James (1909/1996) was particularly sensitive to the limitations of "concepts" for the formation of percepts. Concepts, he said, were "thin descriptions" (p. 136-138). Dewey recognized the utility of concepts and definitions, so long as one is careful to recognize the kind of simple tool one is using. Practical work is concerned with particulars as Aristotle said. From a systemic understanding, the particulars are not epiphenomena that mask the important things. "Micro-managing," for example, is a useful concept for directing us to look in certain places in certain ways. However, to understand

managing in an organization, micro and otherwise, we need to look in a detailed way at what particular managers do in situated episodes. Thus concepts must be supplemented with descriptions and stories about the phenomena identified in a variety of contexts with a view not only to similarities but to differences as well.

Concepts treated as variables are problematic in another way. Defined traditionally as concepts that can have various quantitative values, variables assume an understanding of meaning that is not a good fit for systemic work. Variable analysis requires that each observation of a variable be independent of others. However, an evolutionary biological understanding is that features of a system in-form each other. This is particularly important for social phenomena. What a person says creates conditions in which the utterance or action of the other person is formed. That is not a causal relationship. In a systemic understanding of social action, a person "acts into" the activity of the other, in John Shotter's (1993) felicitous phrase, giving and becoming part of the form of interaction. The foregoing does not mean that quantitative methods can never be used in a naturalistic understanding of inquiry. It does mean that quantitative work will be most useful in pointing us to recurrent phenomena and places to look. It will not be useful for understanding how coherence is made in lived experience.

If we think of creating percepts as participation in the world, we want to be able to justify and show how we came to form percepts. We also want to show how percepts were formed by our clients, workshop participants, etc. In Chong's (1998) study of an American sales group with Korean management, she explored how, in various contexts, the salesmen formed percepts of Korean Management style, and how she formed her own percept of what the American's meant by Korean management style. As she interviewed them, the sales group members were continuing to develop their own percept of Korean management. By asking questions about it, Chong invites them to articulate statements about Korean management style in a new context of conversation with another Korean. For this reason she had to be careful to avoid interviewing in a way that further develops and solidifies percepts that are problematic for organizational life.

At a stage in her work, Chong had a sufficiently developed percept of Korean management style (as the Americans understood it) to select it as an "object" of inquiry. That is, to temporarily hold its meaning relatively stable so as to be able to point at it, and say, "See? There he is doing ____." She did that by writing a more formal description of it, thus making it, in Dewey's vocabulary, a determinate object. However, such determinations are always provisional, open to reconsideration.

Suppose a consultant with a Pragmatist or systemic orientation hears an employee say, "I just don't feel right about working here. It's disturbing, but I can't say what I am feeling." The consultant would not attempt to discover what the employee's emotion "really" is. That is the danger of assuming that everything we hear can be usefully treated as a determinate object. Instead, the consultant would attempt to develop percepts of the employee's lived experience, inquiring into various episodes and asking when in particular episodes those feelings come about and subside. All that should be made determinate is the moment in an episode the client calls "emotionally confusing." The consultant will try to interview in such a way that the employee is assisted in creating his or her own way to make feelings coherent.

The ideas of "emergent percepts" and provisional "determinations" provide another important insight. Namely, that a percept is not exhausted by a definition, description, or any

formalization. The sophisticated inquirer develops a "feel" for how to go on that is not fully expressible in language (Polanyi, 1958). More than definitions are needed to help other inquirers develop that feel. Definitions need to be complimented by other tools that help us grasp meaning, including short examples, detailed case reports, descriptions, and, of course, the attempt to use the determination in one's own work.

The Instrumentalities of Arts and Theories

Definitions, propositions, descriptions, objects of inquiry models, and hypotheses are all instrumentalities that make up an art or theory. Dewey (1938) says that these are means for inquiring, just as are descriptions and definitions of the phenomena under study. I may be forming a percept of an administrator's directive as part of a consultation. I form that percept with a particular set of instrumentalities that are part of my theory.

Unfortunately, Dewey treats all the instrumentalities of theory as intrinsically propositions. This is not consistent with his own understanding that meaning is use (Dewey, 1911/1933;). A heuristic model, such as the one we use in Coordinated Management of Meaning Theory (Pearce & Cronen, 1980, Pearce, 1989; Cronen; 1994, 1995), does not function like a proposition except for the fact that it relates features of the theory (Harre, 1970). Our heuristic models have flexible, moving parts. The inquirer can try one configuration, then another and look for what might happen to one feature if another is changed. Similarly, hypotheses have different functions than models or definitions. As Baker and Hacker (1984) demonstrate, extracting a propositional "core" from a different form of expression changes the meaning by changing the use.

There is nothing sacred about the proposition. It can be a very useful tool for some purposes. Their form seems sacred if the world is assumed to be a static, mechanical set of objects that can be discovered, and theory is a map of that reality with variables correctly defined and related to each other with probability statements standing for hidden causal mechanisms. In a naturalistic account of inquiry, however, instrumentalities are constituted as means of inquiry during inquiry and or across successive inquires. Like the objects of inquiry in the original situation, they are relatively stable determinations.

Hypotheses are also instruments created to guide some phase of inquiry. They are like temporary scaffolds supporting the next moves. For example, recently while working on a case with a graduate student, John Chetro-Szivos, we had the idea that the participants' understanding of their situation is a story without an account of how the future will be or ought to be. We asked some questions to confirm our percept, predicting that, like in the case of earlier questions, they would dismiss our queries as uninteresting, or requests for information about the unknowable. Having support for that hypothesis, we became interested in what factors in their situation preclude stories about the future.

