

## INTERACTION OF THEORY AND METHOD IN SOCIAL SCIENCE

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Theory, method, research, philosophy of science, epistemology, interpretation, *verstehen* explanation, logic, quantitative methods, qualitative methods, experiment, history, comparative methods, value-free

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### **1. Introduction**

Everybody recognizes that research in the social sciences requires both methods and theory, but it is not always clear how method and theory relate. Moreover, one needs to appreciate that there remains considerable controversy as regards many of the central issues. In what follows the effort is made to clarify both the relation (or relations) between theory and method and to at least address the central controversies. The essay is organized around methods, divided into four main types: Quantitative, Experimental, Qualitative and Historical. As they are generally understood, each of these presupposes some strong assumptions about the philosophy of social science, what might be termed its "meta-theory." That is, each assumes a notion of the nature and tasks of a science, and in particular ideas about the nature and tasks of a social science. Thus, to merely hint

at what is at issue, does science aim at establishing patterns or regularities—"laws" --in terms of which we gain the capacity to predict and control, or does it aim at providing an understanding of these patterns; and if the latter, in what does understanding consist? Related to this are differences in the conceptualization of 'theory.' Thus, is theory the effort to articulate relations of variables arranged deductively, the effort to represent causal mechanisms or perhaps, the effort to secure meaning? Complicating things further, there is the question of whether there are important differences in the domain of inquiry in the physical and social sciences which require important differences in both the aims of inquiry and the methods to be used? For example, is the fact that the social world is meaningful make a difference? And if so, how does this bear on methods? Similarly, is social science inherently historical and if so what difference does this make as regards methods and goals of research?

A sketch of each type of method is offered, making the effort to identify what is being presupposed and then assess its strengths and limitations. It will be a main thesis of this account, that if properly understood, all the existing methods have an important place in research and that problems arise only when assumptions about science and the domain of inquiry in social science are not critically examined. Indeed, to see the issues, we need to have an understanding of the current situation in the philosophy of science. There has never been a time that research in the social sciences was not influenced by positions in general philosophy and more specifically on questions of the nature of the sciences. The current period is especially interesting since with the demise of the dominating theory of science in the 1970s, there has been a most fertile reconsideration of the central issues in theory and method.

## **2. Philosophies of Science**

Toward the end of the nineteenth century, a host of philosopher/physicists were producing books and articles in what we would now call "the philosophy of science." These included G. R. Kirchoff, Wilhelm Ostwald, Ludwig Boltzmann, Hermann Helmholtz, his pupil, Heinrich Hertz, Ernst Mach, W. K. Clifford and his student, Karl Pearson, Henri Poincaré and Pierre Duhem. These men all spoke with enormous authority exactly because, by then, science was rapidly becoming an evident force in the daily lives of people. Moreover, all of these men have been called "positivists" in that they held, first, that scientific explanation must eschew appeal to what in principle is beyond experience, that to do so, as Kant had insisted, takes one into metaphysics, and second, following Berkeley and Hume, that "laws of nature," are but empirical invariances. The term "positivism" had been in use since August Comte's coining of the term in the 1830s. In what follows, "positivism" includes "neo-positivism," "logical empiricism" and sometimes "empiricism" --all distinguished from "post-positivism," Worth mention, Comte, who also invented the term "sociology" made a strong argument that if the social sciences were to be sciences, they had to rid inquiry of "metaphysics" including the idea that causes were "productive powers."

These ideas were well developed by the philosopher/physicists of the late 19<sup>th</sup> century. Thus, in his *Analytic Mechanics*, Kirchoff had said that we understand the effect of force, but do not understand what force is. It surely seems here that, as Ostwald and Mach argued, force is not some "mysterious power" but is nothing other than its "sensible effects." As Mach insisted, if force is not some "mysterious power," then we must also abandon all those explanations which appeal to "mysterious powers." For Mach, a theory is merely a set of concepts which provides an

‘economical’ schema for experience. Mathematical functions are thus “abridged descriptions.” As Mach insisted, “knowing the value of the acceleration of gravity, and Galileo’s laws of descent, we possess simple and compendious directions for reproducing in thought all possible motions of a falling body...This compendious representation ...necessarily involves as a consequence the elimination of all superfluous assumptions which cannot be controlled by experience, and above all, all assumptions that are metaphysical in Kant’s sense.”

As just time, another debate broke out in Germany. The so-called “*Methodenstreit*,” or “war of methods,” posed positivist philosophy of science against an argument that the human sciences (*Geisteswissenschaften*) rested on entirely different foundations than the physical sciences (*Naturewissenschaften*). The search for general laws may be appropriate for physical phenomena, but since persons were conscious, historical beings, for the human sciences, explanation required *verstehen* (understanding). This was possible in the *Geisteswissenschaften* because as Hegel had argued, life ‘objectifies’ itself in the institutions of the family, civil society, law, art, religion and philosophy.

For positivists, this surely smacked of metaphysics. Max Weber joined the argument, but as in happened, while he firmly rejected positivism as appropriate for a human/historical science, except for his work and a few others, the idea that *verstehen* was not inconsistent with causal explanation failed to take root. Indeed, in the 1920s “logical empiricism” was born in Vienna. It combined the deductive logic of Russell and Whitehead’s *Principia Mathematica* (1910-1913) and the promise of a comparable inductive logic, with the empiricism of the turn of the century philosopher/physicists. By mid-century, then, it had become the dominating and definitive philosophy of science, thoroughly taken-for-granted by nearly everybody, social scientists as well as philosophers.

Things began to change in the 1950s. While the story cannot be told here, we can notice that by 1970 all the fundamental features of positivist philosophy of science were in tatters. Critical here was the early work of philosophers, W.V. Quine and Rom Harré, and the historian of science, Thomas Kuhn. It is now fair to say that while there remain important points of difference between them, the dominating current of philosophies of science are “post-positivist.” We can best make clear both the differences between positivism and post-positivism, and the differences within post-positivism by examining, concretely, method and theory in the human sciences.

### **3. Quantitative Methods**

It is hardly a historical accident that quantitative methods are very often taken to be the paradigm for social science research. From the beginnings of modern science, mathematics has been an important tool and the capacity to measure and formulate relations between quantifiable entities is an important achievement. Perhaps from Durkheim on, so-called “hard science methods” have been legitimated by positivist philosophies of science. Given this posture, quantitative methods are not only taken to be the best example of social science, providing the criteria for its standing as “science,” but for some, the only methods.

We will conceive this type of method broadly, to include all statistical methods including, for example, survey research, and various versions of factor analysis (including regression and path

analysis). We may begin with the obvious: Ordinary life is filled with statistical information, from who is in first place in soccer standings, the cancer rates for smokers, to the number of Hawaiians in Hawai'i. Just as many ordinary conversations make use of statistical information, most research projects will employ statistical data of some sort. Much of this serves to have an abstracted description of vital "social facts" and much of it serves as evidence which either confirms or falsifies critical assumptions and hypotheses. Of course, there are problems in the effort to use numbers to represent features of the world, some always noticed, some not.

### 3.1 Descriptive Statistics

The biggest problem with what are usually termed "descriptive statistics" ("descriptive" since they merely summarize in numerical form some attribute, a batting average, smokers, Hawaiians) is in the "categories" which are employed in assembling the data. "League-leader" constitutes no problem since we can agree that it measures the number of wins against losses of teams in the league. Hawaiians is a different matter: In the 1990 Census, the number of Hawaiians by "race" was 138,732, by "ancestry" it was 156,812 and by the more complicated measure of the State Health Survey, Hawaiians numbered 205,078.

In one of its many confusing uses, since it makes commitments regarding a "conceptual scheme (or framework for inquiry), employing categories is rightly thought of as "theory." In this sense, everyday experience is "theory-laden" since it would be unintelligible without the countless concepts which mark off and relate "kinds:" apples and fruits, criminals and doctors, red things and edible things—one could go on endlessly. Embedded in ordinary language, kinds are inevitably social and historical constructions. We learn to use these, generally with success, even though for most of them, we have only a "typical" case and there will be an irremediable fuzziness about them. Indeed, we generally cannot provide a clear definition of a term or concept: We know a bird when we see one--and put aside pterodactyls. More important, the fact that kind-concepts are social and historical products is highly pertinent to research in that one may well encounter "conceptual maps" which are different that the one assumed by the researcher, either of another culture, another tradition of inquiry, or simply a different study by a different researcher. Since these conceptual maps parse the world differently, they constitute different "realities." *This problem bears on all research, qualitative as well as quantitative.* We need to avoid the tendency to assume, uncritically, that *our* categories are "given" and sacrosanct. Consider, for example, that racial categories in fact make no biological sense. On all the evidence there are no biological grounds for grouping people into distinct races. In other terms, there is no non-arbitrary statistically significant difference between populations which we would like to call "races" and neighboring populations. Indeed, "each population is a microcosm that recapitulates the entire human macrocosm even if the precise genetic composition vary slightly..."

The kind-concepts of ordinary experience are often the point of departure of the categories used in quantitative research. In the effort to ensure clarity and agreement about these, empiricist oriented researchers insist on the need for "operational definitions." Here one specifies exact criteria for applying the concept, the "operations" which need to be performed to see whether the term applies. Thus, for example, we may count someone as Hawaiian only if they can produce a genealogy which goes back to pre-Western contact. This certainly clarifies the concept but raises the question of whether it arbitrarily restricts the meaning and thus fails to catch the "reality" intended. (Formally, is the concept "construct valid"?) In our Hawaiian case, the researchers

employed *different* criteria for determining who counted as Hawaiian. Since *who* is Hawaiian is precisely what is at issue and there is no theory-neutral conception of this, there will be room for disagreement. We need to be as clear as we can in our use of concepts, but we need also to avoid the trap of supposing that operationalizing a term gives us a theory-neutral category. The idea that there is some rock-bottom empirical “data” (“the given”) which is theory-neutral is a fundamental feature of empiricist (positivist) theory of science. It is now generally agreed, however, that this a false ideal, and that science can proceed without assuming that there is a theory-neutral, God’s eye view of the world. We say more about this subsequently.

