Critical remarks on Bruno Thüring's polemic against Einstein

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Bruno Thüring (1905–1989) was among those scientists who joined the campaign against Einstein's Theory of Relativity which was undertaken in the name of so-called "German Physics" (*Deutsche Physik*, Lenard 1935) between the 1920s and the 1940s. Thüring was the director of Vienna's University Observatory from 1940–45; hence, we present biographical information on his scientific and administrative activities in Vienna, partly based on documents and on interviews with time-witnesses. Particular emphasis will be put on his statements against the Theory of Relativity in the book "Albert Einstein's Umsturzversuch der Physik" (Thüring 1941) and to situate it in a wider historical context. Such an investigation is suited to shed light not only on the intellectual life in the Third Reich, but also on the relation between modern physics and philosophy, even though – as we try to show – Thüring gave far too simplistic and sometimes plainly wrong anwers to these questions.

It is one of Thüring's basic convictions that Einstein's scientific work cannot be understood without an analysis of the development of physics (and philosophy) in the 19^{th} century. While this is certainly true as a general statement, Thüring's account of the above mentioned development is rather superficial. For example, he considers Kant's idea of the *a priori* status of geometry as a wholly sufficient epistemological foundation of science, while *both* idealism *and* positivism were a mere backdrop for the development of human knowledge – a view which can scarcely be defended today.

Concerning the impact of Einstein's theory on physics itself, Thüring of course advocates the view that the principles of (special and general) relativity be nothing else than arbitrary decisions (as opposed to real insights). Hence – he argues – these principles would never be verified or falsified by any experiment. The Michelson-Moreley experiment, e.g., would not prove the principle of special relativity. Thüring considers Einstein's interpretation of this experiment as a premature and, again, arbitrary judgement on a very particular and rather subaltern phenomenon which would not entitle us to the conclusion that the velocity of the Earth respect to the ether cannot be measured by *any* experimental technique.

While it can hardly be denied that the principle of special relativity had the character of a postulate, it must be kept in mind that Copernicus' heliocentric hypothesis and even Newton's synthesis of Kepler's celestial and Galilei's terrestrial mechanics had the same character at the time of their invention. Hence, the following statement by Thüring applies also to the Copernican hypothesis and the Newtonian synthesis: " (the theory of relativity is not a new insight, but) merely a method of reasoning. To approve or disapprove it is, hence, left to the free will of any individual." Such a statement is hardly suited to prove that a hypothesis be of no value for the progress of science.

A further aspect of Thüring's critics of Einstein's method which deserves critical reading is the idea of an identity of relativistic physics and Talmudic thought, which is based on a book on the latter by Karl G. Kuhn from 1937. Kuhn had highlighted three essential elements of Talmudic thought: at first place, of course, the Thora; second, morals handed down orally, the so-called halochot; third, methods designed to prove that the halochot are implicitly contained in the Thora – the so-called midraschim. Thüring easily finds this trias in Einstein's concept of physics as well: the Thora would correspond to (subject-independent) nature; the halochot have their equivalents in the "postulates" of modern physics; the midraschim, finally, be arbitrary, quasi-scholastic methods needed to establish a connection between the postulates on the one hand and the positivistically distorted nature on the other hand. An example of a midrasch be the non-Euclidean geometries as used (or rather misused, according to Thüring) within the General Theory of Relativity. We discuss this interpretation, too, showing that it has rather the character of a mystification than that of a demystification, despite its opposite ambition.

Remarks on Thüring's relation to other authors highly esteemed by him (such as Hugo Dingler and Eduard May; cf., e.g., Dingler 1922) conclude our study.

References

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