

LEONARDO PARRI. – EXPLANATION IN THE SOCIAL SCIENCES. A THEORETICAL AND EMPIRICAL INTRODUCTION, SOVERIA MANNELLI, RUBBETTINO EDITORE, 2014. 254 P.

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ANALYSES BIBLIOGRAPHIQUES GÉNÉRALES

Leonardo PARRI. – **Explanation in the Social Sciences. A Theoretical and Empirical Introduction**, Soveria Mannelli, Rubbettino Editore, 2014. 254 p.

The book by Leonardo Parri focuses on a major goal of the social sciences: the explanation of social phenomena. The book is a contribution to the philosophy of the social sciences. The question addressed is how social scientists *proceed* when they explain social phenomena and to what extent these procedures are *acceptable*.

Many social scientists do not think highly of the philosophy of the social sciences. These philosophers are often not well informed about existing theory and research in the social sciences. From those contributions social scientists cannot learn whether their procedures might be problematic. However, there are other philosophers of social science who are very well informed about the social sciences and contributed important analyses that show weaknesses of social science theory and research. Examples are critiques of *functional analysis* (Nagel 1956a, 1956b; Hempel 1959, 1965). These contributions indicate that many functionalist arguments that, for example, explain social phenomena by their functions, are more problematic than most social scientists think. In speaking of *ideal types*, based on Max Weber's work, it is often not clear at all what is meant. Hempel in particular (1952) provides a possible clarification. The phenomenological school claims that the *method of "Verstehen"* is different from and superior to the method of explanation. But if social scientists speak of "Verstehen" it is often not clear what exactly this procedure looks like, and its differences to explanation are not clear either. One possible clarification was suggested by Abel (1948).

These and many other examples indicate that social scientists can learn from the work of philosophers of social science. They show where social science practices are deficient and how they can be improved.

The present book by Leonardo Parri is one of those excellent contributions to the philosophy of the social sciences that describes, clarifies practices of social scientists and points out where they are problematic. The book is not written by a professional philosopher, but “by an economic and political sociologist,” as the author emphasizes in the first sentence of the Introduction: Leonardo Parri is a professor in the Department of Political and Social Sciences at the University of Pavia in Italy. Being not a professional philosopher may be a disadvantage: such an author might not be familiar with the results of the philosophy of science and the relevant apparatus of formal logic. However, as the arguments in the book clearly show, Parri is very well versed in those fields. An advantage of his social science affiliation is that most of the examples that illustrate the author’s arguments are taken from the social and not from the natural sciences.

It is further important to note that the author spells out his *scientific orientation* (see the Introduction). He makes clear that “relativist and post-modernist approaches are considered below the rod of the minimum scientific standard” (p 8). In regard to structuralism (*i.e.* macro sociology), Parri discusses the problems of these theoretical schools and advances a micro-macro approach (*i.e.* structural or methodological individualism). This reviewer fully endorses these positions. But there will be other readers who disagree. Nonetheless, for them the book is worth reading in order to know the arguments of their opponents.

Parri’s book is written in the tradition of analytic philosophy with Carl G. Hempel, Ernest Nagel and Karl Popper as major representatives who are important in this context (for details see Glock 2008, and an article in Wikipedia⁴⁴). It is thus not astounding that the book stands out for his clarity and precision. The writing style is semi-formal: there are no complicated mathematical or logical arguments; clarity and easy understanding is also achieved by many arguments that are separated in the text, there are many figures and symbols are used that clarify arguments.

I will now shortly describe the contents of the book and then add some further comments. For a more extensive summary see pp. 13–18 in the book. Chapters 1 to 3 address some basic facts from the philosophy of science that are useful to know before one deals with explanation. «Explanation» means that an explanandum (a sentence about a phenomenon that is to be explained) is logically derived from other statements

44. http://en.wikipedia.org/wiki/Analytic_philosophy

which consist of at least one law or theory (as a set of laws). It is thus useful to start the book with a description of possible types of inferences (deductive, inductive and abductive inferences – see chapter 1). The next chapter 2 shows how theory and observations are related. The basic position advanced is a realist one claiming that theories refer to phenomena that exist and can in principle be accessed by the scientist. This is the position that is in general accepted in the social sciences, and that is incompatible with a «constructivist» view. Chapter 3 discusses differences between scientific and non-scientific statements. These chapters are relatively short (about 40 out of 254 pages) so that the major part (chapters 4 to 10) is devoted to explanation, the theme of the book.