### 3.2 Inferential Statistics

So-called “inferential statistics” refers to the use of statistics to make inferences concerning some unknown aspect of a group or set. We then have further complications regarding the general problem of induction—inferring probabilities from our premises—in particular, judging whether what was true of the sample, is true of all. We cannot here get into the many problems of sampling, except to notice that one can never be sure that the sample is truly representative of the population from which it was derived; hence one must be cautious regarding the conclusions drawn. There are, it might be mentioned, several competing theories about proper sampling techniques.

Things get even more complicated when we turn to quantitative work which seeks to identify patterns and regularities. This is often taken to be a major goal of science. The concept of a “variable” is critical. Simply defined, a variable identifies an item that varies, perhaps numerically between 0 and 1. “The language of quantitative social research is a language of variables and relationships among variables.” Typically, one offers an “hypothesis” which is a conjectured “law-like” statement. The hypothesis links an “independent variable” (or variables) to a “dependent variable.” Again, “the cause variable, or the one that identifies forces or conditions that act on something else, is the *independent variable*. The variable that is the effect or is the result of the outcome or another variable is the *dependent variable*.”

This sort of analysis makes perfectly good sense only if we assume a positivist theory of science in which explanation proceeds by subsumption under laws and in which causality is conceived as per David Hume as constant conjunction. On this view of the matter, C is the cause of E means *only* that “If C, then E.” Similarly, one explains E by showing that C has occurred and that “If C, then E.” Termed the “covering law” model of explanation (or Deductive-Nomological: DN Model), it is the second defining feature of positivist theory of science. (The first is the assumption regarding “data” as theory-neutral.) On this view, a fully ramified theory is thought of as a deductive system in which premises, the explanatory principles or “laws” entail what is to be explained.

### 3.3 Causality and Multiple Regression

We can see the problems with this conception of explanation by considering a central technique of quantitative methods: multiple regression. Consider the following:

1. A (some “variable,” e.g., IQ) correlates with B (some other variable, e.g., income)
2. A “predicts” B

3. A “explains the variance” in B
4. A “explains” B
5. A “causes” B

We can handle 4. and 5. together. We can say 4., “A explains B” only if we can say, “A causes B.” But first, as everyone admits, correlations do not establish causes. Causes *produce* outcomes, Science may well begin by identifying regularities in the world. But a scientific explanation does not aim establishing “law-like” correlations, no matter how probable. Rather, it comes with identifying the causal mechanisms which *explain* empirically available patterns. We know that, generally at least, salt dissolves when put in water. But there is something about salt *and* water, such that when salt is put in water, it tends to dissolve-- and not (say) to explode or turn the water to gin! Indeed, the covering law model obscures the critical role of theory and model building in real science. Thus, the Bohr model of the atom generates the periodic table which “summarizes the properties of the elements—the variation in their physical properties, such as the number and type of bonds they form to other atoms.” With an understanding of this mechanism, we understand, for example, why iron oxidizes and copper conducts electricity.

Second, there are always many causes of any outcome. In order to make a fire, we need in addition to some combustible material, a source of heat and oxygen. Absent any of these, no fire. So which is more important? We get a fire only if the right combination is present. (It takes a good deal more heat to ignite a vinyl fabric than it does to ignite cotton.) If we pick out a source of heat as “the cause,” that is because we assume the presence of oxygen and the combustible material. We forget about the oxygen and say that the spark “caused” the fire. (Weber called this “adequate causation,” the difference in the existing state which brought about the effect.) This is both convenient and unsurprising. But the fact remains: all the factors are important: you will not get a fire if any are absent. Consider then Sarah’s ability to score big on the SAT. What is “the cause”? Which of the “factors” (causes) will be more important? Sarah may be “bright,” but she also was well-motivated, got some terrific education—and she felt good on the day of the test.

Versus the covering law model, on the realist understanding of causality, explanation and prediction are not symmetrical. That is, where we have a statistically significant correlation, we can predict even if we could not explain. Smoking and cancer is good example. There is some causal mechanism at work in cancer production, likely several, and smoking is related to this in ways that we do not yet understand. Some people surely do smoke all their lives and never get cancer. And some people who never smoke do. But we know that the probability of getting cancer significantly increases if you smoke: A “predicts” B. More generally, it is an error to hold that the social sciences fail because they fail in their predictive capacities. The physicist understands the principles of motion but cannot predict the resting place of a falling leaf or of the resting places of the pieces of a boulder shattering as it rolls down a mountain-side. Indeed, it is hard to underestimate the damage done to social science by having false assumptions about what the physical sciences can do.

### **3.4 Explaining the Variance**

It is usually supposed that regression and other related techniques, by enabling us to “explain the variance,” solve the problem of complex causality. What is intended can be briefly summarized. Assume that there are a number of “factors” which taken together presumably “determine” some outcome. The idea then is find out how significant each factor is in “producing” this outcome. The

language of “producing an outcome” or “determining an outcome” is causal language. But indeed, such language is entirely inappropriate. We need to go a little deeper to see what is at issue here.

Assume first a standard regression equation, a set of dependable, meaningful independent variables (a, b...) with a linear relation to the dependent variable (Y).

$$Y = a + b_1 + b_2 + b_1b_2 + e \text{ (Equation 1)}$$

“Y,” the “dependent variable,” presumably is “determined” by the independent variables, “a + b<sub>1</sub>...” The problem is then one of variable selection. (It might be mentioned here that while multiple regression treats all independent variables as prior to the dependent variable, path analysis can offer far more sophisticated models in which time enters, showing, for example, that some factor or factors have but indirect “effect” on some other variable. But the problems to be considered in what follows remain.)

The goal of the analysis is a “good fit.” If we do our work well, what we end up is “a useful statistical description defensible against plausible alternative interpretations.” It is critical to emphasize that the very best result is a statistical description, a point nearly always missed. At best, the result is a highly simplified picture, a statistical snapshot, of a fantastically complicated concrete social situation. For example, as an abstract ratio, the crime rate represents a picture of crime in the real world. It leaves much out—obviously. On the other hand, “A picture of a friend is useless if it covers a football field and exhibits every pore. What one looks for instead is an interpretable amount of information, with the detailed workings omitted.” As regards the crime rate, the “detailed workings” include, of course, the specific structured actions of *everyone* in society: both criminals and non-criminals. While it would be agreed that a crime rate is such a snapshot taken from a very long distance, the same is true of all other statistical results, including the results of regressions.

A useful description—a good fit—is not so easy to come by. One test of this is the “coefficient of correlation,”  $R^2$ . It is usually said that  $R^2$  gives “the percentage of variance explained” in the dependent variable by the regression. But, this is an expression that, “for most social scientists, is of doubtful meaning but great rhetorical value.” The rhetorical value lies in the supposition that first, a large  $R^2$  guarantees “good fit” and second, in the more radical confusion, that the number represents the causal importance of the factor in the regression.

Neither supposition can be sustained. As one prominent writer says,  $R^2$  “is best regarded as characterizing the geometric shape of the regression points and nothing more.” It is easy to see why it is nothing more than this. The central problem is that the independent variables are not subject to experimental manipulation. In the natural sciences, one tests theories about causality with an experiment. The experiment seeks to “control” the conditions to see if the hypothesized cause actually produces the outcome which the theory predicted. This is not possible in the social sciences. “Regression,” which presumes to “control” variables, mathematically, is often thought to be an adequate substitute for experiment.

There are several lines of argument that it is not. One regards the problem that “variances are a function of the sample, not the underlying relationship.” That is, the linear model (eq. 1) is a local analysis whose result depends upon the actual distributions of the variables in the population

sampled. Thus, “in some samples, they vary widely, producing large variance; in other cases, the observations are more tightly grouped and there is little dispersion.” (One needs some further understanding of statistical analysis to fully grasp this criticism.) For this reason, then, “they cannot have any real connection to the 'strength' of the relationship as social scientists ordinarily use the term, i.e., as a measure of how much effect a given change in the independent variable has on the dependent variable...”

Second, there is the problem of assuming that the measured variables “add up” to 1.0, the problem of “additivity” and independence. Consider this example:

If the regression describes, say, domestic violence in countries as a function of violence in prior years plus economic conditions, can one say which variable is more important in causing violence? For most purposes the answer is no. The units of one variable are violence per amount of prior violence; the units of the other are violence per amount of economic dislocation. One can say only that apples differ from oranges. As theoretical forces abstracted from any historical circumstances, they have no common measure.

Equation 1 makes us believe that the variables are both additive and independent (with  $b_1b_2$  taking into account the interaction effects of the variables.) But this is never the case. Nor can it be said that "path analysis" solves this problem. Path analysis is an extension of regression which makes the same assumptions as does regression, but where "a regression is done for each variable in the model as a dependent on others which the model indicates are causes, direct and indirect." "Path coefficients," then, are "used to assess the relative importance of various direct and indirect causal paths to the dependent variable. As above, "good fit" presumes to indicate (Humean) causality.

The best sort of example to illustrate the general principle is to see the confusion in the mostly meaningless discussions of the relative effects of heredity and the environment. Consider a parallel (idealized) biological study, a study that requires a controlled experiment.

Take a genotype replicated by inbreeding or cloning. This minimizes genotypic individuality. Place them in a various carefully controlled environments. It is then possible to establish rough tables of correspondence between phenotype on the one hand and genotype-environment combinations on the other. The results, called the “norm of reaction,” are never predictable in advance. They are not predictable since genetic and environmental factors are not additive (and hence cannot be represented by linear equations.) They are causes in transaction in exactly the sense that genes cause different phenotypical outcomes in different transactional environments.