In practical inquiry, the primary goal is to improve the situation in view, not to support hypotheses. Hypothesis are simply useful guides along the path of inquiry. For example, a family came to the Kensington Consultation Centre, London. The family was engaged in repeated episodes of conflict. The team behind one-way glass met with the interviewer. We decided to test our understanding of the case this way. We predicted that when one partner accepted blame for creating problems, they would continue by telling a story of hopelessness about the relationship,

saying that it should be ended. We further predicted that whenever the end of the relationship was accepted by one partner, the other would accept blame, deny that the relationship was hopeless, and go on to talk about how the other was the problem. Support for this hypothesis helped move our understanding of the case.

Judgments

Dewey uses the term "judgments" for what we would prefer to call a "systemic hypothesis." A judgment, in his vocabulary, is a description that weaves together the element of the situation-in-view. Judgments are predicated of situations-in-view says Dewey (1938). He goes on to say that judgments, by his definition, are not predicated of propositions. Dewey says judgments, like all predications, implicate action.

This practical understanding of predication is consistent with the idea that meaning is use in context (Dewey, 1911/1933). Dewey illustrated how predication is fundamentally action with the example of a child learning the meaning of the word "hat." The sounds of the word "hat" come to be meaningful in contexts such as preparing to go outside, having the hat put on her or his head, and hearing the words, "We can't forget your hat," or "what a nice hat." When outside the child might hear, "your hat is falling off," followed by the feeling of someone adjusting it. The putting on the hat to go out, the finding of it, the adjusting of it are all predications of the word hat in various contexts.

In a similar way, we form a judgment about a situation that weaves its elements together in a way that describes its possibilities. For example, we might formulate a judgment (systemic hypothesis) about a couple describing them as stuck in a problematic loop from which they do not have the resources to escape, thus creating anger and limited possibilities for creative action.

Notice that the foregoing judgment has a moral dimension to it. There must be some idea to the effect that a good human life is one in which it is possible to conjointly produce creative action, or at least vary patterns of talk. That is consistent with Aristotle's idea that the arts of praxis have an intrinsically moral dimension. We only practice then in order to make life better. The form of the judgment (systemic hypothesis) must be, of course, strongly influenced by the theoretical tools used in the inquiry. Thus, the other determinations in the movement toward a judgment must have strong support, just as the judgment itself.

Judgments and Actions

In a naturalistic understanding of inquiry, there are many kinds of action. A decision might be made to work with a particular understanding of some feature of conversation, or to be guided by an hypothesis leading to particular research activities. All of the foregoing implicate kinds of action. Judgments that summarize the whole situation-in-view also implicate action.

Just as the nature of an hypothesis or percept influences how action will go forward, the form of a judgment points to how one might go on to change the situation-in-view. Lang (see Cronen & Lang, 1995) reported a case involving the violent behavior of a client toward property: When the client described situations as frustrating or entrapping, he struck out by breaking things such as parking meters. He said he knew it was wrong, but could not help himself, he just exploded in rage. In the course of an interview, the client told a story about a time when, as a little boy growing up in a rough neighborhood, he came home crying because some boys had

cornered him and hit him. His mother told him, "Men don't cry, men hit." The interviewer and observing team gradually formed a percept of the sort of episode in which circumstances seemed entrapping for the client and what sort of event initiated such an episode. The client said that he knew his behavior was unproductive in many ways. It was ruining his relationship with his wife, but only a real man was worthy of such a good wife. He did not talk about particular persons threatening or trapping him, but rather the circumstances of life. However, he did say that when he attacked property his wife responded negatively, saying she could not live with his behavior. The systemic hypothesis was guided in its formation by CMM heuristic models and took the form shown in figure 1. The model in figure 1 has implications for interventive action. The interview can work to reframe the moral operator "caused" by attempting to recast it as a choice. The way the client understands conditions that implicate violent episodes could be reframed. A useful intervention might get the wife to change her responses for that seems to increase her husband's felt threat. The interventive action that had the most impact was to reframe the higher order story of his mother's admonition, limiting it in application to childhood circumstances. There were, of course, other possibilities for action implicated in the model and one does not preclude others.

Consequences and Warranted Assertability

The consequences of actions must be assessed. I do not think it is useful to talk about the "truth" of a judgment or systemic hypothesis. Rather, following Dewey (1938; 1941) I think we should, and typically do, talk about "warranting the assertability" of a claim. We need data to show how we warrant systemic hypotheses and other steps of the inquiry process such as forming a percept and making a connection between percepts. In the foregoing case the interviewer picked out the expression "a man doesn't cry, a man hits." He worked on forming a percept of that full story by interviewing about it and exploring its connections. Selecting it for attention was warranted by the way it appeared in various episodes. Assertions about its connections to various situated actions and to the mother's admonition were also warranted by the data obtained. Having supported the hypothesis that mother's admonition was the highest level story, the interviewer and his team used the time during breaks in the interview process to carefully examine what more was being learned by proceeding with that hypothesis in contrast to others.

In a systemic sensibility, consequences are never singular. It is not sensible to consider only the consequences of inquiry on a preselected "outcome" variable. Having changed the system, new connections can emerge. For example, suppose a consultant helps an organization to develop a different way of managing internal conflict. The new way may suggest ways of managing conflict with outside organizations, ways that may or may not be helpful. New relationships to other parts of the organization may be made as the new way comes to the attention of other managers. There may even be consequences for the families of organization members. Perhaps the less stressed and conflicted spouse no longer fits their partner's story of "the suffering but supportive life mate" that gave him or her a sense of importance. Consequences require exploration, although that may be limited by the understanding the inquirer has with participants.

