

Objectivity, Truth, and Method
A Philosopher's Perspective on the Social Sciences
Commentary
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Philosophers in the past 150 years have devoted a good deal of attention to the question, what is a social science? John Stuart Mill offered one important view in the 1840s, endorsing empiricism, methodological individualism, and causal explanation as the dominant methodological commitments for the human sciences. Wilhelm Dilthey, in the 1890s, emphasized the meaningfulness of human phenomena and put forward the method of *verstehen* and the primacy of "lived experience" in the interpretation of human affairs. These two perspectives--empiricist and causal, anti-empiricist and hermeneutic, have set the stage for much current thinking about the logic and method of the human sciences since the nineteenth century. Political scientists on the whole treat their discipline in terms very reminiscent of Mill; whereas anthropologists and interpretive sociologists have much greater affinity with Dilthey. Likewise, analytic philosophers have much sympathy for Mill's perspective, whereas Continental philosophers are more intrigued by the hermeneutic approach.

It will be noted that there are two axes of disagreement in these strands of tradition in the philosophy of social science. One concerns the epistemology of the social sciences--how are we to establish scientific assertions as justified and probable? Empiricism maintains that the constraints of empirical observation and the scientific method serve to establish the best possible basis for justifying beliefs about the world, and lead to objectivity and truth in the assertions advanced. The other axis concerns what we might refer to as the explanatory fabric of the social world: is the social world a causally ordered system, or is it a system of meaningful actions, beliefs, and values? But these dichotomies are not exclusive. It is possible to be an empiricist interpretivist (that is, insisting on rigorous empirical evidence in support of a proffered interpretation). And it is possible to incorporate the perspective of *verstehen* into a broadly causal framework (maintaining, for example, that it is the meaningful self-understanding of participants in a market economy that *causes* the regularities of the price system).

The most critical issue in the human sciences, then, is *not* causation versus meaning. Rather, it is the issue of scientific method. Is there a method for the human sciences on the basis of which we can arrive at hypotheses about social phenomena--causes *and* meanings, test them, and come to conclusions about their truth value? Is there a scientific method that secures a measure of objectivity for the social sciences? I begin by affirming a crucial proposition: to

be a scientist is to be committed to arriving at true beliefs about the domain of phenomena in question, on the basis of an appropriate method of empirical evaluation and confirmation. Objective scientific inquiry is possible in the social sciences, and it leads to theories and hypotheses which we have reason to believe to be true.

It is well-known in the human sciences today that the concepts of objectivity, truth, and the authority of empirical standards have come under serious challenge by some critics of the social sciences. Feminist critics charge that the concepts and methods of the social sciences reflect an essential patriarchy that discredits the objectivity of social science knowledge. Marxist critics sometimes contend that the social sciences are enmeshed in a bourgeois worldview that makes objectivity impossible. And post-modernist writers seem to disdain the ideas of truth and objectivity in the social sciences altogether, preferring instead the slippery notions of multiple discourses and knowledge/power.

These points of view are apparently reinforced by a number of philosophical worries about the claimed objectivity of scientific knowledge. For example: Scientific disputes are inherently underdetermined by the evidence. There are no pure "facts," but only facts as couched in one conceptual system or another. There are no pure observations, but rather observations couched in a theory-laden vocabulary. Theories bring with them their own empirical criteria, which bias the findings in support of them. The relations between observation and theory are hopelessly circular, with theories generating the observations that supposedly support them. Research projects are guided by antecedent assumptions about the structure of the phenomena which shape the eventual empirical findings in an arbitrary way. Scientific research communities are regulated by other criteria altogether (individual career advancement, the political demands of funding agencies, etc.) rather than epistemic criteria (evidence, logical coherence, etc.). Social phenomena are not objective in the first place, but rather defined by the fluid and changing intentions, meanings, and beliefs of the participants and observers. All observation in social science requires the interpretation of behavior, so there are no brute facts at all (Charles Taylor); the investigator constructs the world he observes (Peter Berger); or all social observation depends upon the perspective of the investigator, so that there are no perspective-independent facts.

These points challenge the claim of objectivity in social science. They contribute to a conception of social science that, if accepted, would radically undermine the claims of objectivity, empirical control of belief, and rigor which science claims for itself, and that would emphasize non-rational factors in the development of science. However, most recent philosophy of science provides effective rebuttal to worries along these lines, and provides a basis for renewed confidence in a robust defense of scientific knowledge. Equally importantly, examination of the current practice of social scientists in a wide range of

disciplines does not support such a non-rational or anti-objectivist theory of science. Instead, it is possible to discern a clear set of empirical procedures in the various disciplines that are well-designed to collect and analyze empirical data. And it is possible to trace through the logical relations that obtain between the types of data that are collected and the more abstract or hypothetical claims of the disciplines. These findings suggest a level of objectivity and empirical rigor that is consistent with a sophisticated empiricist theory of science.

What, then, is the "scientific method" that underlies all scientific research? It must first be emphasized that there is no unified scientific method that provides a "cookbook" on the basis of which to conduct scientific research. Each discipline has its own sophisticated methods of inquiry through which the scientist is enabled to probe the phenomena of interest. For example, participant-observation methodology, ethnomethodology, and other specific techniques of investigation have emerged in the discipline of anthropology; these techniques are very different from those used by historians or geographers. It is most useful to distinguish between epistemic requirements of scientific method--those that have to do with establishing the truth or credibility of scientific assertions--and research maxims and methods. The latter provide discipline-specific guidance in appropriate ways of probing empirical phenomena; the former provide general requirements concerning the logic of scientific reasoning.

