RESEARCH-TO-PRACTICE IN A POSITIVISTIC COMMUNITY

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Abstract

This paper will examine the philosophies of research in an attempt to understand where adult educators are in that milieu. The paper will propose that pragmatic philosophy and soft systems methods may hold promise for research in agricultural and extension education and that the profession should prepare researchers for broader scholarly interests.

A legend exists in the Middle-East about a man by the name of Nasrudin who was observed by a friend searching frantically in the roadway dust outside his home.

> *"What have you lost, Nasrudin," asked the friend?*
> *"My key," said Nasrudin.*
> *So the friend helped look for the key on hands and knees. Finally, after no success, the friend asked "Where exactly did you drop it?"*
> *"In my house," Nasrudin said.*
> *"Then, why are you looking here, Nasrudin?"*
> *"Because there is more light here than within my own house," replied Nasrudin.*

This story forms a backdrop for what will be discussed related to research. The profession should examine the research that we are conducting. The philosophy of science will be examined to define the boundaries of the thesis and attempt to draw implications for our research. The heart of the discussion will feature the concept of "knowing". Ray (1987) stated that "research is not a process of proving something but a process of discovering and learning ... we may see problem solving, thinking, learning, research and discovery as one and the same process."

To extend the analogy, where and how are we looking for our key? Are we tending to look only in the dust of the well-lit roadway, or are we willing to search in other, darker locations, with other means, to move down that road to "knowing". Here, I am using Krathwohl's (1985) term, because he discusses research as not necessarily always resulting in the ultimate destination of "to know", but on the roadway to "knowing". That is, research moves us toward the solutions to problems, but does not always provide the absolute final answer to the whole research problem. Röling (1974) wrote that our research is not geared to make conclusions (generalizations) but as decisions, a formula for action.

What I want to discuss will not be related to discipline-specific research, but related to "subject matter research" or "problem solving" research (Miller, 1989a). Bonner (1986) related how land grant universities undervalue subject matter and problem-solving research relative to

discipline research. The agricultural and extension education key will not be among the roadway dust of basic research but in the house of the people. Our research tends to be toward "soft" on a soft-hard continuum, and toward applied on an applied-basic continuum, placing it in the less-well-lit area.

Some basic researchers would note that our research is "soft," does not have clearly defined objectives or hypotheses, lacks focus and rigor, is not programmatic, and is not sufficiently funded. The research is conducted by persons with weak training in research methodology who (a) cannot identify important research problems, (b) do not value research endeavors, (c) conduct research for promotion and tenure rather than for its importance and utility, and (d) have a limited amount of time assigned for research. We would not fare much better if those from the humanities or arts perused our work. Criticism would also come from those subscribing to post-positivistic paradigms. They would view our work as not scholarly enough, not reflective, or not employing critical analysis.

As universities and other agencies move toward interdisciplinary inquiry and project teams are formed, the omission of agricultural and extension education researchers from these groups will not be surprising because they do not understand what we do or how we can contribute. I have been frustrated, too many times to mention, because international or domestic projects have been submitted by my college or through interdisciplinary teams which had education/training or evaluation components and the proposers saw no reason to include us.

Conceptual Basis

Let us consider these issues from the perspective of "knowing". Oliga (1988) summarized the basic elements of Habermas' Interest Constitution Theory (Figure 1) and noted that the three different knowledge types implied different methodological approaches, namely, empirical, hermeneutic, and critical. This theory helps explain much of our position on the hard-soft, basic-applied, and concrete-abstract, active-reflective continua respective to other disciplines. The technical researcher wants to produce "laws", the interpretive researcher to reach "consensus" and meaning, and the critical researcher to achieve "emancipation" through reasoned choice. Van Manen (1977) noted that each of the three forms of inquiry is distinctive in terms of (a) its way of looking at people and society, (b) the form of knowledge it produces, (c) its logic in use, (d) its methodologies and techniques, and (e) the use to which the knowledge can be put.