We must confront the question of whether observations subsequent to an intervention are related to it. In a systemic view, all events operate in a complex nexus of activity. Any change that happens in the process of intervention must be lived by persons beyond their relationship to

the practitioner. Therefore, all changes must be adapted and developed. Support for the efficacy of action must be found in the specifics of the actions taken by inquirer and client. For example, in work done at the Kensington Consultation Centre, a hospital's managing group reported serious difficulties dealing with the foreign owners. One consequence of the work was a new way of interacting with those owners. That change was not specified during consultation; it was the clients' creative idea worked out in practice. However, it was based on the consideration of future relationships with their own country's Ministry of Health. That orientation began with the consultants asking future oriented questions. Indeed, early in the process of consultation, the clients had not talked about resolving their difficulties in terms of future relationships. This kind of data warranted connecting the interventive action to the observed consequences.

Art and Theory

Does the brief foregoing account of naturalistic inquiry require theory? I think the answer is no. While I think the development of practical theories for social inquiry is highly desirable, not all work based on the naturalistic view of inquiry requires a theory for legitimation. Indeed, I borrowed the phrase, "Practical Theory," from John Shotter (1984) who subsequently turned away from theory and has argued for a tool box of useful ideas (Shotter, 1990; 1993). A theory is a set of instrumentalities. What matters most is the formation of good judgments (systemic hypotheses) that weave together situations and lead to consequential actions. I think practitioners' work continues to be undervalued because we no longer use the old term "art." We thus dichotomize practice as either based on theory (read rigorous) or on subjective experience (read merely impressionistic). This is a false dichotomy. In addition to Shotter's work many systemic practitioners work in highly rigorous ways that would not best be described as employing a theory. For example, a consultant may draw upon a number of ideas developed by practitioners and others who share a systemic outlook.

"Art": A Term Worth Reviving

At universities there are still colleges of Liberal Arts, usually including the traditional departments of physical and natural sciences, social disciplines (typically called social sciences), humanities, and fine and performing arts. What originally held this diversity together? What is an art?

According to both Plato and Aristotle, those who know an "art," such as physics, politics, or drama, can be distinguished from those who work by habit or by trial and error. Those who have learned an art work by principle. The Greek word usually translated as principle is *arche* meaning the origin and source of things. It was coined by Anaximander (Reale, 1987) and referred to a source from which other objects and understandings are derived. This meaning of *arche* as origin, source and starting place is similar to the Old Latin root of principle. An art always involves a "reasoned capacity" to work from "principles" (Aristotle, *Nicomachean Ethics*, 1139b1-1141b25). Those who have studied an art can explain their claims, actions and techniques. In addition to being able to explain themselves, the command of an art means that one has a more general ability than knowing that when "A" happens, one should do "B." Principles are elaborated, extended and used to guide actions in new situations. I strongly resist reducing any art to reasoning from principles, and Aristotle also rejected such a reduction. He insisted that to command an art required experience and intuition and that these were part of the art (Aristotle, *Metaphysics*, 981a15).

Suppose a systemic practitioner, for example, uses in consultation principles of language derived from Wittgenstein (1953), principles of context taken from Bateson (1972), principles of paradox taken from Cronen, Johnson & Lannamann (1982), and principles of voice and authorship taken from Bakhtin (1981). The consultant uses such ideas as a tool box, employing that which seems to help at a particular moment in the work. These instrumentalities are not randomly drawn, however. They do not contradict each other. They invoke commensurable understandings of the situation-in-view. A practitioner working this way could be well described as having command of a practical art.

Theory and Practical Theory

What differentiates an art from a theory is the degree of integration of its features. I want to reserve the term "theory" for an account of social processes that: Provides a comprehensive frame within which phenomena can be efficiently ordered and relationships among phenomena parsimoniously expressed [such] that it offers the opportunity for and encourages the interrelating of all the phenomena that come within its scope, and that it directs attention to the possibilities of phenomena and relationships among phenomena that might otherwise be missed" (Chein, 1972, pp. 9-10).

In addition to the stress on parsimonious integration, the value of this definition lies in its last phrase: "it...[theory] directs attention to the possibilities of phenomena and relationships among phenomena that might otherwise be missed."

Because of its integration, a theory helps an inquirer to know where to go next. It therefore helps in the creation of a judgment that weaves the elements of a situation together. If a danger of theory is constraining the range of ways to develop a judgment, a danger of art is the tendency to overlook features of a situation because one is not directed to proceed in an integrated way.

I have tried over the last few years to formulate a description of Practical Theory consistent with the naturalistic understanding of inquiry that is concise enough to define it (Cronen, 1995a). One of the instrumental values of doing so is to generate some criteria for the development of that kind of theory. To facilitate further development of the rigor already at play, I suggest that practical inquiry is a special form of inquiry employing a kind of theory, Practical Theory, as described below:

A Practical Theory informs a grammar of practice that facilitates joining with the grammars of others to explore their unique patterns of situated action. The proximal reason for joining is the co-creation of new affordances and constraints for creative participation in the instrumental and consummatory dimensions of experience. Practical theory itself is importantly informed by data created in the process of engagement with others.

Important Features of the Foregoing Description.

The aim of offering this description is to distinguish a practical theory from the general category of applied theory. I want to call special attention to various aspects of the description.

