

Paul Ziche. *Wissenschaftslandschaften um 1900: Philosophie, die Wissenschaften und der nichtreduktive Szientismus*. (Legierungen, 3.) 410 pp., illus., bibl., index. Zurich: Chronos, 2007. €42.00 (cloth).

Ziche's book focuses on the topic of the classification of *Wissenschaften* (the German term encompasses both natural sciences and humanities) and on the related reflections on *Wissenschaftlichkeit* that arose mainly in the German-speaking world throughout the second half of the 19th century until the early 20th century. The conceptual and academic-institutional (re)arrangement of the system of the *Wissenschaften* and the re-thinking of their relationships to each other under the ideal of the „unity of science“ are central. Particular attention is devoted to the re-definition of the role of philosophy (particularly to the origins of philosophy of science) and to the historical developments of psychology, of mathematics and of logic, all of them re-read in connection with the main issue of the classification of sciences (*Wissenschaftssystematik*).

Ziche's historical reconstruction is based mainly on a quite large amount of primary (published) sources, many of which originate from public talks or belong to the context of the popularization of science anyway. The historical work is here meant to support the author's philosophical attitude towards (actual) debates on reductionism and on the mind/body problem. Accordingly, Ziche pleads repeatedly in favour of the importance of history of science to philosophy of science: the historical relativity of the criteria for *Wissenschaftlichkeit*, for example, suggests that philosophers of science be wary of normative claims on science and hierarchical conceptions of the sciences, in which some sciences would allegedly be „more“ scientific than others. Insofar, the book is addressed both to historians and to philosophers – Ziche himself is currently Professor for History of Modern Philosophy at the University of Utrecht.

Ziche's present book develops around a central historical-philosophical project, namely the effort made by scholars like Wundt, Ostwald, von Helmholtz or some neo-Kantians to provide a systematic and unifying picture of the (19th century-) sciences and of their achievements instantiate what Ziche calls a „non-reductionist scientism“, defined by a general commitment to science but not to a rigid normative/selective view on what science really is or should be, and which accordingly does not identify ‚more scientific‘ sciences to which others should/could be reduced. Throughout the last decades of the 19th Century and before the 1920s sciences were able to grow spontaneously in an open

landscape (*Wissenschaftslandschaften*) and what counted as *Wissenschaft* depended on its place in the academic world (of course the problem of the relationship between scientific disciplines has also an institutional side, to which Ziche pays much attention). According to what Ziche calls the „Fechner model“, different *Wissenschaften* could be conceived simply as different perspectives, which did not need to be mutually exclusive or competitive, nor one *Wissenschaft* had to be reduced to another one: with respect to psychology, for example, the mind/body problem could be faced without invoking reductionism in that mental and physiological states were considered as the results of two autonomous perspectives with equal dignity.

In this context of strong autonomy and growth of special scientific disciplines the role of philosophy had to be re-defined. Ziche outlines a path of development ‚from scientific philosophy to philosophy of science‘ (through „inductive philosophy“), in which interestingly the main characters are scientist-philosophers (besides Wundt, to whom an entire chapter is devoted, Ostwald, Fechner, Mach, Lotze, Stumpf and others). In the absence of a normative role for philosophy, the central challenge for this non-reductionistic philosophy was to work out for the empirical sciences a global world-view, a systematic and general synthesis of scientific results and of scientific concepts and find its own culturally relevant place. In order to be „scientific“, philosophy itself had to be a „science of the sciences“ and a special science at the same time: it had to be most general, „pure“ and „fundamental“, and still endowed with empirical contents. Systematic tools providing a solution to this logical puzzle and to a number of problems which affected „non-reductionist scientism“ were developed by the new mathematics and logic, to which two chapters of the book are devoted. Husserl is naturally a key-figure in Ziche’s arguments embodying the connections between mathematics, logic, psychology and philosophy.

However, after having read Ziche’s quite unusual reconstruction of the contributions of mathematics and logic to the systematic conception of theories and concepts, their specific application to the classification of sciences remains somewhat obscure. He gives a lack of evidence for the hypothesis that a strong relationship between the developments in mathematics and logic on the one hand and the issue of the classification of sciences on the other hand was widely (and not just by single scholars like Cassirer and Husserl) and explicitly recognized.

“Neopositivism”, and in particular the Vienna Circle, is charged by Ziche to have put an end to the ‚golden age‘ of „non-reductionist scientism“ by introducing a hierarchical and reductionist conception of the sciences. Some of Ziche’s cautions against reductionism are surely reasonable: it does not, in itself, improve *Wissenschaftlichkeit* and it makes us run the risk of missing the richness provided by the variety of sciences (both „hard“ and „soft“ ones). Nevertheless, labelling the Vienna Circle as „reductionist“ *tout court* just means to carry over an old stereotype with “(neo-)positivism”. Recent research on the rise and development of logical empiricism since Ernst Mach – esp. on the so called “first Vienna Circle” around Philipp Frank, Otto Neurath and Hans Hahn - has uncovered convincingly a nonfoundational as well as nonreductionist conception of scientific philosophy already before World War I.

Disregarding this specific historiographical blemish Ziche’s book is without doubt a most informative and innovative contribution to philosophy, and history and philosophy of science in the German speaking community around 1900.

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