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THE HERMENEUTIC CONCEPTION OF SCIENTIFIC TRADITIONS IN KARL R. POPPER

1. Introduction

Karl R. Popper is undoubtedly one of the authors who have contributed most to the development of the philosophy of science in the 20th century. His vigorous criticism of the central theses of logical positivism opened up new perspectives for the analysis of the rationality of sciences, that would subsequently be critically taken up and developed by authors such as Thomas S. Kuhn and Imre Lakatos.

One of Popper’s ideas that had the greatest influence on Kuhn and Lakatos was the thesis that there is no firm, definitive empirical basis, but rather that, by convention, the latter must be accepted in a provisional, fallible way. Linked to this thesis is the idea that the rationality of science lies not in its empirical bases but rather in the way scientific theories are criticized, change and evolve.

If the rationality of science lies in its peculiar progressive historical change, then scientific methodology must act as a resource for promoting change rather than for seeking and proving the truth of scientific theories. It is therefore evident that method in sciences is not a method of verification, as the Positivists thought, but a method of empirical refutation.

Due to the fact that scientists seek to empirically refute their theories and hypotheses, it is possible to detect errors and overcome them through the formulation of bolder and better theories. This process of conjectures and refutations gives rise to the progressive historical transformation of sciences.

Popper describes historical change as the continuous development of the scientific tradition. Although the concept of tradition is crucial to...
Popper’s philosophy, it has failed to receive the attention it deserves. This concept is so important that Popper himself was obliged to put forward a specific methodological proposal for the understanding of scientific traditions and social traditions in general. This methodological proposal actually constitutes one of Popper’s most valuable contributions to social sciences, and one that also distinguishes him radically from the Positivists. Popper believed that his methodological proposal for social sciences, which he called “situational analysis,” actually constituted a hermeneutic proposal. By vindicating a hermeneutic method, Popper moved radically away from the Positivists, who were extremely scornful of hermeneutic methods in the social sciences.

Popper’s contribution to hermeneutics in the social sciences is another issue that has barely been explored in Popperian studies. In this paper, I propose precisely to analyze Popper’s contribution to the concept of tradition and hermeneutics.Highlighting these issues gives us a better understanding of Popper’s significance, not only in the philosophy of science, but also in socio-historical sciences. In the following section, I shall focus on Popper’s theory of the rationality of traditions. I shall then analyze his contributions to hermeneutics and subsequently emphasize the consequences of these contributions for an understanding of scientific rationality.

2. The Rationality of Scientific Traditions

Karl R. Popper put forward a set of theses that would subsequently be developed by post-Positivist philosophers of science with a certain claim to originality, such as Kuhn, Hesse, Shapere, Toulmin, Lakatos and Laudan. These theses include the conventional nature of the empirical base and methodological rules, but above all the idea that the development of scientific knowledge is conditioned by historically inherited theories, methods, criteria and values, which orient the posing of problems, the formulation of hypotheses and their acceptance or rejection. Popper calls these inherited elements “tradition.”

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1 One of the few works that analyze this issue is the article by Farr (1983).
2 See Popper (1959, Chapter V). It is important to note that the conventionalist theory had previously been formulated by Otto Neurath in 1932. “It is impossible to take formal sentences conclusively as the starting point for sciences. There is no clean slate. We are like navigators who are forced to transform their ships in mid ocean, without ever being able to dismantle them in a sand dyke and reconstruct them with the finest materials available” (Neurath 1981, p. 206).