Introduction :: Why Philosophy?

1 Social Science Includes Some Philosophy

Science and philosophy were hardly distinguishable until the Romantic period. Then they became estranged, but they never really split. Actually, science and philosophy share a number of extremely general key concepts, principles, and even problems. Hence, far from being disjoint, they overlap partially. To prove this claim, I shall exhibit random samples of each category of ideas.

To begin with, consider the following statements, disregarding their truth-value and noting only their constitutive concepts, although an analysis of their negations would in fact yield the same conclusion.

—All societies are concrete systems composed of living beings (rather than, say, either mere agglomerations of individuals or sets of beliefs, values, and norms).

—Some social systems (e.g., families and circles of friends) are natural, whereas others (e.g., business firms and schools) are artificial.

—All social systems are located in space and evolve over time.

—Agency and structure interact: there is neither individual action in an institutional vacuum nor social structure without individual social behavior.

—Every type of society is characterized by, among other things, its own value system and its own system of moral and legal norms.

—Society can—indeed, ought to—be studied in a scientific manner, though not as if it were a natural object, for it is largely artifactual, and people have feelings and thoughts.

—The findings of the scientific study of society are items of testable knowledge about social systems (rather than, say, speculations about individual behavior).
—Description is necessary but insufficient: we should attempt to explain data and, whenever possible, to predict them as well.
—Programmatic hypotheses of the form "Variable *y* depends upon variable *x*," as well as statistical correlations, are necessary but insufficient: we should strive to conjecture causal, probabilistic, and mixed mechanisms.
—Some rational choice models involve fuzzy concepts of utility or rationality, and all of them include the controversial hypothesis of maximizing behavior.

It is not hard to identify the philosophical components in the above list. The universal concepts "all" and "some," as well as "and" (or a comma) and "or," are studied in logic; so is "are." And logic is of course part of philosophy as well as of mathematics. The concepts "about" (or "refers to") and "fuzzy" (or "inexact") belong in semantics, a next-door neighbor of logic. The concepts of matter, process, nature, space, time, system, history, society, and artifact are extremely general: they are not the exclusive property of any special science, and they are analyzed and systematized in ontology (or metaphysics), one of the oldest branches of philosophy. The concepts of knowledge, science, model, and testability belong in epistemology (the theory of knowledge), another branch of philosophy. (Each of the words ***rationality*** and ***utility*** designate different concepts, some of which are philosophical.) Finally, the concepts of value and norm are studied in value theory and moral philosophy. We have thus shown that philosophy and science—in particular, social science—share some concepts.

I shall next show that social science and philosophy share some principles. Any of the following will do, and so will their denials.
—Social facts are objective and can be known, albeit only partially and gradually.
—Ordinary experience (including intuition and empathy) is necessary but insufficient to understand complex systems such as societies: we also need systematic observation, calculation, and theory.
—Observation should be guided by theory, and, in turn, theory should be tested by data.
—Social science is in need of theories of various ranges: "grand," or maximum-range, theories, middle-range, and narrow-range theories—or philosophical, general, and specific theories, respectively.
—The empirical tests of hypotheses in social science are tests for truth, whereas the tests of social policies are tests for fairness and efficiency.
—The truths about social facts and policies are often only approximate, but they can be improved upon through further research.
—To explain a social fact is to disclose its plausible mechanisms.

—Social science makes use of some biology and some psychology but is not reducible to either.
—The frontiers among the social sciences are artificial and shift over time.
—It is morally wrong to make up data or to publish incomprehensible texts.

These propositions and their denials are philosophico-scientific, because they belong in the philosophy (or metatheory) of social science, and they are supposed to be observed (or violated) by social scientists.

