

Štěpán Mach's "Inductive Logic and the Vienna Circle" concentrates on the logical and relative frequency interpretations of probability from the interwar period up to the late 1950s. While the title might lead one to think that the work narrowly covers only research done by the members of the Vienna Circle, it in fact contains some background material on the views of Aristotle, Bacon, Hume, Mill, Whewell and Bolzano on induction. There is also a substantial section on Keynes. The work follows the debate long after the Vienna Circle had been broken up, and the views of most of its members had undergone considerable evolution. In particular, the views of von Mises, Reichenbach, Carnap and Popper are dealt with detail; the contributions of Wittgenstein, Waissman, Feigl are also noted.

Mr. Mach's work is highly competent. His often enlightening explanations are accurate. He does not shy from the technical details, but also keeps in mind the historical settings of these details. The area he researches is not well covered in the Czech literature, nor, as of late, has it been much discussed abroad. Mr. Mach is therefore to be commended for undertaking a task made more difficult by a dearth of secondary material. While I shall detail some disagreements with his work below, these should not be taken as seriously detracting from its value.

I find that there are two areas in which this work could be found wanting: the first is in the choice of which particular views to explicate; the second is with a certain distancing from philosophical issues.

(1) The choice of subject matter is occasionally puzzling. The inclusion of Aristotle does not seem to add much to the subsequent discussion. The discussion of Bacon does throw light on one branch of inductive logic, but this comes at the cost of not dealing in depth with Bacon's multi-faceted work. The inclusion of Keynes is in a sense logical, since he was a student of Russell, but it then seems arbitrary to leave out Ramsey: the Vienna Circle was surely familiar with his work as well. Finally, great weight is placed on Popper, yet Popper's reputation has been steadily diminishing, and, *contra* Kraft, does not seem to have been very high within the Circle. (By contrast, it should be pointed out the inclusion of Bolzano is to be welcomed, although Lukasiewicz is also in this context a clear candidate for inclusion.) Another example is von Mises' theory, which was never meant to be an inductive theory, but rather an account of probabilities found in certain sciences – von Mises referred to Bayesianism when dealing with induction. Hence the inclusion of von Mises' theory in a work on inductive logic can seem odd if it does not deal with his Bayesianism. Finally, the debate between Mill and Whewell can hardly be understood without reference to Kant – nor can the positions of the Vienna Circle, in particular that of Carnap. In conclusion, there could have been a more consistent justification of the cast of characters.

(2) The largely historical character of the work leaves aside a number of obvious philosophical points. For example, von Mises' definition of randomness was of great interest to the Vienna Circle, and generated a considerable literature that continues to grow even today. Keynes based his system on G.E. Moore's account of ethical knowledge, leading to a very peculiar notion of how to obtain probability values. Popper's attempts to ground a notion of corroboration, with the related notions of verisimilitude, were the subject of a great deal of (mostly negative) attention. Also, it would at least be worth noting the sheer oddity of Popper's views. The debate between Whewell and Mill is not pursued, and yet seems to point to a great divide in the notion of induction which is not taken up again in the work. The notion that relativity and quantum mechanics destroyed a particular version of a deductive view of knowledge is raised, but not discussed. In the conclusion reference is made to Kuhn and

Feyerabend, but Kuhn's views are now emerging from the misrepresentations of earlier commentators. In summary: if the work is to stand as one of history, then it should go into more depth on a narrower range; if it is to be taken as philosophical history, or history of ideas, then it should engage more with the philosophical issues being addressed.

Both of these complaints should also be taken to indicate the breadth – and ambitiousness – of Mr. Mach's work. Neither of these complaints should be taken to indicate that his work is anything other than a pleasure to read.

A handwritten signature in black ink, appearing to read "J. A. Mach". The signature is written in a cursive style with a large initial "J" and a stylized "A".