Type of Research	Basis of Human Interest	Type of Interaction	Underlying Paradigm	Method/Approach
Technical	Labor	Man -- Nature	Functionalists or Positivists	Empiricism
Practical	Communicative Interaction	Man -- Man	Interpretive	Hermeneutics
Emancipatory	Power	Man -- Self	Critical	Critique

Figure 1. Habermas= Interest Constitution Theory (Habermas, 1972)

The methodological approaches of the empiricists produce objective knowledge which is independent of the researcher, and replicable in other settings. The knowledge also has value freedom in that it is ethically neutral. The knowledge or "discoveries" produced add to the knowledge base in a discipline or, as in the case of hard systems methods, such as engineering, provide technology which produces greater output or more efficient systems of doing things. The philosophy underlying this epistemology is most often positivism. The position is "that science alone represents a genuine form of human knowledge, such that nonscience represents pseudoknowledge or even cognitive meaninglessness or nonsense" (Keat, 1981). Popper (1969), although a positivist himself, argued that while science could be distinguished from nonscience, that did not imply an equivalent distinction between sense and nonsense. The second doctrine of positivism argues that knowledge is the explanation and prediction of observable phenomena through the demonstration that such phenomena constitute instances of universal laws that remain invariate in all regions of space and time (Oliga, 1988).

The methodology of hermeneutics, or interpretive science, includes the "naturalistic", the "hermeneutics as method", and the "historical-hermeneutics". Oliga (1988) wrote that the naturalistic perspective includes the phenomenological symbolic interactionism which seeks to explain how social order, as a real phenomenon, emerges from social action and interaction processes, from which shared meaning in turn emerges. Ethnomethodology seeks to explain how actors employ various cognitive resources to order and make sense of their everyday activities and make some activities accountable to others. Existentialism is concerned with the central lived qualities of individual human existence and seeks to understand the individual "life-world" from the point of view of those involved, using constructs and explanations which are intelligible in terms of common sense interpretations of everyday life. The belief in hermeneutics is that social reality is distinctive in character and contains a component missing from natural phenomena; it requires a mode of analysis different from that of mere explanation (Oliga, 1988).

Jax (1984) related that interpretive science was conducted to interpret and give meaning to a given situation and that the intent was not to provide broad generalizations. The researcher takes on the role of the people or group studied and attempts to understand the context of the situation within the framework of the participants.

Critique, or critical hermeneutics, is an attempt to mediate the objectivity of historical processes with the motives of those acting within it, the aim being the freeing of emancipatory potential. The approach seeks to remove barriers to understanding that may be operative, without the individuals or groups concerned being aware of them: a critique of ideology (Bleicher, 1980). The task is to render individual and social processes transparent to the actors concerned so that they can pursue their further development with consciousness and will, rather than remaining the end product of a causal chain operative behind their backs (Oliga, 1988). Freire (1987), referring to the adult learner, stated that they are objects of persuasion which will render them more susceptible to propaganda, but this cannot happen if they are critically aware of their situation, then they can act on it. Lather (1991) brings summary to the nature of inquiry in another form (Figure 2).

Prediction	Understanding	Emancipation	Deconstruction
Positivism	Interpretive Naturalistic Constructivism Phenomenology Hermeneutics	Critical neo-Marxist Feminist Praxis-oriented Educative Freire=s participatory action research	Poststructural Postmodern Post-paradigmatic diaspora

Figure 2. Nature of Inquiry (Lather, 1991)

Application

With this backdrop from philosophy, I believe it is clearer as to why agricultural and extension educators have difficulties in communicating about our research and participating in the research of others. Our tradition and our learning related to research methods are couched in the empirical method. However, much of our interest for knowledge production or problem solving lies in practical understanding with our basis in communicative interaction or emancipation.

