

Vienna-Prague-Harvard: Philipp Frank, logical empiricism and science in a changing world.

Veronika Hofer, "Philipp Frank in Prague: a portrait of a scientist-philosopher as a young man."

Michael Stöltzner, "From Vienna Indeterminism to Copenhagen Complementarity."

George Reisch, "Philipp Frank, J. Edgar Hoover, the Cold War Depoliticization of Logical Empiricism."

Speakers are:

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Panel abstract

For more than two decades scholars have witnessed a re-evaluation of the Vienna Circle and Logical Empiricism. In particular, the intellectual and social background of Red Vienna of the 1920s and its relations to early philosophy of science has attracted both historians of philosophy and historians of science. Yet one important figure in these contexts, both a scientist and philosopher of science, has attracted surprisingly little attention. This session intends to picture the physicist-philosopher Philipp Frank against the backdrops of the Viennese philosophical tradition he inherited, the Prague intellectual circles in which he was active, and movement of intellectual exiles to Cambridge and Boston. Throughout his writings, Frank followed Mach's ideal of basing epistemological claims in historico-critical analysis and he emphasized the influence of socio-political contexts even for the acceptance of scientific theories. Thus Frank's intellectual project stood out from those of his logical empiricist colleagues who were more committed to logical analysis of theory and normative methodology than to the factual debates with scientists. These papers will explore how Frank's historical backgrounds and surroundings help us understand the successes and failures of his project.

Abstracts of the Papers:

1. Veronika Hofer (Vienna)

Philipp Frank in Prague: a portrait of a scientist-philosopher as a young man

When Frank in 1912 was appointed professor of physics in the German part of the Charles University in Prague he was one of the youngest professors and found himself in a peculiar historical situation. In this talk I provide an overview of his developing intellectual and academic career that is based on new archival material. I will reconstruct important debates in which Frank played a key role to provide further details about his intellectual context in Prague. The portrait of Frank as academic teacher and popularizer of science can be rounded out by a closer look at his assistants, the dissertations written under him, the colleagues to whom he was close and like-minded and the colleagues from whom he kept his distance. In particular I am interested in whether and how Frank's twofold project of 1) interpreting the philosophical heritage of Ernst Mach and 2) paving the way for a non-metaphysical interpretation of Einstein's theory shaped his enduring interest in the dynamics of science embedded in its social and ideological contexts. Giving due consideration to Frank's years in Prague yields a far better understanding of Frank's role as one of the main figures of the Vienna Circle.

2. Michael Stöltzner (Bielefeld)

From Vienna Indeterminism to Copenhagen Complementarity

The paper studies the development of Philipp Frank's ideas about causality and indeterminism from his Vienna days being a student of Boltzmann until the 1936 Copenhagen Congress for the Unity of Science. I argue that Frank followed a specific Viennese amalgamation of Boltzmann's legacy statistical mechanics and Mach's radical empiricism that made it a viable option to consider all macroscopic regularity as the limit of a large number of random events. Inspired by the relative frequency interpretation of probability elaborated by his friend Richard von Mises, Frank came to view statistical mechanics simply as a theory about mass phenomena in the same sense as Newtonian mechanics was about the motion of point particles. On this basis Frank, unlike his Vienna Circle colleague Moritz Schlick, was not forced into a philosophical about-face by the advent of quantum mechanics. Frank's seminal book *The Law of Causality and Its Limits* thus did not impose any new epistemic strictures on the atomic domain. After the famous EPR-problem of 1935, Bohr's notion of complementarity provided the basis for a far-reaching philosophical rapprochement between Frank and Schlick. Rather than subscribing to the Copenhagen interpretation as such, a major motive was to form a strategic alliance to combat several metaphysical misinterpretations of quantum mechanics. Quite ironically, some of the criticism of Frank and Schlick could well be directed at Bohr himself.

3. George Reisch (Chicago)

Philipp Frank, J. Edgar Hoover, the Cold War Depoliticization of Logical Empiricism

This talk will introduce Philipp Frank's (1884-1966) proposals for the cultivation of science studies as a socially and politically engaged project. A review of Frank's early scholarship in the philosophy of physics, his participation in the famous Vienna Circle of philosophers, and his post-exile movement in New York intellectual circles will be used to characterize Frank's project in the North American landscape. His project failed to attract interest, however, largely because of the climate of McCarthyism in the 1950s (a climate in which Frank and other logical empiricists were investigated by the FBI) and intellectual trends favoring apolitical professionalism over public engagement. The talk will conclude by comparing Frank's legacy with that of his colleague at Harvard, Thomas Kuhn. Both Frank and Kuhn

upheld history of science as a crucial check on philosophy of science, and both upheld a cyclical, discontinuous model of science's history. The chasm between Kuhn's popularity and Frank's obscurity, it will be argued, lay in the fact that Kuhn, in an era of intellectual specialization, was a champion of professional isolation and (paradigm-based) autonomy for intellectual projects. Frank, as leader of the postwar Unity of Science Movement, promoted the opposite vision of science studies prizing interdisciplinary cooperation and public engagement at a time when few intellectuals found such a vision appealing.