Focus
"The Non-Neutrality of Medical Knowledge"

Introduction

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The articles that constitute this special *Focus* have the common aim of exploring – drawing on concrete case studies – how the production of medical knowledge may be, on the one hand, affected by extra-scientific factors and, on the other hand, be used and distorted for social, political, cultural etc. purposes. Following a longstanding tradition, this kind of epistemological issue could be named as the problem of "non-neutrality" of scientific knowledge. This expression is used to refer to a contestation of the image of science understood as disinterested research not subservient to special interests, as free from bias and conditioning, as pure research indifferent to the purposes with which it is produced or to the social responsibility of scientists, and, finally, as pure rational enterprise not susceptible to ideological abuses.

Anticipations of this debate can be traced as early as the Marxist debates on science in the 1930s, which gave rise to the historiographical current known as externalism (an expression used by its detractors). Authors such as Boris Hessen, John D. Bernal, Henryk Grossmann or Edgar Zilsel applied Marxist methodology to studies on science, showing how the development of scientific thought depended on social and economic contexts and thus deconstructing the historiographical model of the history of science as a celebration of great personalities. For the development of an epistemological consciousness of the socio-historical elements affecting the production of scientific knowledge in the medical field, particularly relevant was the work of the Polish microbiologist Ludwik Fleck. In his *Genesis and Development of a Scientific Fact* (1935) he opened a line of research that, however, had a very narrow reception at the time of publication. It was R. K. Merton and Thomas Kuhn who rediscovered this volume by having it translated into

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English in 1979, and thereby making Fleck a classic author in the field of history, philosophy, and sociology of science. Fleck's methodology, precisely because of its ability to enter into the content of science by showing its social determinations, was particularly appreciated in the field of the *Sociology of Scientific Knowledge* (SSK), which saw in this author one of its precursors. As it is easy to imagine, in addition to the authors just mentioned, the institutionalization of the sociology of science, the historical epistemology, and the development of Kuhnian and post-Khunian theories played a key role in creating the preconditions for the emergence of the debate on the neutrality and non-neutrality of science (with special reference recognized to extra-scientific factors in the paradigm shift phase).

Despite these anticipations, the debate on the neutrality and non-neutrality of science definitely took shape during the 1970s and in the wake of the political-cultural climate of the time. While the *Science and Technology Studies* and, especially, the SSK were consolidating on the one hand, the so-called "Radical Science Movements" were also gaining ground. Both of these critical approaches to science developed, albeit in different forms, an analysis of the non-neutrality of science.

On the one hand, the authors afferent to SSK had the ambition to overcome institutional sociology of Mertonian orientation, which they claimed was limited to the analysis of the organization of science and not its cognitive content. Through the adoption of the principles of "causality", "impartiality", "symmetry" and "reflexivity", the Strong Program in SSK believed it could open the "black box" of scientific knowledge and show how its very content could be affected by social determinations. In its developments, it even derived the thesis held by Steven Shapin and Simon Schaffer that "solutions to the problem of knowledge are solutions to the problem of social order".

On the other hand, the Radical Science Movements, adopting a militant perspective, were rather oriented in emphasizing the intricate relationships between science and politics. By the phrase "non-neutrality of science", the Radical Science Movement referred to at least two specific stances: on the one hand, scientific knowledge, like other cultural forms, is influenced by the historical and social conditions in which it is produced. In this sense, science and technology are ideologically influenced by forms of cultural and economic hegemony. On the other hand, science and technology are conceived as conformations of knowledge that cooperate in structuring forms of organization of society, production, power, etc. (social function of science). In this sense, science and technology are tools that can be ideologically used to cooperate in the creation of cultural hegemony. In synthesis, science seems to have a dual positioning in classical Marxist theory: it can be seen as cooperating in the development of the economic and social

structure, but it can be also affected by the latter and be seen as an element of the superstructure.

The readers will find in the following pages a variety of ways in which the theme of the non-neutrality of science can be used today in the study of specific historical case-studies covering a time span from the Middle Ages to the present day.