Hilbert, by Constance Reid. xi+290 pages. Springer-Verlag, New York–Heidelberg–Berlin, 1970. U.S. $8.80.

This book should be of interest to almost every mathematician. It describes in a lively, slightly popular way one of the great periods in the development of mathematics. Beginning with Hilbert's youth in Königsberg (East Prussia), we learn about his friendship with Hermann Minkowski which greatly influenced the work of both men and lasted until the latter's early death at Göttingen in 1909; about the periods in Hilbert's work: Theory of Invariants (1885–1893), Algebraic Number Fields (1893–1898), Foundations of Geometry (1898–1902), Integral Equations and Calculus of Variations (1902–1912), Mathematical Physics (1910–1922), Foundations of Mathematics and Logic (1922–1930), each culminating in a result of fundamental importance for the further development of the corresponding branch of mathematics; about the remarkable concentration of Hilbert in any one period on one and, with few exceptions (as, e.g., his solution of Waring's problem in 1909) only one topic, forgetting all the others to an almost incredible extent; about his famous lecture "Mathematical Problems" at the International Congress in Paris (1900) and his tremendous optimism: "Wir müssen wissen, wir werden wissen"; about his influence on the start and development of modern quantum theory. We become acquainted with many of the German and non-German mathematicians and theoretical physicists who during Hilbert's time at Göttingen (from 1895 on) were either his colleagures, as, e.g., Felix Klein, H. Minkowski, Carl Runge, R. Courant, Emmy Noether, Hermann Weyl, M. Born or his students or visitors, creating the impression of an "International Congress in permanent session". There are remarks on the research habits and on the perfections and imperfections in the teaching of Klein and Hilbert. We find distributed over much of the book many of the drastic statements made by Hilbert and others in certain situations, some of them in the original German, most of them (unfortunately) translated into English whereby a good deal of the flavour was lost.

The book is of course written mainly for the large circle of those who at one time or another in their mathematical career had closer contact with the Göttingen school. In them it will awake memories of now famous men, of remarkable lectures and of festivities in the Göttingen circles. They all will be grateful to the author who by conversations with prominent members of the old Göttingen school has ascertained the facts and turned them into a pleasing narration. The authenticity of the work is guaranteed by the foreword of Richard Courant who as successor of Felix Klein for many years, until 1933, was the director of the Göttingen Institute.

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