Now let us list a few problems that, in being extremely general and in concerning either society or social studies, are philosophical as well as scientific, all of which are currently the object of spirited controversies.
—Are social facts out there, or are they all constructions of the observer or of the community of social students? (This is part of the ontological and epistemological problem of realism.)
—Are there objective social patterns (laws), or are social facts utterly lawless? (This is part of the ontological problem of lawfulness and the epistemological problem of distinguishing objective patterns from the statements claiming to represent them.)
—What is society? An amorphous collection of individuals, an unanalyzable block, or a system? (This is the individualism–holism–systemism trilemma, an ontological problem with an epistemological counterpart.)
—How do societies change? Under the action of external forces, through their internal dynamics, or both? And as a result of ideas, material factors, or both? (This is part of the philosophy of history.)
—What prevails in society? Solidarity (cooperation) or conflict (competition) or a combination of the two? (This question is relevant to moral and political philosophy.)
—Are people totally free to act, or are they the pawns of historical forces, or neither? (This is part of the ontological and ethical problem of free will.)
—Are the social sciences idiographic (limited to particulars), nomothetic (seeking or using laws), or both? (This is a central problem in the epistemology and methodology of social science.)
—Do social science theories represent social facts in a literal manner, or are they mere metaphors? (This is one of the semantic and epistemological problems concerning fact–idea relations.)
—What impact, positive, nil, or negative, have the various philosophical schools, such as empiricism and idealism, had on social studies? (This is part of the task of identifying and evaluating the philosophies underlying the various schools in social studies.)
—Are the basic social sciences value-free and morally neutral? And how about the social policy sciences? (These problems belong to the ethics of science and technology.)

These problems are situated at the intersection of social science and philosophy. Hence they must be tackled with the help of the tools and findings of both research fields.

I have thus proved that there is some philosophy in social science. (Note, by the way, how easy it is to check weak or particular generalizations—i.e., propositions prefixed by "some." All one has to do is to find at least one example, in contrast to strong or universal generalizations—i.e., propositions starting with "all.")

In other words, there is no frontier between science and philosophy. Consequently, the search for a criterion of demarcation, which has occupied many philosophers, among them the positivist Rudolf Carnap and the rationalist Karl Popper, is in vain. And if such a search is in vain, this suggests that it originates in seriously mistaken conceptions of both science and philosophy. This is one of the reasons why we must find our own way, doing our best to observe the canons of rationality, while at the same time keeping in touch with reality and its scientific exploration.

2 Philosophical Controversies in Social Science

Since social scientists utilize philosophical concepts and principles and pose problems of philosophical interest, they are likely to adopt definite philosophical stands or even to get involved in philosophical controversies. This was the case with Smith, Bentham, Condorcet, Mill, Cournot, Marx, Engels, Jevons, Menger, Marshall, Pareto, Weber, Keynes, Marc Bloch, Braudel, Merton, Samuelson, Myrdal, and Milton Friedman, among others: none of them was philosophically innocent or neutral.

However, most scientists do not bother to examine their philosophies in any depth. A consequence of this philosophical insouciance is inconsistency between theory and practice. Thus Marx praised Hegel's confused dialectics and often adopted Hegel's convoluted style. But because he also engaged in hard-nosed research based on industrial reports, social surveys, and economic, political, and historical data, he did not betray science to Hegalianism (Schumpeter 1950 [1942], 10). Likewise, Weber paid lip service to the idealist philosophy of Dilthey, Windelband, and Rickert but transcended the idiographic–nomothetic dichotomy they preached (Merton, 1987, 13). And, despite his defense of methodological individualism, Weber rarely engaged in micro–macro analysis. As a result, his later work does not differ much from Marx's (Alexander and Giesen 1987, 18). Few scientists have avoided inconsistencies between their sermonizing and their practice. Galileo, Einstein, and Cajal were among the exceptions. Moreover, Einstein warned that in order to find out what science really is, we should watch scientists at work, rather than read what they say about science when philosophizing.

Philosophical controversies in science can be enlightening, constructive, and scholarly—or none of these. An early example of a destructive philosophical controversy in social science was the *Methodenstreit* in the German-speaking world, which started in the 1880s and, to all intents and purposes, is still going on worldwide, albeit in a muted way. This controversy was destructive in opposing two perfectly legitimate, complementary fields of research: namely, economics and economic history. As a result, each of these disciplines was retarded, instead of being enriched by its complement (see Swedberg 1991). Paradoxically, economics won the political battle but lost the intellectual one, because, by gaining independence, it became increasingly remote from economic realities, both past and present.