The epistemic features of science include at least these criteria: an empirical-testability criterion, a logical coherence criterion, and an institutional commitment to intersubjective processes of belief evaluation and criticism. All sciences place a high value on the use of empirical research and observation as a central means of evaluating scientific assertion and hypothesis. All sciences require that systems of belief be logically coherent and developed. And all proceed through a community of inquirers in which the individual's scientific results are subjected to community-wide standards of adequacy. And these standards are designed to move the system of beliefs in the field to greater veridicality and explanatory power.

The upshot is that the most important feature of scientific research is a commitment to the role of empirical evidence in evaluating scientific belief. For what distinguishes science from commonsense is the availability of appropriate standards of empirical adequacy for the former. But there is what some take to be an obstacle to such a commitment in the human sciences; it is sometimes alleged that there are insuperable barriers to empirical assessment when we are concerned with human meanings. If interpretive social sciences should turn out to lack such standards, then it would be reasonable to conclude that interpretive sociology is not social science. Is there any reason to think that this is the case? Consider the following argument: Empirical data must be logically independent from the hypotheses for which it is presented as evidence. Ideally, empirical data should be wholly observational. The "data" available for a hermeneutic

interpretation is doubly tainted: the hermeneutic approach requires that we attribute meanings to participant behavior which is in turn used to evaluate hypotheses about participant meaning (thus violating the requirement of logical independence); and meanings themselves are not observable, so data reporting meaningful behavior is defective. Purely behavioral descriptions would be acceptable; but purely behavioral descriptions are notoriously incapable of pinning down meanings. Therefore there is no empirical basis for assessing hypothesis about participant meanings, and interpretive sociology cannot be given empirical support.

This argument is unconvincing. First, it is now well-established in the philosophy of science that data are often or always theory-laden. Even in physical sciences there is no purely observational vocabulary in terms of which to couch empirical data; instead, observations bring with them substantial parts of physical theory. And the requirement that social data should be based on purely behavioral description is discredited by the collapse of behaviorism as a viable approach to the problems of thought, consciousness, cognition, language use, and the like in psychology. Therefore there is no obstacle to interpretation theory's providing empirical support for hermeneutic hypotheses on the basis of observations that themselves presuppose that we understand at least some of the meanings of participants' behavior. The "hermeneutic circle" (the fact that observation and interpretation of meanings are inseparable) is no more damaging for the empirical credentials of interpretive sociology than the corresponding circularity of theory and theory-laden observations in natural science. When we attribute a meaning to an individual, we are able to cite various pieces of evidence that serve to support or disconfirm the attribution; and this is all that is required in order to provide an empirical basis for the attribution.

Consider an example. An ethnographer observes a puzzling ensemble of practices and artifacts in a community. He arrives at an interpretation of the significance of the practices and artifacts, and he puts it forward that this interpretation *explains* the ensemble of cultural phenomena. This interpretation represents a hypothesis about the meanings that participants invest in their actions and things. How can such an interpretation be empirical evaluated, since it involves suppositions about what is going on inside the heads of participants? Note, first, that this is a situation that is rich in empirical detail. Participants discuss their behavior and practices, they interact with each other, the artifacts themselves have manifold physical characteristics, and historical records may exist concerning the practices and artifacts as well. Second, the hypothesis, like any sound scientific hypothesis, has implications for observable data. It attributes certain beliefs and attitudes to participants; if true, these attributions have predictive consequences for behavior. (The interpretation may specify the highly secretive nature of the practices in question; if participants talk easily among themselves and with the investigator about their practices, the

secrecy hypothesis is undermined.) Likewise, the interpretation attributes to the artifacts a particular role in the culture's practices; this attribution has implications for the physical characteristics of the artifact. (The hypothesis may hold that the artifacts are made during ritual performances using traditional tools. The research methods of the archeologist can now be brought to bear on to determine whether this is consistent with the physical characteristics of the artifact.)

There is thus no logical obstacle to an empirically well-grounded hermeneutic science. In order to know whether interpretive anthropology in fact succeeds in producing an empirically grounded discipline, however, we must examine their practice. And here the results are mixed. Some are so distrustful of "positivism" that they flout the requirements of empirical adequacy. But this is not unavoidable, and there are in fact many strong examples of ethnographic and hermeneutic studies that are highly rigorous and strongly committed to providing evidence for their conclusions. Thus Gary Witherspoon's analysis of the Navajo conceptual scheme is strongly supported by evidence ingeniously gathered through study of Navajo grammar; Victor Turner's analysis of the significance of religious pilgrimages is carefully supported by data from a variety of cultures; and Clifford Geertz's treatment of the symbolic and material cultures of Bali in *Negara* is grounded on careful, rigorous assessment of available evidence. These examples show that it is possible for interpretive anthropology to be supported by appropriate empirical methods; and that is all that we need in order to anthropology is a scientific discipline in which there are appropriate standards of empirical reasoning as a control on scientific assertion.

The general moral of these remarks is rather simple: social sciences show appropriate diversity in method and explanatory focus. What they must share in common is a commitment to the requirements of empirical evaluation. For to offer a scientific account of a domain of phenomena is to implicitly claim that the account is truthful and justified; and in order to provide rational support for a body of theory, we need to make skillful use of available empirical data in evaluation of our hypotheses and interpretations. Science is not simply a set of competing interpretations; it is rather a set of positive assertions about the world, which must be justified on the basis of rigorous interrogation of empirical evidence.