If such norms could be experimentally established for persons in their development, then across the range of controlled environments and (cloned?) genotypes, one could relate the variances in outcomes with the changes in the independent variables. This would still not provide the proportion of causation since causation does not suddenly become additive. But one could talk sensibly about their relative “importance.” One could “explain the variance” sensibly. More dramatically, as Achen says, we conduct an experiment in which we put some children in middle-class homes and the others in closets. There surely will be differences in cognitive ability, personality, etc. Almost certainly, most of the differences in these realized capacities will be “explained” by environment. Conversely, put them all (per impossible) in the same environment, most of the variation surely will

be “explained” by heredity. The foregoing explains, of course, the importance of (identical) twin studies—and their limitations.

### **3.5 The Role of Quantitative Methods**

But all this is not to say that quantitative methods have a minor place, or more outrageously, that have no place in social science. First, as noted above, they are enormously useful in providing descriptions of facets of society. We need to have numbers of all sorts of things, demographic, economic, political, and sociological. These provide descriptions of what needs to be explained, for example, a change in the crime rate. And they provide valuable evidence for conclusions about social reality. For example, we need to know the number of middle-class youth who escape conviction for possession of drugs before we can conclude that drug use is mainly restricted to poor blacks.

Second, these methods give us capacities to generalize, including generalizations discoverable only through the use of regression and similar methods. "Quantitative and statistical techniques may be used to reveal patterns... that are obscured by the range of influence operating on them...Likewise, statistical techniques can be sometimes be used to extract revealing patterns in data even when the precise parameters of the various influences are not known prior to analysis." For example, how do we explain ethnic or income differences in voting behavior, etc. As above, identifying such patterns does not give us causality, but "the existence of such a pattern suggests that there may be structural influence at work, a claim that can be investigated further to examine its plausibility." That is, the description calls for theories about the mechanism or mechanisms involved in the pattern. One can say more generally that science often begins with a reliable generalization: Iron rusts, apples are nutritious. But science allows us to understand these in terms of causal mechanisms.

## **4. Experiment**

The critical idea is the idea of “control.” In experimenting, we physically control and manipulate the conditions to determine outcomes. Thus, we theorize a causal mechanism; then establish conditions which isolate that mechanism from other mechanisms and see if it does what theory says it must do. Plainly this is not what happens when we do a regression. The “control” is mathematically and not physical. But if regression cannot give us this sort of control, is it otherwise available for social science? The answer is clear: Generally, it is not. In the first place, there is a huge ethical barrier in manipulating people and their environments. Second, a “controlled” environment will distort the conditions which conjointly produce outcomes making generalization from the experimental situation to the real world rare if not impossible. Critically, here, the social world is real enough, but the mere fact that necessarily it is mediated by the consciousness of agents makes it impossible to say how a condition being manipulated will be experienced and understood by the agent, both in the experimental situation and in concrete real world situations. There may very well be huge differences depending on how the subject understands the context.

Many “experiments” are really not experiments in the sense that conditions are controlled and the goal is to test for a theorized social mechanism (paralleling the mechanism of oxidation). Thus, in the typical sociological “experiment” subjects in both “an experimental group” and a “control group” are pretested by responding to a measure of the dependent variable. Members of the

experimental group are then exposed to some sort “stimulus” –the independent variable, and then both groups are tested again. Any difference is attributed to the independent variable. But, as noted, no attention is paid to question of whether there is a functioning social mechanism which explains the difference. Plainly, all the foregoing problems regarding validity and causality remain. Is the difference, if found, a fluke or is there are plausible causal mechanism which needs to theorized? Still, when they are sufficiently rigorous (and forego claims about explanation) such studies are rightly part of the descriptive evidence for conclusions.

An excellent example is the longitudinal study, 'Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40.' As summarized by David L. Kirp, "From a group of 123 South Side neighborhood children, 58 were randomly assigned to the Perry program, while the rest, identical in virtually all respects, didn't attend preschool. Most children attended Perry for two years, three hours a day, five days a week. The curriculum emphasized problem-solving rather than unstructured play or "repeat after me" drills. The children were viewed as active learners, not sponges; a major part of their daily routine involved planning, carrying out and reviewing what they were learning. Teachers were well trained and decently paid, and there was a teacher for every five youngsters. They made weekly home visits to parents, helping them teach their own children." "Random assignment is the research gold standard because the "treatment" -- in this case, preschool -- best explains any subsequent differences between the two groups." Data was collected every year from age 3 through 11, then at ages 14, 15, 19, 27 and 40.

What makes this an interesting study is the fact that the results are quite remarkable. In terms of every relevant outcome, literacy, completion of high school, crime, and marriage and divorce rates. Indeed, at age 40, "nearly twice as many have earned college degrees (one has a Ph.D.). More of them have jobs: 76 percent versus 62 percent. They are more likely to own their home, own a car and have a savings account. They are less likely to have been on welfare. They earn considerably more -- \$20,800 versus \$15,300. But, of course, we remain unclear as to what in the experience of these students *explains* these differences in outcomes. It will be certainly be a complicated story.

Finally, so-called "natural experiments" are not experiments in any useful sense, but these may also provide sound evidence for some conclusions. One thinks here of the American “experiment” with prohibition. After alcohol was criminalized, the number of “speak-easies” in New York City was three times the prior number of legal bars and saloons. Even worse, criminalizing the use of alcohol both weakened respect for law and was a boon to organized crime.

## **5. Qualitative Methods**

While qualitative research includes a widely various set of assumptions, methods and techniques, a generic definition would have it that it seeks to understand social phenomena in terms of the beliefs and understanding which people bring to them. We need to establish what the phenomenon means to the members. Critically, this is always an interpretive problem. That is, since meanings are not directly accessible, this always involves an effort on the part of the researcher to understand the “other.” Ethnography, of course, is a typical, perhaps paradigmatic interpretative effort, but such research includes as well, more narrowly conceived structured and unstructured interviews, translation and participant observation. But as in “culture studies,” it

may consider a wide variety of empirical materials, including “discourses,” texts, historical documents, life stories, films, advertising, indeed, any material which is meaningful and which therefore demands interpretation. While there is considerable overlap in strategies of achieving interpretation of meaning, there is little agreement, as well shall see, on assumptions and goals of such research. Thus, it may draw on the naturalism of the symbolic interactionist tradition, the hermeneutics of Hans-Georg Gadamer, the phenomenological approaches of Edmund Husserl and Alfred Schütz, psychoanalysis, versions of Marxism, feminist theory, or more recently the “deconstructive” and “genealogical techniques of Jacques Derrida and Michel Foucault.

## 5.1 “Objectivity” and Qualitative Research

But despite differences, a key point of agreement in these meta-theoretical approaches derives from a common problem of qualitative research as defined here. Since these approaches share in rejecting a positivist theory of science in which “data” are “given” and unproblematically available for “objective” inquiry and since all these perspectives assume that all meaningful “data” requires interpretation, the question arises: What are the problems of “understanding” and what is the status of the conclusions at which one arrives? We can distinguish two different sorts of answers.

One can hold that at the conclusion of competent inquiry, one has achieved a more or less adequate understanding of the social phenomena as that is understood by members. Speaking broadly, this is the posture of the naturalism of SI theory, the approach of critical realism and most readings of the hermeneutic tradition. For these perspectives, the problem is an instance of the more general fallibilism of any assertion (hypothesis, interpretation, etc.). That is, from this point of view, one must acknowledge that any hypothesis or interpretation may be wrong—even radically so, but also insist that this is true of all science. As regards interpretation, we have what people say and what people do, we have texts and artifacts, and one must engage these critically. Just as the field linguist approaches the construction of a translation of an alien language, the problem is to consider reflexively our hypotheses regarding meaning. That is, the researcher must consider what he is assuming and with this as essential background, make judgments about the meaning of action of the observed. Is the researcher making unnoticed assumptions which distort the effort to comprehend? Does the interpretation make sense? Are their anomalies which need to be addressed? Are their alternatives that need to be considered? Does the interpretation stand up to behavioral tests? Etc. Similarly, since (as the hermeneutic tradition insists), meanings are cultural products which do not present themselves neutrally or with one voice, and since the observer and the observed are situated spatially and historically, we cannot hope for an absolutely objective, theory-neutral interpretation.

At best we can have but qualified objectivity—indeed, exactly parallel to the objectivity available in *all* science. That is, all post-positivist philosophies of science acknowledge that there is no “logic” of discovery, confirmation or falsification and no algorithm which assures a scientific consensus (when it is achieved). Indeed, recent valuable work in the sociology of science, inspired in part by the work of Thomas Kuhn, shows both that while scientific practice does not obey the constraints of “rationality” as envisioned by Vienna logical empiricism, it does answer to contextually responsible forms of rationality. At the very least, the practices of the successful physical sciences have evolved norms regarding inquiry which practitioners acknowledge, usually tacitly. Publicity and consideration of evidence is one. Acknowledgement of a stubborn reality

and fallibilism is another. Thus, while work in the sociology of science gives us a deeper understanding of the actual practices of the sciences, few, if anyone, would go so far as to say that scientific practices are indistinguishable “methodologically” from non-scientific practices. Similarly, given agreement on critical norms governing inquiry, there may well be differences in techniques and even in criteria for evaluating outcomes.

The social scientist does have, however, an already noticed special burden. For social science there is a “double hermeneutic.” The natural scientist is interrogating a mind independent nature, but arriving at consensus among colleagues regarding its processes is a hermeneutic process. That is, the physical scientist must communicate with, and convince colleagues, that her claims deserve acceptance. The social scientist, by contrast, is interrogating a meaningful social world. Getting an understanding of this is the “first” hermeneutic. But then, like her colleagues in the physical sciences, she must seek a consensus among colleagues regarding her claims about this meaningful world, the second hermeneutic process. We can perhaps see more clearly what this means by considering the second option, which can conveniently be termed “ethnographic skepticism.”