Other famous controversies have been those between Marxists and their rivals, and between conservative and liberal economists. Unlike the Methodenstreit, these debates had strong ideological components, which the controversies succeeded in exposing. Many further controversies are currently brewing. Some of the main current philosophical debates in and about contemporary social science concern the following questions:

—Are social systems and their structure out there, or are they only in the student's mind? (an aspect of the epistemological problem of realism)

—Is social conflict the engine of history, or is cooperation equally powerful? (part of the ontological problem of the main types of change mechanism)

—Are social classes entities or concepts? (a member of the class of semantic and epistemological problems concerning fact–idea relations)

—Are scientific ideas processes in individual minds (or brains), or social constructions, or do they hover above people? (part of the ontological mind–body problem)

—Can there be true scientific ideas, or only conventions accepted by the scientific community of the day? (another aspect of the epistemological problem of realism)

—Are there laws of history? (part of the philosophy of history)

—Is it possible to study society in exactly the same way as we study nature, or do we have to take into account the perceptions, delusions, interests, intentions, and decisions of the agents? (part of the methodology of social science)

—Can mathematical models of social systems and processes capture the variety and changeability of social life? (part of the semantical and epistemological problem of the relation of mathematics to reality)

—Are all social events predictable? And is predictability (or lack of it) inherent in social reality, or is it merely a matter of knowledge (or ignorance)?

—Can anything be salvaged from the shipwreck of Marxist philosophy, social theory, and ideology? (In particular, does the crisis in Marxism entail that materialism and realism are indefensible?)

Every one of these questions has been answered both positively and nega-

tively at one time or another. We shall tackle them in due course. The point of reciting them at this juncture is not to find out the correct answers, but as a reminder that, contrary to Thomas Kuhn's contention, science, like theology, ideology, philosophy, and politics, is rife with controversy. What *is* true is that scientific controversies can be conducted in a rational manner and can be settled honestly in the light of empirical data and logical argument, as opposed to resorting to rhetorical flourishes, negotiations, or decrees. That is because such controversies are ultimately about truth, not power.

3 What Is Social Metatheory About and Up To?

The philosophy of social science is a branch of the metascience of social science. Other disciplines concerned with social science are the history, sociology, economics, and politics of social science. These additional disciplines supply the philosopher with useful data and may provide him with penetrating insights. However, the social sciences of social science are, in turn, indebted to the philosophy of science for the elucidation of such key concepts as those of quality and quantity, truth and error, testability and test, science and pseudoscience. In other words, although all the sciences of social science interact with one another, the philosophy of social science is logically prior to the social studies of social science.

The philosophy (or metatheory) of social science refers to the ideas and methods that occur in the synchronic and diachronic studies of social facts. It does not refer directly to such facts: it does not dispute the turf of the social scientist. However, it cannot help but refer indirectly to social facts. Indeed, a philosophical discourse about a specific construct of social science, concerning a domain of social facts, is indirectly about the latter. For example, the statement "The hypothesis that all societies are stratified is testable" refers directly to the hypothesis in question, and indirectly to all societies. (In general, formal terms, the reference function R_1: $P \rightarrow S$, which maps philosophical constructs into social science ones, and the reference function R_2: $S \rightarrow F$, which maps social science constructs into social facts, compose to yield the indirect reference function $R = R_2 \circ R_1$: $P \rightarrow F$.)

Philosophical statements about constructs in the social sciences fall into several classes: (*a*) logical, or about logical form (structure); (*b*) semantical, or concerning meaning or truth; (*c*) epistemological, or about ways in which constructs are formed; (*d*) methodological, or concerning matters of general method and special technique; (*e*) ontological, or about the nature of the referents of the constructs; (*f*) axiological, or concerning the value concepts and value judgments that may occur in social science; and (*g*) ethical, or about the morality of the uses of social studies or policies.

In other words, the philosophy of social science entails the following:

The *logic* of social science analyzes the logical form of concepts, propositions, theories, and inferences in social science, regardless of their content. Thus it asks such questions as: Is concept X well defined, either explicitly or by way of axioms? Does proposition B follow from assumption(s) A? Is theory T internally consistent? What are the analogies and differences between explanation and prediction? How are such and such theories related? What are the structure, power, limits, and functions of the reduction and merger of theories? Is logic androcentric?