Practical theories are overtly heuristic. All theories are used for some sort of activity, from having academic discussions and generating journal articles, to advising a community

group, to intervening in a problematic situation. However, Practical Theories are presented in a form overtly designed for use in joining with others. Allow me to use Coordinated Management of Meaning theory as an example. Rather than foregrounding a set of principles of communication, it is organized around a heuristic model for guiding the inquirer in how to develop percepts, and how to organize information for analysis and evaluation. The models are flexible. They specify, for example, treating persons' abilities as a hierarchy of stories taking a particular configuration at a moment in conversation (see figure 1). The models do not specify what kinds of stories are used, or in what relationships to each other. The inquirer may cast information in alternative configurations, treating, for example an autobiographical story as the context for a relationship story. The inquirer may then reverse their hierarchical order, and also consider whether the stories could be related as a "loop" with each the context for the other (Cronen, et al., 1982, Cronen, 1994). The inquirer does this to see which is the more useful guide. Practical Theories are general methodologies in form.

Practical theories reject the dualisms of practitioner - theorist, and professional - participant. From all that has been said thus far it should be clear that entering into the particulars of lived experience provides rich information for the development of theories. Practice is particularly important because it is the systemic realization of the experimental attitude that Dewey advocated. In an evolutionary-systemic understanding, it is not realistic to attempt changing one element of a system while controlling for others. Indeed, it is not possible to know in advance how a change somewhere in a system might lead to new connections with elements not before implicated. However, practical work does allow one to form hypotheses about the consequences of an interventive move and then explore the changes that have come about as discussed above. For this reason, practical theories are importantly (not solely) informed by practical work.

I have avoided in the description of Practical Theory a sharp boundary between the professional inquirer and others. In an evolutionary-systemic view all are inquirers. Of course, those who have learned to develop their specialized skill using an art or theory bring a special kind of contribution to an interaction. A manager, with specialized training in the management of conflict, for example, may bring that training into play at a meeting and do valuable work. The fact she or he is not primarily employed as a professional in organizational conflict does not disqualify that person as an inquirer.

Practical Theories inform a "grammar". I am using the word grammar in Wittgenstein's (1954) sense. Wittgenstein's rules of grammar distinguish sense from nonsense. They are not the same as rule formulations or accounts of what persons usually do and they do not provide a logical calculus (Baker and Hacker, 1985). The key to Wittgenstein's notion is that rules are used to go on in action. For example, when we respond to another we use our ability to formulate a sentence in a way that makes sense. We need not, however, be able to state the rule formulation as it would appear in a grammar book. Wittgenstein expands this idea beyond the sentence level to encompass various forms of expression as well as movement, attention and feeling. We use rules when seeing a stranger at a bus stop. If the stranger says, "Cold day isn't it?" we know there are various ways we can respond, but feeling suddenly happy announcing the Latin name for a duck is not one of them.

In the process of inquiry we respond in ways that make sense in a situated moment of action. The formulations of a theory are not themselves rules of grammar. Theoretical

formulations, like any formulations in Wittgenstein's sense, play a role in teaching, learning, justifying, explaining, criticizing, and evaluating rule use. That is why I say that Practical Theories "inform" a grammar. The grammatical abilities used in inquiry are, of course, informed not only by the theory, but also by past experience with various inquiries, personal experience, educational background, cultural experience and more. Even when theory is a crucial informant of the inquirer's actions, the rules used will not all be amenable to useful reports as rule formulations. That is the tacit dimension of which Polyani (1958) writes.

Practical theories facilitate joining and co-creation. Central to the evolutionary - systemic perspective and to the idea of "grammars" as used here, is that all learning is a co-creation. We develop new rules in interaction. We know that we have grasped a rule when by using it we go on with others in a way that makes sense. A child learning math may think she or he has grasped a rule. But the student does not have a grasp of the rule until he or she uses it in a variety of problems and the teacher says in effect, "yes, that's it." Rules therefore cannot be private. An intelligent person can come up with a rationalization for why most any action can be related to a rule (see Wittgenstein, 1953 or, better still, ask any parent). We have grasped a rule when we are able to go on with others.

In order to facilitate change we need to enter into the grammars of others to explore those ways of making sense. In doing so we use our professionally informed grammars (Cronen and Lang, 1995). All forms of social inquiry involve joining with others in some way. The use of questionnaires is a way of joining. However, joining with others' grammatical abilities and their unique patterns of communication deters us from the reduction of complex human action to merely abstract principles.

Practical theories explore what is "unique," "situated," and "patterned." The value of practical inquiry is to grasp the complexity and detail of lived experience. As explained above, principles, concepts and the like are instrumentalities whose value must be shown in the process of making judgments and in the consequences of actions there from derived. The reduction of the uniqueness of lived experience to the "thin description" of concepts (James, 1909/1996) does not cut to an essence of things. In this view, it loses the vital information about how "stress," for example, is done in this organization and that, in this culture and that, under these circumstances and those. This focus on the unique and situated assumes Wittgenstein's (1954) argument that objects, events and behaviors do not have similarities because they share a hidden essence. In the biological world they are branchings with shared DNA. In the social world they share "family resemblances."