## 5.2 Ethnographic Skepticism

Ethnographic skepticism is very much influenced by so-called “post-modern” epistemologies. It asserts either that even a qualified objectivity is impossible or, more radically, since there is nothing “objective” about socially constructed meanings, the question of true or false does not even arise. On this view, granting that there is no God’s eye view of the world leads to the conclusion that there are only *different* views of the world and there can be no adjudicating between them. Thus, for Lyotard, there is an “heterogeneity of language games” with no consensus possible as regards “rules” or “meta-prescriptions.” Each is subject to its own “pragmatic rules,” and they are not “isomorphic.” That is, lacking a universal set of “rules,” these many “discourses” are not inter-translatable. Hence any “consensus” must be “local.” “The game of science is thus put on a par with the others.” One may take a feminist perspective or the perspective of the colonized. These will provide very different conclusions regarding the understanding of society. The question then may be asked, are the likely different conclusions merely “true for them,” females or the colonized”? Is the account *merely* a feminist point of view, or is the account true (period)—as much true as quantum theory is true? The difference is fundamental. To say that some assertion is true is to claim authority for the assertion: we are obliged to accept the claim despite our “opinion” to the contrary. “True for me,” or “true for us,” makes no such claim. But of course it also ends argument. Scientific claims are fallible exactly in the sense that argument is always possible.

We need first to notice our taken-for-granted ability to understand one another in our everyday lives. As Weber pointed out, this involved what he called *verstehen* (“understanding”), the human capacity to grasp the meaning of another’s actions. We must not think of *verstehen* as some sort of special, intuitive, sympathetic understanding, a reliving of the experience of others. *Verstehen* is something we all always do! We are engaged in *verstehen* in judging that a person on a ladder is painting the house, in judging that the expression on mother’s face is distress produced by our careless remark, and so forth. We learned to do this, indeed, when we learned to use language! There is nothing dubious about such judgments since, as with any judgment, they require evidence and may, subsequently, be rejected. While it can hardly be denied that we are able to understand one another, philosophers have argued about how this is possible. The biggest difference is between theories

which follow George Herbert Mead's "social behaviorism," those that take a position which derives from the phenomenology of Edmund Husserl and those that follow the "hermeneutics" of Hans Geog Gadamer. The differences here are philosophically important but need not bear on concrete inquiry. Indeed, most qualitative research usefully employs insights derived from these competing philosophical positions

Second, our ethnographer is not a Martian, but a human being. And even if the culture she studies is very, very different than her own, it remains a human culture: hence, *verstehen* will still be critical. In the worst case, accordingly, the researcher has available the same evidence that members have—the actions and products (for example, texts, artifacts, etc.) of members. Some actions will be immediately understood: they are seeking food, building a shelter. Eventually interactions succeed, expectations are realized, there is communication and understanding. Of course, this will take some time and considerable skill, and of course, our ethnographer might be wrong—perhaps in detail, perhaps in some fundamental way.

### 5.3 Privileging Perspectives

But doesn't the "native" have a "privileged" understanding that is inaccessible to the "other?" Consider then possible "privileged" points of view: "the colonized," "women," "Black women," "women of color," "upper-class women of color," "urban lower class women of color," etc. etc.: The issue is not whether these "voices" have been suppressed in white male dominated positivist social science: They have. Nor is it argued that much qualitative work is poorly done, distorted in this way or that. The issue rather is epistemological: Because each of us, logically, has a unique biography and position in society, each person's viewpoint is strictly speaking unique. We seem driven beyond "relativism" to a radical subjectivism—a position which is ultimately incoherent! I cannot be a native but I cannot be you either. But this is a pseudo problem: Meanings are not in the "minds" of actors. Meanings are "out there" in the practices themselves. They are "intersubjective," neither "subjective" nor "objective." Thus, the problem of understanding "the other" begins at home. In everyday life, we do not turn a problem into an impossibility! Indeed, as Mead and Schütz insisted, if I am to communicate with you at all, I must in some measure take your position.

One cannot, to be sure, overestimate how difficult it may be to achieve an adequate interpretation. Granting that such objectivity is "situated" and not "absolute," a "situated objectivity" will require "reflexivity" in Bourdieu's sense. That is, in addition to being aware of the obvious potential positional biases, there is question of "the objective space of possible intellectual positions offered to him or her at a given moment..." and finally, there is "the intellectualist" bias of construing the world as "a spectacle." On this view, "knowing" is not a "reflection" of reality nor a mere construction, but is "disciplined by the otherness with which it engages." Not only may informants lie or distort what they report—sometimes for very good reasons, but they may not be self-conscious of meanings that their behavior seems to confirm. Plainly, reflexivity puts strong requirements on questions in interviewing and on perceptions on what is going on in participant observation, but it does *not* require that positivist criteria of validity, reliability and generalizability need be satisfied. It suggests also that considerable trust will be demanded on both sides. Finally, any viewpoint will leave much out. Accordingly, as Schütz insisted, the social scientist is obliged to take care that "other voices" are heard, that the account is as "objective" as is humanly possible. Patricia Hill Collins makes the point: "Each group speaks from its own standpoint and shares in its own partial, situated knowledge. But because each group perceives its own truth as partial, its

knowledge is unfinished. Each group becomes better able to consider other group's standpoints without relinquishing the uniqueness of its own standpoint or suppressing other groups' partial standpoints.”

#### 5.4 The Role of Qualitative Research

A second fundamental question regarding qualitative research regards its role in social science. One view holds that it is the whole of social science, that one cannot do any more than provide a description of the meanings shared by members. Indeed, on this view, the idea that we can find general laws, or causal explanations, is completely misplaced. As noted, this posture has roots in the *Methodenstreit* in the late nineteenth century. Resting on entirely different “foundations” from the natural sciences, the human sciences employ entirely different methods. Clifford Geertz speaks, accordingly, of “thick description.” On this view, the boundaries between “science” and non-science are, at best, blurred. A good deal of cultural anthropology (often also influenced by postmodern ideas, above) takes this path. On this perspective, there is nothing in social science which even faintly resembles theory in the physical sciences.

Another posture accepts a distinction between “micro-sociology” and “macro-sociology” and offers that qualitative methods are the critical component of micro-sociology. Presumably such work complements macro work which, operating a different level of abstraction, seeks structural explanations of action. On this view, the macro sociologist offers explanatory theories, for example, that some system functions to assure allocation or legitimation. But whether macro work in fact is complementary to micro work is contestable. Schütz’s criticism of Parson’s structural functionalism shows why. Schütz wrote:

Professor Parsons has the right insight that a theory of action would be meaningless without the application of the subjective point of view. But he does not follow this principle to its roots. He replaces subjective events in the mind of the actor by a scheme of interpretation of such events, accessible only to the observer, thus confusing objective schemes for interpreting subjective phenomena with these subjective phenomena themselves.

But,

the answering of our question, 'What does the social world mean for me, the observer?' has as a prerequisite the answering of the quite different questions, "What does this social world mean for observed actors within this world, and what did he mean by his acting within it?' With these questions, we no longer naively accept the world and its current idealizations and formalizations as ready-made and meaningful beyond all doubt, but undertake to study the process of idealizing and formalizing as such, the genesis of the meaning which social phenomena have for us as well as for the actors, the mechanism of the activity by which human beings understand one another and themselves.

The upshot of much macro-theory has been a tendency to assume that one has the meanings of participants without actually doing qualitative research, that meaning is captured without examining the concrete contexts of action. But there is a wide range of work which is generally deemed “micro” which takes Schütz’s advice and seeks “to study the process of idealizing and

formalizing as such, the genesis of the meaning which social phenomena have for us as well as for the actors, the mechanism of the activity by which human beings understand one another and themselves.” This includes the work of Goffman and the ethnomethodologists (of course with differences) and might also include the work of symbolic interactionists. However, it is not clear whether this work is best seen as seeking to complement macro-orientations or as offering a different *kind* of social science, one which is perhaps closer to Geertz.

A clear third choice is provided by some versions of Weber and some versions of Marxism, critical realism, the work of Giddens, Bourdieu and perhaps also Foucault. These orientations all reject a micro-macro division and all hold that “social structure” cannot be understood without acknowledging that society is the product of individual agents working with materials at hand. It follows then that all *explanatory* social science has an ethnographic moment. But critically, this is seen as but the first step.

The key point for these writers is that once one gets an understanding of the meaning which social phenomena has for actors, it must now be asked: Is their understanding adequate? That is, while actors need to have practical knowledge sufficient to carry on practices in society, they need not have an understanding of the conditions and consequences of action. They may, accordingly, *misunderstand* what is happening in society. More generally, it is possible that they are acting on false beliefs and that, indeed, if they were to come this conclusion, they might act otherwise. Consider, for example, the belief that women are capable only of domestic and reproductive activities. This belief will surely support and legitimize patriarchal social relations and practices in the institutions of society. But if women (and men) came to believe otherwise, actors would be motivated to change these practices. On this view, it is a critical task of social science to explain why people have the beliefs they have. Thus, by explaining our beliefs and by making clear the conditions and consequences of social action, social science is potentially emancipating.

Moreover, on this view, theory has a role analogous to theory in the natural sciences. Thus, the rusting of iron is made intelligible by molecular theory which provides an explanatory causal mechanism. By analogy, social outcomes are made intelligible by theorizing social mechanisms: which provide both accounts of action in terms of the meanings and beliefs of actors *and* an explanation of why the outcomes are as they are. So, for example, in his classic study of why working class kids get working class jobs, Willis shows that they get working class jobs exactly because, given the conditions of their action, they unwittingly co-operate in bringing about outcomes which are plainly not in their interest. Similarly, in his account in *Asylums*, Goffman offers a powerful social mechanism in which “staff” and “clients” co-operate in structuring identities and practices which explains why the goals of the institution are not satisfied even while it appears to all—including the participants, that they are.

## **6. History and Social Science**

The present is the product of events and actions by geographically situated persons working with cultural materials which were themselves the product of previous events and actions by persons. This process began in human prehistory and continues today. There are a number of critical implications for social scientific research of this elementary fact. First, there are no two local histories which are identical and this means that there will be historically generated differences in

societies. Accordingly, explaining these differences will require inquiry into their concrete histories. For some differences, the recent past may be sufficient. For others, for example, understanding uneven development in the world, as Jared Diamond has shown, it may be necessary to go back as far as prehistory. A number of questions are suggested by these considerations.