When the basic scientist is so well versed in the positivistic paradigm and sees the study of nature and the production of value-free knowledge as the ultimate end, how does a person from agricultural or extension education explain the knowledge produced from interpretive or critical research? Or, for those concerned with emancipation, international development, or critical consciousness; how would one communicate such man-self interactions to an empiricist from the positivistic community? "Discovery" is the driving force for the basic scientist, with patents. If the research is conducted to better understand how to educate adults, wherein is the patent? Where is the value-free knowledge, the laws, the discoveries/patents which emerge? Should critics not be examining the man-man or man-self dimensions? Should the standards for research quality or promotion and tenure be determined only from data-based, quantitative research publications? Schön (1983) stated that "in the United States more than any other country except Germany, the very heart of the

university was given over to the scientific enterprise, to the ethos of the Technological Program and to Positivism." Our profession suffers criticism because of our way of knowing and our interest in doing the research.

Critics also note that we do not produce theory from our research. Generalizations are closely related to theory, the difference being that theory specifies the relationship among a set of variables while generalizations concern the extent to which whatever relationships are uncovered in a particular situation can be expected to hold true in every situation. Cronbach (1982) concluded that social phenomena are too variable and too context-bound to lend themselves to generalization. He emphasized that data should be interpreted in context rather than reducing the context to arrive at generalizations, with local conditions becoming primary, and with helping "people use their heads instead of constructing generalizations and building theory". In essence, we should focus upon research which will permit us to put it into practice.

I suggest we look elsewhere than positivism for our key. The key may not be found in the well-lit dust of the road. The key may lie in what can be applied, in the identification of the problem setting, in a given context, and in a more pragmatic concept of our research philosophy. Let us not be swayed by the preferences of hard/basic scientists with positivistic inclinations.

Carl Rogers (1969) wrote that in educational research "rigorous procedure is considered more

important than the idea it is intended to investigate. A meticulous statistic and a sophisticated research design seem to carry more weight than significant observation of significant problems." Therefore, a pragmatic philosophy is more nearly in order. Pragmatists use a standard of "workability". Is the recommendation from the research "workable" in this situation? Truth may be place- and time-specific. The most important question to ask of research remains: "So what"?

Ackoff (1974) noted that most of the real problems of society are "a mess" of interrelated problems and not resolvable with common research methods; they are a system of problems. Consider the "rural decay" problem in the United States today. Consider all the related disciplines which have a stake in that problem, just a few of which would be economic revitalization, educational, sociological, anthropological, medical, or environmental in nature. The problems the public and the legislatures want addressed by universities are often these "messy" problems.

Ulrich (1988), in defining a program of research in such "messy," soft systems, posed that these are "practical problems", not unlike those faced by pragmatists such as agricultural and extension educators. He noted that the practical intent is to bring more reason into actual social practice, that theoretical knowledge would bring some "objective knowledge" about some segment of the problem, whereas the practical reason is to secure ethically justified consensus among the stakeholders about norms regulating interpersonal relationships within our world or society.

Freire (1987) wrote that knowing, whatever its level, is not the act by which a bit of knowledge is transformed into a subject who passively accepts the contents others give; on the contrary, it is the curious presence of learners, who are confronted by the world, who transform actions on reality with constant searching, invention and re-invention with each person undergoing critical reflection on the very act of knowing. Knowledge is not extended from those who know to those who do not. Knowledge is built

up in the relation between human beings and the world, relations of transformation, and reflects itself in the critical problematization of these relations.

Miller (1989b, 1991) has proposed that we consider soft systems methodology [SSM] (Ackoff, 1974; Checkland, 1981; Churchman, 1968; Raman, 1989) as a potential strategy for agricultural and extension educators to employ because it deals with problem setting, and involves the stakeholders in the research process in the local context. SSM is not a method to necessarily employ in one specific study, but a philosophical basis for conducting inquiry. SSMs are called "soft" because the problems addressed do not have clear objectives, hard feedback mechanisms, or boundaries. The system is a construct and its objectives and boundaries depend on shared decisions and consensus, and one which I suggest should be explored by our profession.

Within universities, we have become academic cannibals: "eating our own"! Our internal criticisms of each other leak outside to our detriment! I have tried to illustrate a broader definition of scholarship, encompassing other ways of knowing, to alleviate such elitist criticism, as we seek our key. The profession must begin to prepare persons for other ways of knowing while applying strict quality standards for all research and scholarship (Miller, 1990).

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