Consider "stress" in organizational life. At an Oxford Summer School Workshop sponsored by the Kensington Consultation centre of London, participants from many countries discussed "stress." While the data are anecdotal, the diversity of ways of living that are translated as "stress" is surprising. In the US one can speak openly about his or her own stress with colleagues, although whether that can be done at the work site varies. In other countries you must not speak of your own stress yourself, but others should notice it and remark on it. Otherwise, you are not a good worker. In still other places showing stress indicates inefficiency. There seemed to be differences in the conditions for when stress is manifested, how it is shown and what consequences follow from it at work and at home. As Hyon-sook Chong says, a Korean wife, observing her husband's "stress," may very well encourage him to take additional training after work so he can be more efficient at his work, while an American wife is more likely to offer

comfort (personal correspondence).

To offer reports of inquiry that are useful to others requires detailed descriptions of the percepts that concern us. What we can learn about stress across contexts is the complex of family resemblances that connect its use in lived experience.

Practical theories identify real situations-in-view as the proximal reason for inquiry. I have chosen to highlight the proximal reason for inquiry into a situation because, as Aristotle said, the practical is about particulars. The particulars of a specific situation, therefore, provide the best initial orientation. The most important reason (the distal reason) for a professional to see a particular family may be interest in the subject of eating disorders, or testing the utility of a theory for a particular kind of situation. However, focus on the proximal reason keeps the inquiry focused on the nuances of the case and thus grounds any general claims in the details of experience.

Practical Theories lead to new affordances and constraints. The process of joining with others in a way that changes grammatical abilities means that new actions can make sense and others nonsense. If, for example, a story about managing is changed, then it may make little sense to engage in some old practices and new possibilities may be entertained. Constraints may be just as important as creating new possibilities. A spouse's grammatical ability may be changed so that violent behavior is no longer a coherent possibility, and the protection of a child becomes an obligation. The new affordances and constraints include grasping when and how to attend, what to recall, and how to come into emotional roles.

This holds for all participants. The inquirer using a practical theory hopefully learns a grasp of what to ask next without having to reflect before every talking turn. The inquirer's grasp of the theory develops and changes. This may include modifying or rejecting the theory.

Practical theories afford creative participation. Participation is stressed here because of the conception of meaning as a conjoint creation. Creativity is given importance because language, like all social action, points into the future (James, 1912/1996). However, that future may be the reconstitution of unwanted repeated patterns that narrow our abilities and become increasingly dysfunctional. New rules can open new patterns of conjoint action and thus new learning or lock participants into redundant forms. The new affordances and constraints should be liberating in that they facilitate new leaning and new ways to learn. Because meaning always has a future dimension, there is always an element of mystery in new practices. Part of the learning from practical inquiry must be the ability to value that which is unfinished and in process.

Practical theory encompasses both the instrumental and consummatory dimensions of experience. Practical theory recognizes not only the value of fine arts, but also the artistic dimension of everyday life. I have observed troubled relationships in which both partners praise the concern, supportiveness, positive values, intelligence and respect shown by the other. What they could not do was conjointly produce those moments of intimacy, joy and excitement that are intrinsic to a good human life (Cronen, 1995). In organizational settings I am concerned about the conditions in which employees learn to have the moments of excitement and achievement that make work life fulfilling.

Practical theories are importantly informed by data from practical inquiry. When I say "importantly informed" I realize that I am introducing some ambiguity. What I want to do is avoid quibbles over whether a particular theory qualifies for club membership by having sufficient reliance on such data. What I envision is tacking back and forth between the details of practice and consideration of various philosophical and theoretical contributions of other kinds. When I participate with the Kensington Consultation Centre, we work on a case and later may discuss it in light of Wittgenstein's idea about rules, or Lyotard's (1979) ideas about "grand narratives."

The foregoing description of practical theory does not specify that everyone must be practitioner and theorist in equal degree. In any kind of work, various people will emphasize some aspects more than others and practical theory is no exception. Nor is it my point that "knowing from" inside the details of engagement is superior to, or wholly separable from, other ways of knowing. However, in practical theory development, it is expected that important contributions to theory will come from practitioners in the course of their work, and that those who are primarily theorists will engage with practitioners and themselves become involved in applied work.

Practical Theory Applications: Their Relevance to Interpretive and Critical Work

Theories of the kind I have been sketching are informed by work that has intervention as the primary goal. However, Practical Theories that are so informed can be and are used for interpretive and critical work. Interpretive and critical work, even if texts are used for data, does allow some measure of testing one's emerging ideas by exploring how well an emergent hypothesis about the texts or observations hold up in the course of continuing work with those materials. All inquiry is action. However, the texts do not change when we interpret them. Interventive work is the Ur form of practical inquiry because there we can act into a situation looking to see if and how we have made a difference. For that reason, it useful and rigorous to take a theory strongly informed by practical inquiry into the arena of practical or critical.

Criteria for Evaluating Practical Theories

The criteria for evaluating practical theories are implicit in the preceding description. However, some amplifications are in order. Of course, the first three criteria are whether a theory is (1.) useful for creating Judgments (systemic hypotheses) that (2.) implicate actions leading to (3) the consequence of improving the situation-in-view.

A sound practical theory should assist in creating systemic hypotheses that encompass the data on hand and organize it into coherent explanations. The systemic hypotheses should be informed by the theory in such a way that the inquirer is directed to courses of action. In CMM as in other systemic work, a systemic hypothesis is a call to action saying, for example, look at the elements of the manager's story about this subordinates, look at the way subordinates' responses reconstitute that story, etc. The consequences, of course, are evaluated not only with regard to the original situation-in-view, but also with a view to the new connections that may change the situation-in-view.

The following secondary criteria are crucial to the ability of a practical theory to meet the

first three.