First, is historical inquiry a critical part of *all* social science inquiry? An affirmative answer to this question is widely held, but one might insist that historical inquiry is necessary only if the goal of research is explanation: either some important feature of the society, e.g., the prevailing level of development, the form of state, etc. or explaining some important event or episode, for example, the Chinese revolution, a depression, an increase in inequality or a decrease in the crime rate. Explaining an event requires history because they are always many causes which taken together produce the outcome. Consider, e.g., explaining the events of 9/11.

But much sound social research has other aims. These include quantitative or qualitative *descriptions* of current (or past) states of affairs. Thus, one seeks demographic facts or an ethnography of Bali. There is further often unnoticed goal: Some research in social science is aimed at providing an account of a critical social mechanism at work at some definite period in society. For example, Willis's study of working class students or Goffman's account in *Asylums* examines a particular concrete aspect of an existing society but it does not seek to explain how it came to be the way it is. Rather, it is best seen as providing an understanding of a critical concrete social process.

Except that in physical science where models apply everywhere and anywhere, there is analogy to model building in the natural sciences. Thus, molecular chemistry provides a powerful causal model which makes intelligible oxidation and a huge number of other processes. The understanding gained, of course, can be put to use to explain concrete events although, in contrast to social science, this rarely a goal of inquiry. The physicist does not try to explain the trajectory of a falling leaf or, for that matter, the collapse of building. The understanding provided by theory can also be put to applied use, e.g., in developing antibiotics, in building nuclear bombs, in cosmetics, pesticides—on could go on. An understanding of a social process also gives us capacities for applied use, for example, in explaining events, or in crime prevention. But to repeat, in social science, in contrast to natural science, the models remain time and space dependent.

Since studies such as these deal with a restricted locale in space and time, there are severe limits on generalization from these studies. For example, while there are some features of working class kids in working class neighborhoods in Britain which at some level of abstraction are true of working class kids in (say) Detroit, there will be very important critical differences—e.g., how race figures into understanding outcomes. Thus, since both societies are capitalist, all workers face the dynamics of structural unemployment. But race does not figure in Willis's study. Similarly we can think of Marx's *Capital* as offering an abstract theory of capitalist reproduction, true of all capitalisms, but not true of any pre-capitalist society. We can, however, acknowledge at the same time that every concrete capitalist society will be different, often in critically important ways. Thus, while structural unemployment is an outcome of capitalist reproduction wherever there is capitalism, there will be critical differences in the ways that this is faced, e.g., in Japan, Sweden or the United States. And, as above, explaining these differences is necessarily a historical problem.

## 6.1 Further Methodological Issues

The foregoing raises further methodological questions regarding the importance of abstraction and generalization, the question of “general theory,” and the use of comparative methods. All scientific theories must abstract from concrete reality. We “strip away” all the properties of concrete (empirical) iron and define it in terms of its atomic structure. Theoretical iron is Fe and, according to theory, it *must* rust if exposed to H<sub>2</sub>O. And it usually does because most concrete pieces of iron are instances of *theoretical* Fe even they are not purely Fe. Thus, Marx’s analysis of capitalism is very abstract and makes claims about all capitalist societies. Goffman’s account is much less abstract and aims at understanding a range of “total institutions” found in late modern societies.

Generalizing has the form of inferring that what is true of an instance is true of all (or most) such instances. The historical character of social phenomena suggests that we need to be cautious in our efforts to generalize. The foregoing also suggests that versus the positivist “covering law” model, generalizations do not explain their instances, especially if, as it nearly always the case, the generalization is not a universal of the form All F is G. Indeed, even in this, the best case, we can still ask, why is any F, G? Granted, for example, that smokers are more likely to get cancer, why did Sam, a non-smoker, get cancer and Harry, a lifelong smoker, did not. Still, the generalization, “The probability of cancer is higher among smokers” is a sound basis for not smoking. Indeed, everyday life employs a huge store of generalizations which form the basis for action: “Don’t put your finger in the pot of hot water,” “You can assume that Sam will be on time for his appointment.” WE can act on these and lack utterly an explanation for them.

A further problem is suggested. Given that history is the product of events and decisions made by persons working with materials at hand, there is no likelihood that we can find a useful and interesting *general* theory of society, including a general theory of social change. By “a general theory” is meant a theory which identifies all the relevant “variables” and their relations and dynamics, true of all societies everywhere and everywhen. Examples include Parsonian structural functionalism, evolutionary theory (in some of its forms), and orthodox Marxist “historical materialism.” One might say that even if we had such a theory, it would not be useful because to make concrete differences irrelevant, it would need to be at such a high level of abstraction, that it would be totally uninteresting. For example, we know that if a society is to reproduce itself, it must relate to nature to produce the means of life. But the interesting question is exactly how do they do this? The historical variability here is immense. Similarly, while there is always change (and reproduction), the causes of change (and relative stability) vary enormously—from meteorological disasters, to the dramatic effects of destroying the Twin Towers in New York City to the unintended consequences of decisions by actors located in highly various key positions of power.

## 6.2 The Role of Comparative Methods

It may be useful to introduce here John Stuart Mill’s famous “Methods.” He identified five: the Methods of Agreement, Difference, the Joint Method (which is not merely a combining of Agreement and Difference, the Method of Concomitant-Variation and the Method of Residues. Mill wisely thought of these as experimental methods and recognized that experiment was seldom

possible in the social sciences. He believed that the less stringent demands of the Joint Method was most appropriate for social science. Durkheim agreed that the Methods of Agreement and Difference were too demanding. For him, the method of Concomitant-Variation (the antecedent of contemporary regression) was most appropriate for Social Science. Theda Skocpol has provided a much discussed argument which exhibits the key issues.

She has three positive cases to be explained, the social revolutions in France, in 1789, in Russia, 1917 and in China, 1911. In very interesting chapters she undertakes a comparative-historical analysis in which she considers these, and though briefly, three "negative" cases, or situations where there were no social revolution. While her emphasis is on the positive cases, strictly, she employs Mill's joint method. Schematically,

$$\begin{aligned} ABC (x_1, x_2, \dots) &\rightarrow E (y_1, y_2, \dots) \\ ABF (x_1, x_2, \dots) &\rightarrow E (y_1, y_2, \dots) \\ ABH (x_1, x_2, \dots) &\rightarrow E (y_1, y_2, \dots) \\ MNR(x_1, x_2, \dots) &\rightarrow \text{not-}E (y_1, y_2, \dots) \\ KLP (x_1, x_2, \dots) &\rightarrow \text{not-}E (y_1, y_2, \dots) \end{aligned}$$

Probably A,B is cause (or determining condition) of E

She concludes that the three positive cases have in common "(1) state organizations susceptible to administrative and military collapse when subjected to intensified pressures from more developed countries abroad and (2) agrarian sociopolitical structures that facilitated widespread peasant revolts against landlords..." Taken together, she concludes that these are "the sufficient distinctive causes" of these revolutions.

Skocpol assumes the covering law model of explanation and the logic is clear enough. One hypothesizes various potential "causes," then eliminates some as neither necessary nor sufficient. One important commentator asserts that nominal methods such as these, provide "a sound logical basis for eliminating potential necessary and sufficient causes." Unfortunately, this is an unduly optimistic conclusion, for several reasons.

First, Mill intended his methods to be used to establish causes in Hume's understanding of causality: *a* is the cause of *b* means that there is law-like, but contingent association ("constant conjunction," "invariant relation") between *a* and *b*. The realist conception (as noticed above) has it that *a* causes *b* means that *a produces* or brings about *b*, and the relation is not contingent. On the Humean reading, causality can be analysed in terms of necessary and sufficient conditions; on the realist reading, it cannot. That is, genuine causes may be neither necessary nor sufficient conditions.

Consider the example of the drunk driver. Since there are drunk drivers who escape accidents, Mills methods show that drunk driving is not a sufficient condition for an accident. Nor it is a necessary condition, since obviously one can be stone sober and still have an accident. On the other hand, in some particular case, drunkenness was the cause of the accident: one surely does explain it by noting that the driver was drunk. The explanation assumes, of course, a number of mechanisms, including critically, what alcohol does to one's central nervous system and how in this case, it combined with other contingent factors to produce the accident.

More generally, then, even where comparison of cases, positive and negative, eliminates conditions as not necessary and not sufficient, they cannot establish, as Skocpol claimed, "the sufficient distinctive causes" of three revolutions. Put in terms of the foregoing, the three revolutions were the product of different complex historical chains of processes, events and decisions by actors working with materials at hand.

Moreover, as the foregoing suggests, the effort to eliminate "factors" as not necessary or not sufficient is fraught with difficulties. The problem is not merely the theoretical problem of identifying the relevant "factors" but the fact that no comparative study is experimental. Indeed, Sewell is quite correct to insist that Skocpol assumes what he calls "experimental temporality," and that, "in order for Skocpol's revolutions to be subjected to her comparative method, they must be conceptualized as analogous to separate 'trials' of an experiment. This means that the trials must be both equivalent and independent." But it is quite impossible to satisfy these conditions. The point is that since most outcomes are not the product of a single non-trivial sufficient condition, the methods can offer little help with trying to sort this out. On the other hand, while they can offer some confidence in eliminating factors as not necessary, if there are alternative paths to outcomes, this will not be of much help either. This is the point about equivalence. Consider, for example, alternative paths to modernization. That is, at some point in time, given existing conditions, some condition may be "necessary" for some outcome. But it may not be necessary at some other time and place given other existing conditions. For example, at some time and place, breaking the capacity of a landed nobility to resist private property may be necessary for there to be commercial development, but at some other time and place, given (say) abundant merchant capital in cities, this is not necessary.

Indeed, as regards the uses of comparisons, we may conclude with a useful observation of Skocpol: She wrote that:

'comparative history' is commonly used rather loosely to refer to any and all studies in which two or more historical trajectories of nation-states, institutional complexes, or civilizations are juxtaposed. In this very broad sense, the term refers to studies with very different kinds of purposes. Some... are meant to show that a particular general sociological model holds across different national contexts. Other studies...use comparisons primarily to bring out contrast among nations and civilizations taken as synthetic wholes. But there is a third version... in which the overriding intent is to develop, test, and refine causal, explanatory hypotheses about events or structures integral to macro-units such as nation-states.