Chapter 4 outlines in detail the so-called covering law model of explanation: for a satisfactory explanation at least one lawful statement is necessary that provides general information about the factors that are causes of a phenomenon to be explained. The law can thus be applied to specific situations because it points to the causal factors. These are the antecedent conditions. The explanandum can then be derived from the law(s) and the (sentences describing the) antecedent conditions. After this basic chapter the covering law model is further expanded and discussed step by step. In chapter 5 Parri addresses the «Core Features of Scientific Explanation.» Among other things, Parri shows that the explanation by mechanisms (*i.e.* filling “black boxes”) is absolutely compatible with the covering law model. Parri then addresses “complex” explanations (chapter 6). Chapter 7 is important because the relation between statistical analysis and causal explanation is discussed, and examples for social science laws are provided. The argument in this chapter calls into question the claim that the social sciences do not have laws at their disposal. The following chapters deal with intentional explanation (chapter 8), explanation in history (chapter 9) and micro-macro explanation (chapter 10). The unifying theme in all these chapters is the application of the covering law model. The fruitfulness of this model is confirmed: laws are part of each of these different types of explanation. The chapters provide a rather complete list of topics that a book on explanation in the social sciences should deal with.

Let me add some critical comments. Although the book provides many excellent critical analyses that address, often implicitly, weaknesses of social science practices, at some points one could have been more critical. One issue Parri addresses is *abduction* (pp 30–32), a procedure suggested by Charles Sanders Peirce, which Parri discusses together with deductive and inductive inferences. According to Peirce, “an *abductive inference* starts from *particular phenomena* (C), the cause of which is highly problematic, and hypothetically suggests *theories* and *specific conditions*

(A), which are able to give a *plausible explanation*” (p 30, italics on the original). What exactly is the difference to the covering law model? C is apparently an explanandum, the “causes” seem to be antecedent conditions. How to proceed if a scientist thinks that there are different plausible causes? An example would be the causes for the crime drop in the US. One would go through existing theories of crime (or general action theories) in order to find possible explanatory factors. Which factors might be causes? Based on the application of laws or theories that provide information about possible causes, one has to ascertain empirically which factors are given (*i.e.* what the antecedent conditions are), and these conditions then are the causes. What is the difference between this procedure, based on the covering law model, and abduction? I would argue that abduction is actually identical with the covering law model, it is only not precisely formulated. In my opinion, Parri should have been more critical of this venerable procedure (which is, by the way, also controversially discussed in the literature).

The author describes the *covering law model* very convincingly. In particular, it is plausible that without applying laws it is arbitrary which factors are regarded as causal in explaining particular phenomena: laws give general information on what factors cause a phenomenon. However, this model is controversial. The problem with the critique is that no clear and better alternative is suggested, given that there are social science laws that can be applied. This is exactly Parri’s position, and he lists lawful statements as examples that can be applied in explanations. Nonetheless, I think it would have been useful to briefly address the controversy about the covering law model.

Micro-macro modeling is important in explaining macro phenomena, the author claims. I think that this topic had deserved a more extensive treatment. Especially the types of micro-to-macro or macro-to-micro relationships (the bridge assumptions) should have been discussed in more detail. The same holds for the distinction between empirical and analytical relationships.

In addressing the *axiomatic method* (p 33), *i.e.* to set up a system of statements where one set (the theorems) are derived from the other set (the axioms), Parri writes: “Some axioms are empirically and theoretically unprovable, but they are nevertheless accepted because of their manifest evidence, truth or rationality.” Such a statement is not in line with Karl Popper’s critical rationalism: no statement of whatever kind is exempt from criticism. Especially in the social sciences one should be suspicious if statements are claimed to be “evident” or “true” without providing any empirical evidence. According to his basic methodological orientation, I think Parri would agree but it would have been important to state explicitly that in the social sciences there should not be any belief in eternal truths.

In his discussion of *testing theories* (pp 24 ff.) the author correctly states that from true axioms (which include theories) only true theorems can be derived. One might thus think that it is sufficient to test only logical implications of theories. This is actually a well-known strategy suggested by Milton Friedman (1953). However, the deficiency of this procedure should have been discussed in the book: one can derive true conclusions also from false premises. To illustrate, let a premise P1 be: “All Bavarians have an IQ of over 130” (which is certainly false). Let P2 read: “All people with an IQ of over 130 know that Munich is located in Bavaria” (which is incorrect as well). These premises imply the correct conclusion C: “All Bavarians know that Munich is located in Bavaria.” This fact that correct statements can be derived from wrong statements is a strong argument for testing *all* the statements of a deductive argument and not only the conclusions.

Despite these few critical comments there is no question that this is an excellent book that is highly recommendable not only to the general reader who is interested in how the social sciences work. The book is further relevant for the social scientist who is not very familiar with the philosophy of science. The book is further ideal for classes on the philosophy of the social sciences, for undergraduates as well as for graduates.

In its subtitle the book is described as an “Introduction.” However, this book is much more: it is a critical analysis of how social scientists explain social phenomena. The book is “introductory” in the sense that it is understandable to a large audience, not only to social scientists.

Are there other comparable books in English? There is one book which was my favorite philosophy of science book on explanation before Parri’s book came out: it is Daniel Little’s *Varieties of Social Explanation* (Little, 1991). However, this book is from 1991 and does thus not build on the most recent literature as Parri’s book does. Nonetheless, Little’s book is still worth reading – I suggest it as a complement to Parri’s book – because it addresses several topics that are not covered in Parri’s book.

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