4. The instrumentalities of a practical theory should guide those activities of inquiry that create, organize, evaluate and reconstruct:

4.1. Percepts of the situation-in-view.

4.2. Provisional hypotheses about how particular percepts are related.

4.3. Systemic hypotheses.

4.4. Actions taken in the inquiry process.

4.5. Consequences for all elements implicated by the actions taken.

5. A practical theory should provide sufficient guidance for the use of its instrumentalities. Definitions, descriptions, models and case examples all contribute to guiding its use. Meeting this criterion is not a matter limited to providing formal definitions with the form of analytic propositions. This criterion is met by facilitating use.

6. A practical theory should facilitate the creation of alternative systemic hypotheses. The details of experience are typically amenable to more than one coherent explanation. The meaningfulness of a systemic hypothesis, like that of a rule, is realized in action. In addition, a single explanation blinds the inquiry process to alternatives and stymies an investigator when a particular line of inquiry is unfruitful.

7. A practical theory should allow for the further development of old methods and the creation of new ones. As a practical theory is employed in a new and different kind of situation, methods may have to be developed or adapted in response.

8. A practical theory should grow in the richness of its instrumentalities. Theories in the logical positivist tradition aim to avoid the need for post hoc addenda to its list of laws, axioms and theorems. It is also therein presumed that the propositional form of them or their operational definitions exhaust their meaning. Laws, axioms and theorems in positivism are elaborated only by breaking them down into smaller components. In practical theory, by contrast, we look for richer, more useful ways to explore what is involved in, say, a consummatory moment or a client's story. Our understanding of such instrumentalities would develop as we use the theory.

9. A Practical Theory's employment should lead to greater sophistication for all parties concerned including the professional inquirer. Its use should, to offer a few examples, make one a more sensitive observer of details of action, better at asking useful questions, more capable of seeing the ways actions are patterned, and more adept at forming systemic hypotheses and entertaining alternatives.

10. A Practical Theory should provide instrumentalities for including the person using it as a part of the inquiry process. Practical Theories reject both a subjective and an objective understanding of inquiry. Thus they need to be able to take account of the practitioner as participant, if that is useful. Doing this in a formal way is not always necessary. However, when the inquirer's relationships to other participants is important, a practical theory should have a way to do this.

11. A Practical Theory should contribute to the development of principles helpful in new situations. This is only to say that they must have generality and that is a topic to be explored in the next part to this paper.

Dealing With the Traditional Standards: Generality, Reliability, Validity, Generality

How is it possible to produce generalizable findings if there are no essences and each situation is unique? Here we are back to Parmenides' original reason for assuming an unchanging reality as the object of inquiry. There is, however, a ready at hand rough analog for the kind of generality we need. As Kvale (1996) and Kennedy (1979) explain, case law provides that rough analog. A legal principle is created in the adjudication of a particular case and is applied to others with the full understanding that every case is in some ways unique. Principles of law may be modified and even discarded when applied to new cases. What systemic practitioners do is similar in some useful ways.

A systemic practitioner working with a family violence case, has read a number of case reports published by practitioners and other published discussions on the subject. In addition, the practitioner uses his or her own experience in such cases. The issue joined when working with a real case is not whether the ideas about family violence reported in a journal are "true." The issue is whether and in what ways they are useful in working with the new case. The new case may be reported if it further develops or limits the utility of the principles others have offered or suggests new principles.

Reliability

According to the traditional view, reliability is repeatability under maximally similar circumstances. In a world that is evolving and responding to the inquirer's engagement, what can reliability mean? In a world amenable to various interpretations no one of which presumes to be a true map of reality, is it still useful to talk about reliability?

In practical inquiry, reliability first depends on inclusiveness. Neither a percept nor a systemic hypothesis is reliable if it would have to change simply by including more of the data already on hand. A single inquirer or a team of inquirers needs closure on what is important data and whether important data are left out of a particular percept, model, hypothesis, or systemic hypothesis. However, there must be in practical inquiry, a serious concern for premature consensus, masquerading as inter judge reliability. As I discussed above, it is useful to generate alternative systemic hypotheses and then to test and compare them by questions, observations or other means. To generate alternatives, inquirers must sometimes put aside a systemic hypothesis that seems obviously right and work at creating alternatives that can coherently encompass the data. In other words, there are times to work against inter judge consensus. Of course, it is necessary at some points in the inquiry process to treat a particular hypothesis as the basis for an overtly interventive move of some kind. For that, it is useful to come to a consensus on what will guide the next phase of action.

Validity

Reliability in logical positivist work is important for attaining validity. Traditionally,

validity means measuring in a way that measures what you want to measure, in other words "hits the target. In a systemic-evolutionary sensibility, the target not only moves, it changes, and does so in response to the means of inquiry. Positivist research includes several forms of validity. One form, construct validity, amounts to internal coherence. I have subsumed that under reliability because of the assumption that in the social world there are many ways to create coherence at a particular moment. Indeed, the invention of alternative and equally well formed mathematical systems in the last century has undone the Pythagorean - Cartesian faith that form guarantees truth.

The strongest form of validity in the traditional view is predictive validity. Practical work has a similar standard. Dewey (1938) said that his naturalist approach was a correspondence theory of inquiry. He did not mean correspondence between the theory and reality. He meant correspondence among a judgment of a situation (systemic hypothesis), the actions implicated by the judgment, and the consequences of those actions. Making the connections among these depends on the strength of the argument one can make from the data. This is what Dewey (1938; 1941) meant by "warranted assertability" discussed earlier in this paper.