We agree with Skocpol, that because no two local histories are the same, there are no interesting "general models," and hence the first purpose, to show that a general model holds, cannot be sustained. The second purpose is too narrow: First, there is no reason to restrict comparisons to nations or civilizations understood as synthetic wholes. Of considerable importance is the effort to compare social mechanisms, paths and processes, both for their "resemblances" and for their differences. Second, one obvious goal is to explain these differences—as Weber insisted. The third version, then, is correct: to develop, test and refine causal explanatory hypotheses. But one must abandon the covering law model and instead think of "causal explanatory hypotheses" as hypotheses about social causal mechanisms.

Skocpol's conclusions were modest. She asked whether the “broad resemblances” she identified could be applied beyond the three cases of her focus, and answered, “unequivocally 'no'.” She gives two reasons: As C. Wright Mills insisted, “the mechanisms of change...vary with the social structure we are examining” and second, “patterns of revolutionary causation and outcomes are necessarily affected by world-historical changes in the fundamental structures and bases of state power as such.” But why stop here? Why not assert that this is true of all history, all cases, all structures? “Resemblances” are just that: They are neither sufficient nor necessary conditions. They do not explain.

Sewell, in summarizing what he called, “eventful sociology” summarizes matters well enough:

...[S]ociology's epic quest for social laws is illusory, whether the search is for timeless truth about all societies, ineluctable trends of more limited historical epochs, or inductively derived laws of certain classes of social phenomena. Social processes...are inherently contingent, discontinuous, and open-ended. Big and ponderous social processes are never entirely immune from being transformed by small alterations in volatile and local social processes. “Structures” are constructed by human action, and “societies” or “social formations” or “social systems” are continually shaped and reshaped by the creativity and stubbornness of their human creators.

## 7. “Value-Free” Social Science?

We conclude here with some comments on the question of a value-free social science. Positivist theories of social science made two fundamental assumptions in this regard. First, there is a radical epistemological difference between “statements of matters of fact” and “value judgments.” Factual claims are cognitive: either true or false and value judgments are neither. Accordingly, one cannot infer what ought to be from what is. The findings of science, accordingly, are consistent with any value position: Science can address “means” but not “ends.” It can tell you if some policy is efficient with regard to achieving some goal but it cannot be brought to bear on the assessing the goals. Second, and following on the first, since science must be value-free, value judgments are to be carefully expunged from all research.

The second assumption is almost certainly a council of perfection. Researchers, like all human beings, are not logic-machines who have assembled all their beliefs and assumptions into a coherent system. Not only are means and ends not so easily separated—if at all, but unnoticed evaluative assumptions may be buried in unnoticed implications of innocent appearing “facts.” Consider here a very obvious example from Isaiah Berlin regarding what happened in Germany under the Nazis: (1) “The country was depopulated.” (2) “Millions of people died.” (3) “Millions of people were killed.” And (4) “Millions of people were massacred.” (4) is surely evaluative since it implies a highly immoral action; the other assertions do not imply this. But (4) is *also the most accurate description of what happened*. Agency disappears in (1) and (2). (3) does not imply as does (4) that there was a systematic campaign of brutal killing. Indeed, the paradox is that by trying to write value-neutral language—typically writing in the passive voice and avoiding moral terms, one takes a political position which obscures just those facts which are most critical in understanding the Nazi phenomena. Under the guise of value neutrality, (1), (2) or (3) misleads and misinforms the reader, manifestly contrary to the norm that, as far as possible, science should seek to offer descriptions and

explanations which are true. Indeed, it is easy to forget that social science always involves three parties: the members who constitute the domain of inquiry, the inquirer and, not to be forgotten, the audience which receives the research. One cannot hope that hermeneutical and rhetorical problems can be escaped by appeal to the canons of “logic.” But they may be faced intelligently and honestly.

Similarly nobody denies that problem selection is evaluative. This is part of Bourdieu’s observation that one needs to be cognizant of the “objective space of possible intellectual positions.” On this count, the ethnographic skeptics have been decidedly more forthright. That is, by explicitly taking a “feminist” point of view, e.g., feminists researchers have both rejected existing frames of reference and provoked new problems hitherto not on the research agenda.

Finally, one must reject what seems like the easy answer to the problem: To simply make clear one’s values and then proceed “objectively.” But in addition to the problem of identifying and organizing assumptions to see their connectedness, there are two other problems: Priorities of one’s values need to be arranged, and one would need also to state them so that they are not effectively vacuous. One may believe in freedom and justice, but what happens if these conflict? Similarly, a host of conflicting choices are consistent with conflicting concrete conceptions of “freedom” and “justice.”

But the first assumption, that values are effectively science-free needs also be challenged. Without attempting to review the many arguments (and counterarguments), we can notice here that it is easy to see how explanatory theories can secrete values. For example, it may be held that explanatory theories give us insight as regards the extent to which social arrangements enable the satisfaction of human needs and purposes. This is, of course, an abstract value premise which one is free to reject. On the other hand, societies are not suicide clubs and there is ample empirical evidence that considering concrete arrangements in terms of the effectiveness in satisfying concretely specified human needs and purposes gives one at least a wedge in assessing existing arrangements. It is probably the case that many of those who are engaged in qualitative research are committed to assessing research in terms of personal and political goals which, not unreasonably, are taken for granted.

A second line of argument has already been suggested. It offers that social science can provide what is sometimes called “immanent critique,” “critique,” because it seeks to identify those conditions which must obtain if the outcome is to be what it is, and “immanent” because it exposes values internal to the local practices of the members. It brings in no values from “outside” the concrete local conditions. A good deal of historical and anthropological research offers, if often not explicitly, this mode of “criticism” and as already noted, it is an explicit aspect of critical theory, critical realism and, at least on many readings perhaps also of Foucaultian “genealogy” and post modern “deconstruction.” From this point of view, the social researcher makes clear to members what their practices take for granted, including their value assumptions, and thereby gives members greater clarity and insight into their practices.

## **8. Conclusions**

The very often taken-for-granted assumptions one makes about the character of a social science are critical as regards the conception of theory and method that will be employed. Background assumptions regarding epistemology and ontology constrain and enable different notions of theory

and different roles for existing methodologies. As argued in the foregoing, when properly contexted, all the methods currently in use in research have a legitimate place. This means also that we must be clear about our goals and recognize that while the physical sciences provide useful lessons for inquiry in the social sciences, this demands that we have a sound conception of inquiry in the physical sciences. The idea of explanation and of causality are critical here. But we need also to recognize that huge differences in the subject-matters of the human and physical sciences make for differences in theory and methods, if not in goals. For example, while experiment as practiced in the natural sciences is not available in the human sciences, techniques of multiple regression, useful for a range of important goals, are not adequate substitutes for the capacity to manipulate causal variables. On the other hand, inquiry into meaning provides an indispensable resource for explanation, a resource not available to the physical sciences.

Finally, a good deal of criticism of inquiry into the human sciences rests on a misapprehension of the goals and practices of the successful physical sciences. The physical sciences, for the most part, operate at very high level of abstraction, offering us, for example, truths about all matter or all living things. So Newtonian mechanics, even if properly understood, is a poor example to emulate. The human sciences are closer to evolutionary biology or meteorology in seeking to provide truths regarding complexly caused concrete outcomes. This enormously complicates matters. On the other hand, while claims in *all* science are always fallible, the norms which govern inquiry in all science allow for critical self-correction. If science is often part of the problem, it is also part of the solution.

## Glossary

**Abduction.** Inference to the best explanation, an important inductive mode of reasoning. For example, after seeing that the scraps of cheese put on the floor disappear during the night, we infer that we have mice. Abduction is a pertinent test of competing theories. See induction.

**Abstraction.** Roughly, the process of 'peeling away' (in thought) the properties of concrete entities until we grasp their 'generic features.' Many theoretical terms are abstractions in this sense: e.g., 'mass,' 'Fe' and 'NaCl,' 'exchange value' in Marx. Abstraction should be distinguished from Generalization (q.v.).

**A priori.** Knowledge which is available independently of experience. For many (but not all), this is true of mathematics and logic. A contrasting term to **a posteriori**: Knowledge which "depends upon experience." See Empirical, Tautology.

**Causality:** We can distinguish two radically different conceptions:

1. The positivist conception owes to David Hume. 'A causes B' means 'Whenever A, B.' The relation is merely contingent (q.v.), one of constant conjunction; there is no necessity involved since (as Hume had argued), there is no contradiction in holding that A and not-B.

2. The critical realist (q.v.) view: "Things" have causal powers. There is something about A such that it brings about its effects B, C, etc. Thus, there is something about NaCl such that it dissolves in water. If we add a CP clause (ceteris paribus or 'other things being equal'), we can say, there is something about salt such that it necessarily dissolves in water. (When it does not, it is because there are other causes operating which taken together bring about a different outcome. The necessity which is here imputed is 'natural,' not logical, See determinism.

For Marx and Weber 'determines' (bestimmt) is causal and is a realist usage.

**Confirmation.** The problem of establishing that a theory is true. While a fundamental problem for contemporary empiricism (q.v.), empiricists have been unable to articulate a 'logic' of confirmation. It was one of Kuhn's points that consensus in science did not proceed in accordance with such a 'logic.' See also 'falsification.'

**Critical Realism.** A recent form of realism (q.v.) which holds, in contrast to positivisms, that causes are productive powers, represented by theory. Critical realists are post-positivists epistemologically also in that while they reject the idea that we can have a God's view of the world, they seek to affirm a "situated objectivity."

