

## SOME NOTES ON FEMINIST PERSPECTIVES ON SCIENCE WISR - Deborah Pruitt, Ph.D.

*Any contemplation of research leads us to the question of what makes what we do different from ordinary observations - what distinguishes "science" from daily life? For those of us interested in egalitarian relationships, we are further led to question the power of naming, the power of explaining, and the power relations embedded in claims to "truth".*

Science has historically claimed its authority through its claim to universality. This universality derives from its assertions of "objectivity". "Objective" is defined as having reality independent of the mind, "of, relating to, or being an object, phenomenon, or condition in the realm of sensible experience independent of individual thought and perceptible by all observers." Apprehending this purported phenomenon independent of individual thought necessarily then requires a distinction between the researcher and the researched. The distance between them is said to be objectivity. Thus scientific method is conventionally based on detachment.

This separation between the subject and object was always appreciably less tenable in the social sciences, particularly ethnographic research, because such research is distinctly based in relationship and is inherently subjective. Furthermore, the intrinsic power relationship produced when the "detached observer" makes claims of truth about the distanced object of research proved unacceptable. Feminist scholars were unwilling to "objectify" their research subjects and sought to represent their agency, as well as to acknowledge the researcher's own "subjectivity" and its part in the production of knowledge. A "crisis of representation" evolved within anthropology during the 80s and early 90s through which the profession sought to redefine itself by acknowledging the inherently subjective nature of our research. Yet, if we seek more than solipsism, if we desire rational understanding beyond individual relativism, what is the basis of that knowledge?

Wrestling with these questions of power and knowledge, and seeking a more honest position than that presented by conventional scientific detachment, scholars explored different techniques of representation. These included more creative, "dialogic", and "multi-vocalic" descriptions of social and cultural experiences. Writings placed the researchers more explicitly in their research (as opposed to the absence of agency in third person writing), and described their participation and motivations more candidly. This provides more information to the reader so she can more accurately evaluate the meaning of their representations. Some excellent examples of these efforts are *Beyond Women: Domesticity and their Employers* by Judith Rollins, and *The Mirror Dance* by Susan Krieger.

Another pivotal challenge to conventional notions of science came from within the ranks of the "hard" sciences with physicist Evelyn Fox Keller's groundbreaking analysis of gender in science. Keller exposed the "objectivist" bias in scientific research and explained its links to gender ideology. Her work was inspired by her biography on geneticist Barbara McClintock, titled *A Feeling for the Organism*.

Barbara McClintock conducted groundbreaking research in genetics that was not

understood and went largely ignored by the scientific community for several decades. McClintock challenged the notion of DNA as master controller that transmits all instructions and instead posits a more systemic, interactive theory of the relationship between DNA and the cellular environment. Control is said to reside in the complex interactions of the entire system. McClintock was eventually awarded the Nobel Prize in science and her work has contributed greatly to genetic research, though the full implication of her work still has not been fully realized.

Keller's analysis of McClintock's research practice describes it as something akin to a relationship with her subject of study. (We're talking about genes here.) When describing her research, McClintock referred to "letting the material speak to you", "allowing it to tell you what to do next". Become a "part of the system" and have a "feeling for the organism". These are unusual statements for a scientist - the profession based on ideals of control and universality.

Keller identified the deeper implication of McClintock's approach to science as a challenge to the fundamental premise of objectivity. Her work exposed the false opposition between objectivity and subjectivity. By reconceptualizing objectivity as a dialectic, Keller distinguished "objective effort" from the "objectivist illusion" that she said characterizes the prevailing scientific discourse. Actual scientific practice is often said to involve much more dialogue and relationship (subjectivity) than is represented in professional writings, but the driving principles and values emphasize objectivity. Acknowledging and being explicit about the subjective experience as part of "science" is an integral part of more accurate and ultimately more "objective" research.

This then was the task of feminist scholars, to trace the implications of a dialectical methodology and to define the role of the subjective in the production of knowledge. Doing so would, Keller says, allow us to "distinguish that which is parochial from that which is universal in the scientific impulse, reclaiming for women what has historically been denied to them; and to legitimate those elements of scientific culture that have been denied precisely because they are defined as female" (Keller, "Feminism and Science" in *Feminism and Science*, Keller and Longino, eds. Oxford University Press, 1996:31-32). Science could be seen as the social, historical artifact that it is, no longer accepted *carte blanche* as determined by "its own logical and empirical necessities" (p.31). Psychoanalysis, and in particular, object-relations theory offers insight into the linkages between objectivity, autonomy and masculinity. Qualitative research reveals the concomitant links with power and domination. The patriarchal bias in science is uncovered, providing for a decoupling of gender and science and ultimately power and knowledge.

This is a matter of redefining what it means to understand the world in rational terms, "adding to the familiar methods of rational and empirical inquiry the additional process of critical self-reflection, attending to the features of the scientific project that belie its claim to universality" (p.32).

Science is further being redefined as we broaden our horizons to include ways of knowing from other cultures. As long ago as the 1930s Bronislaw Malinowski described scientific practice amongst the Trobriand Islanders in an attempt to debunk notions of "primitive

savages" that relied on magic instead of rational thought. Religious scholars are describing scientific thought that is embedded in spiritual traditions. Shamanic practice has even been described as true science by Michael Harner as a pursuit of knowledge about the world, based on experience and a theoretic derived from synthesis of that experience.

Action researchers emphasize the importance of engagement to producing more accurate understanding. "Disengagement from practice produces theoretical hallucinations." (Roty, Chronicle of Higher Education, 4/3/98).

## **Ethical Considerations in Research – Protecting Human Subjects**

*Many of the ethical concerns in doing research are reduced in action or participatory research. Where people are actively and knowingly engaged in a collaborative research project, potential for harm is significantly reduced. However, many research situations can be ambiguous, particularly to participants that are not central to the planning. Many ethical considerations remain.*

### **Privacy and confidentiality**

How to ensure that confidentiality is maintained. This can be particularly challenging in small social groups where it can easily be determined who said what.

### **Disclosure vs. deception**

Concerns over the ethical obligation to disclose what one is doing sometimes conflict with the fact that people's behavior may change if they know they are being studied. This has been particularly problematic when studying powerful groups.

### **Informed consent**

How does one ensure informed consent? How much information is necessary? Research situations are often fluid and participation may be involuntary. What consent is necessary?

### **Funding and whom one is ultimately accountable to**

When conducting research funded by an institution or company, the goals of the funder may conflict with needs to protect subjects, or actual research findings--for instance, if the institution funding the research is implicated in creating the problem studied.

### **Data selection and interpretation**

How do our assumptions and expectations shape what we pay attention to? Which data do we include or exclude? How do we interpret the data?

### **Fraud**

Career and prestige motivations have led some to fraudulently report research findings.