Treat This Paper As An Instrument, And Have A Nice Inquiry

I offer this paper as an instrument for several ends-in-view. I hope to encourage you to continue the exploration of how the processes of inquiry should be described and how research should be reported if we reverse traditional emphases. Instead of thinking of theory as prior to action, think of it as instrumental within the course of action. Rather than thinking of inquiry into a situation as a way to support a theory, think of theory as a way to improve a situation. Remember, the lioness does not hunt to support a theory of hunting. I also hope this paper can help us on the path to working out standards for the development of new practical theories and evaluating old ones. Inquirers in the positivist tradition have challenged us on that point. We cannot be content only to say that their standards are not always appropriate for practical work.

Another end-in-view for this paper is to provoke discussion about the forms of educational experience most appropriate to teaching practical inquiry. Finally, I hope I have induced you to inquire a little before buying 1 penny fans from peddlers. Go ahead, spend the whole 5 cents -- be comfortable while you inquire.

Figure 1

Sample CMM Model (Simplified)

The truth of mother's words.

Same

Autobiography of a real man.

Same

Episode of reacting to threat and entrapment

Same, but more out of control.

Relationship with wife worsening

Same but worse

Feel threatened (caused (Hit back)) Be seen

Wife threatens (caused(Hit back

Feel like and trapped. as a man to leave harder)) man

[Smashes parking "Please stop! [smashes more meters with bat] I can't stand this!"
meters harder]

Husband is out (Obligatory (Try to control Husband stops control, him by invoking
relationship.) and calms down,

I am frightened.

Unlikely

Episode of husband out o control, I try to help him get control.

In a relationship with an out of control person who may become a danger to me.

Men who exhibit any form of violence may turn on a woman.

References

- Aristotle. (1966) *The basic works of Aristotle*. R. McKeon, Ed. New York: Random House.
- Baker, G. & Hacker, P. (1984) *Language, sense & nonsense*. Oxford: Basil Blackwell.
- Baker, G. & Hacker, P. (1985) *Wittgenstein; Rules, grammar and necessity*. Vol. 2. of an analytic commentary on the Philosophical Investigations. Oxford: Basil Blackwell.
- Bakhtin, M. (1981) *The dialogic imagination: Four essays*. M. Holquist, Ed., C. Emerson & M. Holquist Trans. Austin, Tx: University of Texas Press.
- Bateson, G. (1972) *Steps to an ecology of mind*. New York: E. P. Dutton.
- Bernstein, R. (1983) *Beyond objectivism and relativism: Science, hermeneutics, and praxis*. Philadelphia: University of Pennsylvania Press.
- Burke, T. (1994) *Dewey's New Logic: A Reply to Russell*. Chicago: University of Chicago Press.
- Chein, I. (1972) *The science of behavior and the image of man*. New York: Basic Books.
- Chong, H. (1989) Rethinking the Role of a Bicultural Person. In a *Multicultural Organization. Human systems*. 9, 239-252.
- Cronen, V. (1994) Coordinated Management of Meaning: Practical Theory for the Complexities and Contradictions of Everyday Life. *The Status of common sense in psychology*. J. Siegfried, Ed. (pp. 183-207) Norwood, NJ: Ablex press.
- Cronen, V. (1995) Coordinated Management of Meaning: The Consequentiality of Communication and the Recapturing of Experience. In S. Sigman (Ed.) *The consequentiality of communication* (pp. 17-65). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cronen, V. (1995a) Practical Theory and the Tasks Ahead For Social Approaches To Communication. In L. Leeds-Hurwitz (Ed.) *Social approaches to communication* (pp. 217-242) New York: The Guilford Press.
- Cronen, V. & Lang, P. (1994) *Language and Action: Wittgenstein and Dewey in the practice of therapy and consultation*. *Human systems*, 5, 5-43.
- Cronen, V., Johnson, K., & Lannamann, J. (1982) Paradoxes, double binds and reflexive loops: An alternative theoretical perspective. *Family Process*, 20, 91-112.
- Davidson, D. (1984/1974) *On the Very Idea of a Conceptual Schema*. In D. Davidson. *Inquiries into truth and interpretation*. (pp.183-198.) Oxford: Clarendon Press.
- Dewey, J. (1896) The Reflex Arc Concept in Psychology. *Psychological Review*, 3, 357-370.
- Dewey, J. (1910) *The influence of Darwin on philosophy, and other essays in contemporary thought*. New York: Henry Holt and Company.
- Dewey, J. (1911/1933) *How we think*. Revised Edition. Chicago: Henry Regnery.