**Critique:** A term often used to refer to any critical effort. Historically associated with the tradition of Kant who saw critique as providing the conditions of possibility of intelligible experience, and with Hegel and Marx, who saw it as showing what must be necessary if some outcome is to be what it is. Kant's critique was "transcendental," Marx's "immanent: that is, it found "contradictions" in the actual trajectory of history. A weaker sense of immanent critique exploits the fact that practices involve unacknowledged value positions which can be exposed and thereby redirect action

**Deconstruction.** A term associated with much post-modern theory. Roughly, deconstruction proceeds by 'denaturalizing' concepts, that is, by showing that they are not 'given,' but have been constructed by specific groups with specific aims and interests.

**Deduction.** A mode of inference in which if premises are true, then the conclusion drawn must be true. The premises entail the conclusion. Often mischaracterized as inference from the general to the particular. But there are countless deductions which move from the "general" to the "general." For example: If p, then q; if q then r: hence if p then r. Cf. Induction

**Determinism.** Generally, the idea that whatever happens is caused. One needs to distinguish between a positivist conception in which all the causes of an outcome are theoretically available (the system is closed) with a realist conception in which contingency is a feature of all outcomes (the system is open).

For example, we can explain and predict the position of the moon to the indefinite future. But not only are two mechanisms involved: gravity and inertia, this assumes that some large mass will not enter the solar system. For the realist, most outcomes involve many causes which are contingently conjoined. They might be explained but could not have been predicted—even if principle. Thus, NaCl will dissolve in H<sub>2</sub>O, but there is no necessity that it will put in water!

**Discourse.** A recently fashionable term associated with 'post-modernism' (q.v.) which refers to linguistic practices, 'vocabularies,' modes of speaking and argument. Thus, one can speak of many 'discourses,' 'sexual,' 'empiricist,' etc. One might hold, as well, that each constitutes 'worlds' and that contestation over these is political. See episteme; discipline; power/knowledge.

**Discipline.** For mainstream thinking, the division of labor which answers to the (putative) 'natural' division of domains of nature and society; Many writers (e.g., Mills, Giddens, Bourdieu, Wallerstein, Foucault) have argued that the disciplinary divisions in the human sciences inhibit research. Foucault exploits two related senses: the social process of 'disciplining' individuals ('normalization') through the use of 'truths' generated by (socially constructed) scientific disciplines.

**Empiricism:** The view that we can have no knowledge of anything which is not in experience (or a possible object of experience). That which is 'beyond experience' is metaphysics. This is Hume's sense, codified by Kant.

Often, empiricism is defined as holding that all knowledge is a posteriori, that it 'depends' on experience; if 'depends on' allows for the legitimacy of 'transdiction' (q.v), then realisms are empirical philosophies, for realists surely agree that all knowledge of the world is a posteriori.

It is thus also that empiricism is usually taken to be a contrast term to rationalism, defined as the view that we can have *a priori* knowledge of the world. In this sense, Plato was (on most interpretations) a rationalist. Kant was a rationalist insofar as he held that the categories of knowledge were a priori (hence the possibility of synthetic *a priori* knowledge). But Kant was an empiricist in the contrasting sense to realism (q.v).

It is in this latter contrast that the two main opposing streams in the nineteenth century contest to articulate the nature of 'science' were both empiricisms. British and French empiricism on the one side and on the other, Kantianism. Both were anti-metaphysical in Kant's sense.

**Empiricist.** Generally, as a contrasting term to realist or rationalist. See empiricism.

**Empirical realism.** Empirical realisms are naive realisms: Some things (at least) are experienced as they are. For the empirical (or naïve) realist, when we see an apple, it is because (in contrast to idealisms), there are apples “out there” independently of my perceiving it. It is one of the main features of critical realism and 'deconstruction' (q.v.) to undermine this idea. For the realist, there is something “out there,” but we see an apple (in contrast to say, a poison berry) because the concept “apple” informs our experience. A phenomenalist (q.v.) may be an empirical realist. Indeed, a motivation for contemporary realism is rejection of empirical realism, phenomenism *and* idealism.

**Episteme.** Associated especially with Foucault. Procedures for the production, regulation, distribution and circulation of discourses (q.v.). These delimit a field of objects, define a legitimate perspective, and fix norms for the elaboration of concepts and theories. These 'rules,' however, are both relatively autonomous and anonymous, not discursively formulated by participants. See paradigm; power/knowledge; discipline; ethnomethodology.

**Epistemology.** The theory of knowledge. Invented in the early modern period as the study of the foundations of knowledge. Taking for granted that science gave us knowledge, these writers asked, on what does it rest and then, in Kant, how was it possible?

**Ethnomethodology.** Identifies the work of Garfinkel and his followers. Its key idea is the claim that actors actively construct social structures without, however, being aware of what they are doing. Thus, they do not merely learn rules which are then mechanically applied, but are actively engaged in the recreation of rules in ceaseless, ongoing activity.

**Explanation:** A number of contrasting conceptions can be distinguished:

**Realist:** To explain some event is to display what brought it about, to give its causes. Realists sometimes contrast understanding and explanation, holding that understanding something, e.g., the nature of common table salt is a presupposition of explaining that at some particular time, it dissolved in water. While they are fundamentally different, realist explanation is often confused with empiricist explanation.

**Empiricist:** To explain some event is to show that it can be subsumed under some law--the covering law model (q.v.). This view is as old as Aristotle and is clear in August Comte, who coined 'sociology' and defended 'positivism.' For empiricists, there is a symmetry of explanation/prediction. Given the laws, one can predict what will happen or explain what did happen. For realists, explanation and prediction are asymmetrical.

**Functionalist explanation,** an important species of covering law explanation. Its form is:

S functions adequately in settings of kind C only if condition u is satisfied.

If trait i were present in S, then, as an effect, condition u will be satisfied.

Hence, at t, trait i is present.

**Verstehen (Understanding):** An anti-empiricist approach with application only to the human world; to explain is to 'understand.' to put oneself into the frame of the actor, to grasp the meaning, intentions, etc. of the actor. Cf. Phenomenology, Hermeneutics

**Falsification.** A view associated with Karl Popper which held that while theories cannot be positively confirmed, they can be positively falsified. But it is easy to show that this is not the case. Falsifiability, however, is an important criteria for demarcating science from non-science.

**Foundationalism.** A term used to refer to the epistemological (q.v.) idea that there is a foundation, perhaps sense experience or the *a priori*, for knowledge. Knowledge is “built up” on this foundation; hence belief is secured against skepticism and relativism. While any given belief or statement can be doubted, it can be tested against the “foundation” which is certain, indubitable. This view came under heavy attack beginning in the 1950s in philosophy of science. Kuhn’s *Structure of Scientific Revolution* (1967), while variously interpreted, spelled the death knell of foundationalist epistemology.

**Genealogy.** Associated with the later Foucault. Focuses on mutual relations between systems of truth and modalities of power. Genealogy (as in Nietzsche) rejects the idea that there is some 'form' or 'essence' which develops in history. Quite the opposite, in seeking 'origins,' genealogy tries to undermine the self-certainty, givenness, or seeming inevitability of the present by re-creating a different past. For contrast, see Whiggism.

**Generalization.** An inference from what is true of some to what is true of all. E.g., from observation of a finite set of white swans, we infer that all swans are white. Contrasted with laws. Unfortunately, empiricists (q.v.) have not made

clear how a true generalization differs from a law. (This is a consequence of empiricist qualms about necessity (q.v.)) Generalization should also be contrasted with abstraction (q.v.).

**Hermeneutics.** Broadly, an approach which emphasizes the relative opacity of a text (and then anything which can thought of as text) and the requirement, accordingly, that it be interpreted. Sometimes as a contrasting term to epistemology in the conventional foundationalist (q.v.) sense. On this view, truth claims are negotiated interpretations. There is, however, a critical difference between those who hold that negotiations are rationally constrained and those who effectively deny this. See subjectivism, relativism, skepticism.

**Double hermeneutic.** Giddens's term for the idea that while natural scientists must negotiate claims about the natural world, the social scientist must negotiate claims about a hermeneutically constructed (though real) social world, the product of lay actors.

**Induction.** Usually used as a contrasting term to deduction (q.v.) and (thus) best defined as any inference which is not deductive: That is, any inference from premise (evidence) to conclusion (hypothesis) which is, at best, probable. There are many good inductive arguments which do not satisfy the strictures of a valid deductive argument. For example: If the battery is dead, the car won't start. The car won't start; hence, probably, the batter is dead. To judge a sound induction, one must know something about the world. In this case, while there are other reasons that the car doesn't start, e.g., the starter is non-functioning, very often it is the battery. There are no formal criteria to judge a 'good induction' even though it was the goal (unrealized and almost certainly unrealizable) of recent logical empiricism to provide an inductive logic with features comparable to modern deductive (symbolic, mathematical) logic.

**Meta-Theory:** Theory about theory. Thus a theory about the nature and role of theory (a philosophy of science). A meta-theory also provides an epistemology and an ontology: what the world is like and how one comes to know it.

**Model.** A much abused term in theoretical discourses in the social sciences. It is critical to distinguish the following:

**Sentential model:** If  $T$  and  $T'$  are sets of sentences, then  $T'$  is a model to  $T$  if for each sentence  $p$  such that  $p$  is a member of  $T$ , there is a sentence  $q$ , such  $q$  is a member of  $T'$  and when  $q$  is acceptable,  $p$  is true, and when  $p$  is false,  $q$  is not acceptable. Mathematical models are the most widely used sentential models. But these are (sadly) often confused with

**Iconic model.** If  $T$  is a set of sentences about some subject matter  $N$ , then  $M$  is a model of  $N$ , if  $T'$  is a sentential model which respect to  $T$ , and  $M$  is a set of objects, etc. such that for all  $q$  which are members of  $T'$ ,  $q$  is known to be true or false by reference to  $M$ .

Models are 'representations' in both senses and both invoke theory, e.g., the Bohr model of the atom, or in sentential models a mathematical theory. But only with respect to iconic models do sentences represent theorized 'mechanisms.' (See R. Harre, *Principles of Scientific Thinking*, Chicago, 1970).

**Naturalism.** There are two somewhat related senses. In the philosophy of science, it is the view that the theory and methods of the human sciences are radically different than those of the physical sciences. Strong forms of naturalism assert that there are no important differences; qualified naturalisms offer that there are critical differences but that these do not disqualify social science as science.

