Kuhn, Thomas S. In the 1960s the philosophy of science [S] saw some upheaval in its general orientation. In the earlier decades more or less steady progress seemed to have been achieved within the framework of logical positivism [S], at least in some of the key questions. But now some of these results were challenged—for instance, about explanation and reduction, together with some of their underlying presuppositions. As it turned out, the most important figure in this new movement was Thomas S. Kuhn, who was trained as a theoretical physicist, then turned to the history of science, and finally moved on to the philosophy of science. He became world famous with his 1962 book, The Structure of Scientific Revolutions (SSR), which is the most widely distributed book ever written in the history and philosophy of science. Why was the impact of this book so strong?

First, SSR challenged the existing tradition in the philosophy of science by exposing its discrepancies with the history of science. This was a controversial move, since in the decades before SSR, philosophy of science was mostly understood as normative, and criticizing it by the results of a descriptive discipline apparently meant to commit the naturalistic fallacy. But the discrepancies had to be understood anyway, and from the 1960s on this brought the history of science in closer contact with the philosophy of science.

Second, some of SSR’s central terms have had a tremendous career, not only in philosophy of science, but also in many other fields, especially the term ‘paradigm’, which meant “scientific achievements that some particular scientific community acknowledges for a time as supplying the foundation for its further practice” (SSR, p. 10). This specific practice of science in which there is a consensus about foundations was not seen in standard philosophy of science before Kuhn; he called it ‘normal science’, another of Kuhn’s key terms. Furthermore, at this point a sociological element of Kuhn’s philosophy became apparent, namely an explicit reference to scientific communities. Along with other factors this sort of reference made Kuhn very influential in many branches of the social sciences.

Third, Kuhn directed attention to what he called ‘scientific revolutions’. These episodes of scientific development were seen to terminate one phase of normal science and commence a new one. Because of scientific revolutions, the development of science is not, as was often thought, a cumulative accretion of knowledge. Rather, revolutionary breaks bring about change in concepts, problems, legitimate solutions, and, in a sense, the world in which the community works. The relation between the
two phases of normal science is thus of a special (and controversial) nature; Kuhn termed this relation 'incommensurability'. Incommensurability makes the comparison of competing theories more difficult and subtle than simply balancing the number of correct and incorrect predictions of the two theories, though comparison is not entirely impossible. Neither does it necessitate a conception of scientific change that is devoid of any progress. Rather, science is progressive, but not in the sense of approaching the truth. The sciences' progress is purely instrumental in the sense that the accuracy of predictions indeed becomes better and better, but not in the sense that we know more and more about the nature of things.

Finally, as a consequence of incommensurability, the commonly held view about reduction was seriously called into question. Whereas, under the image of cumulative scientific development, earlier theories seemed reducible to their successors, the meaning change usually accompanying revolutions prohibited such clear-cut reductions.

Bibliography

WORKS BY KUHN


WORKS ON KUHN


PAUL HOYNINGEN-HUENE

LANGUAGE. What is a natural component of a speaker’s intuitions on our external behavior practice, or are languages to be considered as existing abstract objects? Argue in favor of each of these concepts.

Adherents to these different linguistic theories provide the categorizing particular languages as members of different classes of formal theories. This implies a set of rules describing the basic expressions and combinations into meaningful strings that arise concern the interpretation and the nature of the linguistic units described.

Platonists, in contrast, argue that formal, or abstract entities, are identified by formal theories. For them, the branch of mathematics, in contrast to a branch of cognitive psychology, becomes the core of linguistically competent theories. These theories can be seen as a system of the behavior of an interplay with the rules described as social practice.

For platonists, such as Kant, with their properties of meaning independently of speakers, the correspondence between languages and linguistic identities depend on the properties of meaning or structure, although from the theory. Moreover,