The *semantics* of social science explores the concepts of sense, reference, and truth (formal and factual, total and partial) as they occur in social science. Thus it asks: What does such and such a concept, hypothesis, or theory refer to? (i.e., what is it about?) In particular, what is social science about: individuals, ideas, supra-individual forces, or social systems? Does construct A make sense in context B? What is truth? Is truth attainable in social science? Is every truth relative to some culture?

The *epistemology* of social science examines the roles of observation and speculation, intuition and reason, analogy and induction, discovery and invention, in the formation of constructs and methods in social science; the nature and role of *Verstehen* (comprehension or interpretation); the relation between theory and policy; and the power and limits of deduction. Thus it is concerned with questions such as: What can we learn about society by observing individuals? What can we learn about individuals by studying their societies? Is every generalization an induction from data? Are constructs discovered or invented?

The *methodology* of social science looks at the nature of data and hypotheses, the meaning of the expression "interpretation of the data," the role of indicators ("operational definitions"), the modes of empirical validation, the notions of testability, confirmation, and infirmation, and the relations between idiographic and nomothetic studies. Thus it asks: Can social cohesiveness, social inertia, political stability, and the rate of social change be quantitated—and if so how? What are the scopes and roles of quantitation and measurement in social studies? Can there be a general theory of measurement? Is the scientific method exclusive of the "male-stream" and therefore inimical to women?

The *ontology* of social science examines the nature of society, the kinds of social process, the difference between law and rule, the roles of causation and chance, and the nature of planning. Hence it is concerned with questions such as: Are there social systems, or only aggregates of individuals? Are cultures systems of values and norms, or concrete social systems? What is a micro–macro link? What are the engines of history: the environment, biological factors, the economy, politics, culture, or all of these? Are there occasionally leaps in social evolution, or was Marshall right in inscribing the maxim *Natura non facit saltum* on the title page of his classic *Principles of Economics*? Is society a text to be deciphered by hermeneutics or semiotics? Is human history analogous to biological evolution?

The *axiology* of social science investigates the role of values in social science. It asks: Can social science stay clear of values? What kind of value is more relevant to social science: objective, subjective, or both? Are the concepts of poverty and oppression descriptive, valuational, both, or neither? Should social scientists abstain from making value judgments, as Max Weber demanded, or should they declare their values, as Gunnar Myrdal required?

The *ethics* of social science examines the code of conduct of social scientists. Thus it is concerned with questions like: What, if any, is the role of moral norms in the design of economic and social policies? How does one go about proposing a moral justification for them? What are the ethical limits on experimentation in social science? Is social science morally neutral? Is it right for a social scientist to advise an agency intent on destabilizing a foreign government or a company engaged in plundering a country? Is it right for a social scientist to skirt social issues? Is the historian entitled to praise or condemn the actions he studies?

We recognize, then, seven distinct areas in the philosophy of science and, in particular, in the metatheory of social studies. Whereas some metatheoretical problems can be handled by a single branch of the philosophy of science, others require the cooperation of all seven branches. The latter is particularly the case with respect to the following questions: What is basic science? What is sociotechnology? How does social science differ from natural science? Are there sciences straddling the natural–social divide? Is the present fragmentation of the social sciences healthy, and if not, how can it be corrected?

In sum, philosophy is a system of ideas of seven different kinds: it may be pictured as a heptagon. However, this spatial analogy is apt only insofar as it emphasizes the interdependence of the various components of philosophy. It is incorrect as a description of philosophy, which is neither a geometric object nor one that is visualizable. (Many of the diagrams found in the social science literature are merely didactic props.) It would be equally inappropriate to emphasize the systemic character of philosophy at the expense of its analytic component. Indeed, to philosophize is sometimes to analyze ideas—in particular, to subject them to logical, semantical, epistemological, or methodological analysis. Yet, at other times, to philosophize is to build or refine general concepts or conceptual systems (such as classifications and theories). In this regard, philosophy is like theoretical science—in other regards too, as will be argued in due course.

4 Kinds of Philosophy of Social Science

So far I have acted as if there were a single philosophy of social science. But actually, there are as many philosophies of social science as there are philosophical schools. These may be grouped in various ways. In particular, they may be grouped according to logical, epistemological, ontological, or ethical criteria.