This sense is not be confused with a philosophical position held by Aristotle, Marx and Dewey among others. This sense of naturalism represents an effort to include the insights of materialism and of idealism as general philosophies. Thus material *and* social causes explain our experience. This view contrasts also with a reductive version of naturalism which is in effect a materialism.

**Objective.** Used confusedly in at least two not necessarily related senses: (1) as contrasting term to 'subjective' (q.v.), public, available to anybody (intersubjective); hence also, free of bias, distortion, etc.. and (2) the way something 'really' is, independently of the subject or knower, and hence independent of her/his wishes or historical situation: "facts" are "objective." (Empiricists (q.v.) tend to collapse the two senses. An epistemology (q.v.) may affirm that objectivity in sense two is not possible even if in sense one it is. Postmodernisms have tended to assert that objectivity in neither sense is possible. See relativism.)

**Phenomenology.** The approach advanced by Husserl (in response to empiricist epistemology and problems in philosophy of mathematics (Frege)), developed with various turns by Heidegger, Sartre, Schütz, Gadamer and social scientists influenced by these writers. Phenomenology emphasizes concern over how the objects of experience are

experienced, suspending for purposes of the account, ontological questions (the so-called epochē). A further point of concern is emphasis on the constitutive acts of consciousness (intentionality).

**Positivism.** From Comte, the view that no scientific explanation can appeal to that which is beyond experience. The 'positive philosophy' was inspired by the 'negative philosophy' of Kant. It accepted its denial of metaphysics, but thought of itself as doing more than 'criticism'; hence positive philosophy. In the twentieth century, positivism came to be called 'logical empiricism,' the views developed by the Vienna Circle, following the lead of Mach and utilizing the new tools of Russell and Whitehead's *Principia Mathematica* (1910/11). See Empiricism.

**Post-Modernism.** With reference to philosophy, best construed, perhaps, as rejection of all Enlightenment (foundational) epistemological projects. See epistemology. Nietzsche may be the first post-modernist writer.

**Post-Positivism.** Reject various defining features of positivist theory of science, including its epistemology, ontology, views on causality, explanation, and theory. There are critical realist (q.v.), pragmatist (q.v) and anti-naturalist (q.v.) versions of post-positivism, as in much post-modernism.

**Post-Structuralism.** As a counter to structuralism (q.v.) and thus as the denial of 'realism,' in the sense that there is some non-visible real which relates to or explains the manifest. It is thus that, for Derrida, if one constructs a theoretical vocabulary in which the metaphor of representation does not occur, the eternal philosophical problems which accompany the notion would also disappear.

**Power/Knowledge.** Introduced by Foucault and always written as couplet since for him the two are not separable. Thus, "truth" is to be understood as a system of ordered procedures for the production, regulation, distribution, circulation and operation of statements... "Truth" is linked in a circular relation with systems of power which it induces and which extend it. A "regime" of truth.' See episteme; truth.

**Practice.** Brought into currency by Althusser and developed by Bourdieu. Used by Bourdieu and Giddens to refer to structured activities which involve rules and various resources, including the use of power and existing materials. e.g., tools, computers, etc. See praxis.

**Pragmatism.** There are many differences both among and between the "classical" pragmatists (Peirce, James and Dewey) and recent neo-pragmatism (Rorty), but all reject the correspondence theory of truth (q.v.) On might also say that, excepting Peirce, pragmatists are skeptical of realisms, sometimes pulling strongly toward anti-realism (Rorty) or building on a version of philosophical naturalism (Dewey).

**Realism:** There are two contrasting usages: Usually as a contrast term to idealism (q.v.), and thus to the view that the 'external world' is not mind-dependent, as for example, in G.E. Moore.

For critical realists and many others, it is best used as a contrasting term to empiricism since empirical realists (q.v.) need not be idealists. In this sense the realist (in contrast to the empiricist) holds that there are existents which are knowable but not possible objects of experience: The existing world outruns the experienced world.

The realists of the beginning of the twentieth century (Moore and Russell in England, the American realists, new realists and neo-realists) were opposed to idealism, but could never provide a satisfactory realist theory of knowledge. Compare here also Lenin's 'reflection theory.' Russell went to Platonism, a strong form of realism in which 'forms' have independent existence. Thus, e.g., numbers, classes, universals exist. Medieval realism contrasted to nominalism, the view that terms are mere *flatus vocis*, conventions which need in no way 'correspond' to something in the real world. Medieval realists, by contrast, held that universals were as Plato had held, or they were in things and were known through abstraction (as in e.g., Aquinas's 'conceptualism' which followed Aristotle.)

Nineteenth century historiography adopted a trichotomy which omitted realism. For these writers, there was only idealism, materialism (q.v) and positivism (q.v). Marx was very much alone in rejecting all three and adapting (in the early writings) 'naturalism' (q.v.) which him, combined the truths of materialism and idealism. Marxist historiography (following Lenin) follows the conventional trichotomy but holds that positivists are covert idealists. For Lenin (and those who follow his usage), one is either a materialist or an idealist, including then the empirical realists, Mach, Bogdanov, Carnap, etc.

**Realist interpretation of theory.** Theories are understood to provide descriptions of the mechanisms (causal powers) of things in the world. The denotata of theoretical terms may be experienceable or not. This will usually involve the construction of an iconic model (q.v.).

**Relativism.** Best used to contrast to the absolutist epistemological assumption that there are universal, culture-(and inquiry) independent truths, a 'god's eye view of the world.' Greek realisms and modern empiricisms are absolutisms.

But a relativism in this sense may resist *judgmental relativism*, the view that all opinions are equally worthy. That is, some writers reject absolutism, but insist that truth-claims may be still be adjudicated. There is, accordingly, a "situated objectivity," which is responsive to historically contexts. See subjectivism; truth.

**Social Constructionism.** A widely held current view that social forms (institutions, language, etc.) are social products, the unintended outcome of the actions of persons working with materials at hand. There is some disagreement on what this entails, especially as regards the "reality" of social forms.

**Sociology of Knowledge.** With roots in Marx, developed by Karl Mannheim (1936). R.K. Merton and mainstream sociology of knowledge has followed Mannheim in assuming that scientific knowledge cannot be sociologically explained. The so-called 'Strong Programme' and the work of Latour and others, influenced by Kuhn and the collapse of empiricist philosophy of science makes no exceptions. This opens the door to relativism (q.v.)--much to the horror of many.

**Structuralism.** A term which unclearly applies to a variety of articulations in the social sciences.

1. Perhaps the earliest use is in the context of Parsonian theory, sometimes, 'structural functionalism.' See structure.

2. More recently, a continental development (in response to phenomenology (q.v.) and 'humanism' (q.v.)), it shares in thinking in terms of systems (q.v.) but is generally realist in holding that the manifest (phenomena) is the product of a non-visible real. It is this which is the object of theory. It is thus that writers as different as Lévi-Strauss, Lacan, Braudel, Piaget, and Althusser are called 'structuralists.' See structural linguistics, post-structuralism, realism.

**Tautology.** A sentence which is logically true, true by virtue of the formal or semantic characteristics of the sentence. Thus "p or not-p" and "A triangle is a three-sided plane figure."

**Theory.** This is a much used (and ambiguous) term in the literature (especially the literature of social science.). The following are among the most obvious senses:

1. Abstract typologies or systems of categories, including, then, the concepts of ordinary language systems.
2. Systems of sentences which connect variables to variables, where 'variable' is restricted to terms with 'empirical meaning' (extension). This is the standard positivist sense of theory
3. Sentences for which there is a sentential model (q.v.)
4. Sentences for which there is an iconic model (q.v.) and existential hypotheses asserting the existence of the mechanisms modeled. This is the standard realist sense
5. Any tentative, not yet accepted, assertion, but especially explanation; a hypothesis.
6. Any speculation--distinguished from practice.

**Transdiction.** An infrequently used term to refer to an inference from what is in experience to the existence of something not in experience. For example, we infer the existence of atoms on the strength of their explanatory role.

**Truth.** Ordinary use and most philosophical theory agree that to say that some assertion is true *means* that it 'corresponds to' or 'represents' the way things are. 'Snow is white' if and only if snow is white. There are conflicting theories as regards the effort to establish truth.

**Empiricists** (q.v.) and some realists (q.v.) have argued that we can determine whether what we assert 'corresponds' to the way things are (the correspondence theory of truth).

**Post-modernists** (q.v.) have argued that we can never know this, since (with Nietzsche) we cannot have 'objective' (theory-neutral, God's eye) view of the 'world,' they hence have been thought to deny not only an absolutist notion of truth but, as well, even a fallibilist notion of truth. On this view, there is no one way that things are. See idealism.

**Critical realists** (q.v.) hold that while all claims are fallible and there is not God's view of the world, we must reject the correspondence theory of truth. But we can have confidence in truth-claims as products of competent inquiry: "situated objectivity."

**Pragmatists** (q.v.) have insisted, rightly, that since what is known depends upon the relation of the knower and the known, we should shift ground and hold that beliefs are true when and only when they 'work'. But unpacking the idea of "works" is contentious. Realists agree on the human role in producing knowledge, but assert that beliefs work *because* they are true.

**Consensus Theories** agree with epistemological criticisms of the correspondence theory, but hold that truth can be defined in terms of consensus, either actual (relativist and idealist readings of Kuhn) or potential. For Peirce's realism, e.g., truth is what will ultimately be agreed to; for Habermas's realism, truth is achieved under ideal of undistorted communication (q.v.). Critical realists generally hold that for a consensus to yield truth, it must be constrained by stubborn reality, norms of evidence, etc..

**Verstehen.** Understanding. Associated with Weber's theory of action and often held to constitute a special sort of explanation (q.v.). Many writers, including Schütz, Habermas and Giddens, think of it as a presupposition of social life not inconsistent with 'causal' explanation.

**Whiggism.** Broadly, an understanding of history in which progress is the key feature.