- Dewey, J. (1916/1944) *Democracy and education*. New York: The Free Press.
- Dewey, J. (1920/1948) *Reconstruction in philosophy*. Enlarged Edition. New York: Beacon Press.
- Dewey, J. (1922) *Human Nature and Conduct*. New York: Henry Holt and Company.
- Dewey, J. (1929/1960) *The quest for certainty*. New York: Capricorn Books.
- Dewey, J. (1925/1958) *Experience and nature*. New York: Dover publications, Inc.
- Dewey, J. (1934) *Art as experience*. New York: Minton, Balch & Company.
- Dewey, J. (1938) *Logic: The theory of inquiry*. New York: Henry Holt and Company.
- Dewey, J. (1941) *Propositions, Warranted Assertability, and Truth*. *Journal of philosophy*. 38: 169-186.
- Geertz, C. (1973) *The interpretation of cultures*. New York: Basic Books.
- Gould, S (1980) *The panda's thumb*. New York: W. W. Norton.
- Gould, S. (1989) *Wonderful life: The Burgess shale and the nature of history*. New York: W. W. Norton.
- Harre, R. (1970) *The principles of scientific thinking*. Chicago: University of Chicago Press.
- Harre, R. & Madden, E. (1975) *Causal powers: A theory of natural necessity*. Oxford: Basil Blackwell.
- Herodotus. (1954) *The Persian Wars*. New York: Random House.
- James, Wm. (1890/1950) *Principles of psychology*, vol. 1. New York: Dover Publications.
- James, Wm. (1909/1996) *A pluralistic universe*. Lincoln: University of Nebraska Press.
- James, Wm. (1912/1996) *Essays in radical empiricism*. Lincoln: University of Nebraska Press.
- Kennedy, M. (1979) Generalizing From Single Case Studies. *Evaluation Quarterly*,3, 661-678.
- Koestler, A. (1978) *Janus: A summing up*. New York: Random House.
- Kvale, S. (1996) *InterViews: An introduction to qualitative research interviewing*. Thousand Oaks: Sage.
- Lyotard, J. (1979) *The postmodern condition: A report on knowledge*. Minneapolis: University of Minnesota Press.
- Margulis, L. (1998) *Symbiotic planet*. New York: Basic Books.
- Mead, G. H. (1938/1972) *The philosophy of the act*. Edited with Introduction by C. W. Morris. Chicago: University of Chicago Press.

- Mead, G. H. (1934) *Mind, Self and Society*. Edited by C. W. Morris. Chicago: University of Chicago Press.
- Pearce, W. B. & Cronen, V. (1980) *Communication, action, and meaning: The creation of social realities*. New York: Praeger.
- Pearce, W. B. (1989) *Communication and the human condition*. Carbondale: University of Southern Illinois Press.
- Polanyi, M. (1958) *Personal knowledge: Towards a Post-Critical Philosophy*. Chicago: University of Chicago Press.
- Rapoport, A. (1958) *Various Meaning of Theory*. *American political science review*. 52, 927-988.
- Reale, G. (1987) *Form the origins to Socrates: A history of ancient philosophy*. J. R. Catan, Ed. and Trans. Albany, NY: State University of New York Press.
- Sadovsky, V. (1983) Systems Theory. In R.Harre & R. Lamb Eds. *The encyclopedic dictionary of psychology*. (pp. 623-625)
Oxford: Basil Blackwell.
- Shotter, J. (1984) *Social accountability and selfhood*. Oxford: Basil Blackwell.
- Shotter, J. (1990) *Knowing of the third kind*. Utrecht, Netherlands: Utrecht University Press.
- Shotter, J. (1993) *Conversational realities*. London: Sage.
- Stough, C. (1969) *Greek skepticism: A study in epistemology*. Berkeley, Ca.: University of California Press.
- Suppe, F. (1977) *The structure of scientific theories*. Urbana, Il.: University of Illinois Press.
- Wittgenstein, L. (1953) *Philosophical investigations*. G.E.M. Anscombe, Trans. New York: MacMillian.
- Wittgenstein, W. (1969) *On Certainty*. G. E. M. Anscombe & G. H. von Wright Eds. Oxford: Basil Blackwell.

They differed greatly, as we know, on what that foundation was. Thales thought in terms of basic element. Pythagoras argued for mathematical relationships as foundational. Of course, this no longer holds in physics.

The reader familiar with Plato will see how neatly these criteria dispense with Platonic arguments against relying on sense impression. Plato's examples of optical illusions and dreams would not hold up against Carneades' criteria.

He did not mean that all research had to be conducted in laboratory settings, although he did say that schools should place greater emphasis on having science students spend time using microscopes, telescopes and test tubes, and place less emphasis on the sheer memorizations of principles. To study economics he thought that young students should go to businesses and listen to how customers, owners and managers make decisions.

There are many who argue that we should not make a religion of social inquiry. I disagree. Dewey's (1934a) view of religion was that it is the highest form of poetry. That is, a religious experience is an aesthetic moment that transforms our experience, opening us to new forms of experience yet to be realized. Routinized forms of observances, like dull, mechanical research, are obstructions to a fully human life. This is not to say that social inquiry should replace other religious forms. But the most profound moments of social inquiry should have what Dewey understood to be a religious quality of beauty, perfection of fit, and wonder. The practice of any religion is a form or inquiry in which persons attempt to develop a better way of living in the world.

Clifford Geertz (1973) independently came to the same idea, and indeed, the same terms many years later.

Most readers will recognize this as Wittgenstein's phrase. Dewey came to the same position many years earlier based on the earlier ideas of James and Pierce.

Chein calls such accounts "metatheories" to distinguish them from traditional definitions of theory that demand formal propositions combining to make specific predictions the confirmation of which would confirm or disconfirm the theory. However, what Chein calls a metatheory, Rapoport (1958) calls a kind of theory. Rapoport proposed a taxonomy of theories that included qualitative theories organizing our observations for heuristic advantage, and theories in the social disciplines that impart the ability to better understand social systems, institutions, and cultures when we encounter them. Chein himself said that his definition of a metatheory really describes most theories in social research.

I wish to acknowledge my debt to the contribution of Professor Michael Morgan who first alerted me to the idea that inclusivity of data on hand should be discussed as a reliability issue.

Quantum mechanics similarly argues that the nature of an observation is always dependent on the means of observation and thus a neutral observation language is impossible.

Vernon Cronen