From a logical point of view, philosophies can be partitioned into rational and irrational. (Strictly speaking, a school that rejects argument altogether cannot claim any support for its theses and therefore does not rank as a philosophy.) Seen from an epistemological standpoint, philosophies are empiricist or anti-empiricist to various degrees. From an ontological point of view, they can be materialist, spiritualist, or dualist. Seen from an ethical viewpoint, they can be consequentialist or inconsequentialist, egoistic or altruistic, and so on.

Thus, regardless of its many shortcomings, logical positivism is indeed logical, in that it admits and uses logic. By contrast, existentialism is illogical, in that it explicitly rejects logic (and reason generally) and produces plenty of nonsensical sentences, such as "The world worlds." Hegelianism and phenomenology are nearly illogical, in that they employ hermetic lingos and denounce the exact sciences. Positivism is empiricist and, more particularly, phenomenalist, in claiming to keep close to observational data and in distrusting deep hypotheses and theories. In a way, so is phenomenology, in limiting itself to data obtained by introspection or by observation of the *Lebenswelt* or everyday life—but, unlike positivism, phenomenology does not care for empirical tests. Both positivism and phenomenology reject ontology basically for the same reason: namely, their refusal to admit the autonomous existence of an external world. Marxism is not quite logical (in embracing dialectics), not quite empiricist (in adhering to dogmas), and only half-materialist (in splitting society into a material infrastructure and an ideal superstructure). Finally, none of these philosophies includes an ethical theory.

Every one of the philosophical schools just mentioned, as well as several others, has its own philosophy of science. In particular, there are positivist and anti-positivist philosophies of science; some are realist, others anti-realist—for example, conventionalist or pragmatist; some are rationalist, others irrationalist, and so on. This diversity poses the metaphilosophical problem of choosing among the various philosophies of science—or constructing an alternative one.

There are two ways of choosing a philosophy of science. One is to check whether the philosophy under consideration is consistent with one's philosophical or ideological preconceptions: this is the dogmatic procedure. The second way is to check whether it offers faithful descriptions of scientific research, as well as fruitful prescriptions for its conduct: that is, whether it both accounts for science and promotes its advancement. The first way is easier, for it requires no knowledge of science and no overcoming of inertia to rethink one's position. This is why it is the most popular—and the least reliable. Let us see why the second way is preferable: why philosophies can be confirmed or refuted, *pace* Popper (1963, 197).

The philosophy of science is only one of the many philosophies of x, where x is a blank or variable that can stand for mathematics, natural science, social science, technology, medicine, politics, law, morality, art, religion, and so on.

Now, a philosophy of x should match x rather than be at variance with x, for only then will it be able to (*a*) give an adequate (true) description of x, (*b*) suggest fruitful avenues for the conduct of inquiry in x, and (*c*) participate competently and effectively in philosophical controversies in or about x. We call these the *conditions of adequacy and fertility*. A philosophy of x that is totally uncongenial to x or, worse, hostile to x, can be of no help in the development of x. Thus I shall propose the following general metaphilosophical norm: For all x, if x is a field of study, the philosophy of x should match x.

But what does "match" mean in this context? Loosely speaking, a philosophy Px of x matches x if Px shares the "spirit" or "attitude" of x, deals with philosophical issues raised by the actual practice of x, and makes use of scientific findings to construct and check its own hypotheses. Let us now substitute science for x. I submit that a philosophy of science matches science if it depicts faithfully and, to some extent, shares the precision, testability, systematicity, realism, worldliness, and integrity that characterize mature science, refers to contemporary scientific research, and uses some of the latter's findings. A hermetic tirade against the exact sciences and naturalism, such as Husserl's celebrated *Crisis of European Sciences* (1954 [1936]), fails this test.

Ideally, a philosophy of science should be as exact and as scientific as the best science it studies. This was precisely the goal of the Vienna Circle (1926–36), whose members developed logical empiricism (or neo-positivism). Regrettably, this philosophy, though somewhat exact—and so hostile to the obscurities of neo-Thomism, neo-Kantianism, dialectical materialism, phenomenology, and existentialism—was largely unscientific. Indeed, though genuinely interested in contemporary science, and in a few cases working scientists themselves, most members of the Vienna Circle approached science from a narrow empiricist and, to be more precise, inductivist, phenomenalist, and even subjectivist viewpoint. Moreover, the neo-positivists tended to oversimplify philosophical problems, seeing them all as problems of logic, semantics, or methodology—that is, of coherence, meaning, or testability. They rejected metaphysics (ontology) and neglected or underrated value theory and ethics. Hence, while their criticism of woolliness was helpful, their rejection of realism, materialism, and cognitivist ethics was not. In particular, they encouraged behaviorism and subjectivist interpretations of physics, as well as irrationalism in value theory and ethics.

In short, none of the best-known philosophies matches science. No wonder, then, that none of them helps us to understand social science, let alone advance it.

5 Evaluating Philosophies of Social Science

How should a philosophy of social science be evaluated? I submit that the following battery of tests should be used for this purpose.

Relevance. Does it address real problems in contemporary social science, or is it merely an exegesis of worn-out classical texts or an exercise in intellectual (or, worse, anti-intellectualist) gymnastics?

Intelligibility. Can the philosophy in question be understood by any intelligent college student, or is it the property of an esoteric group? Existentialism is at the bottom, and ordinary language (Wittgensteinian) philosophy at the top of the intelligibility scale. Any genuine, relevant, deep philosophy will be way above the bottom but somewhat below the top of this scale. That it should not be at the very top is not because obscurity is inevitable, but because to grasp nontrivial ideas requires some effort: there is no "philosophy without tears" (as Russell called linguistic philosophy).

Exactifiability. Can the basic concepts and propositions of the given philosophy be rendered more precise with the help of logical or mathematical tools, or are they incurably fuzzy, as with Hegel's dialectics, Dilthey's Verstehen, and Heidegger's *Dasein*?

Internal consistency. Is the philosophy under consideration without contradictions? Or, if it contains contradictions, can they be eliminated without destroying it entirely?

External consistency. Is the philosophy in question compatible with the bulk of contemporary science and technology, or at variance with it?

Size and depth. Does the philosophy in question concern itself with mini-problems (e.g., "What did *x* mean by *y*?") and shallow solutions (e.g., with regard to the problem of reality: "To be is to be perceived, or to be measured, or to be talked about, or to occur in a text"), or does it tackle any of the Big Questions in a deep way?

Truth. Does the philosophy at issue match actual scientific research practice, or is it based on a caricature of it?

Universality. Is the philosophy in question universal (cross-cultural), or does it support the views, biases, or interests of a particular sex, ethnic group, social class, nation, religious group, or party?

Fertility. Does the philosophy under consideration solve any philosophical or scientific problems, or at least allow them to be reformulated in a clearer or deeper way? Does it help spot any new problems? Is it of assistance in crossing bridges between adjoining disciplines? Does it criticize any ideas held dogmatically? And does it suggest any promising heterodoxies?

Originality. Does the philosophy in question include any original components: novel approaches, new hypotheses worth investigating, or novel conceptual techniques worth trying out? Or is it a rehash of some obsolete doctrine?

I submit that none of the popular philosophies meets all these conditions, particularly as applied to social science. And some of them, notably phenomenology, existentialism, and their postmodern offspring, fail all these tests. (In the succeeding chapters I will attempt to justify this assertion.) This is why I

have endeavored to build a new, science-oriented philosophical system, expounded in the eight volumes of my *Treatise on Basic Philosophy* (1974–89), and why I have written this book and its companion, *Social Science under Debate* (Bunge forthcoming).

In summary, philosophy is of direct relevance to social science because the two fields overlap and because any important advance in either raises problems for the other, as well as supplying tools to solve them. To be sure, scientists do not need philosophers in order to know what they are doing. But sometimes they do need to be shown that what they have done is mistaken or, worse, irrelevant, as a result of paying insufficient attention to philosophy.

This being the case, it is not wise for social scientists to leave philosophy in the hands of philosophers like Husserl and Wittgenstein, who have never bothered with science, in particular with social studies. And it is downright foolish to seek inspiration in the likes of Heidegger and Derrida, who have written only gibberish, platitudes, or falsities. It would advance the two fields in question if students in each were to take their counterparts in the other more seriously. And it would be even better if social scientists were to engage in serious philosophizing, so as to avoid philosophical blunders, and if philosophers were to try their hand at social research, so as to get the hang of it.