Benjamin H. Yandell,
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REVIEW

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By the end of the nineteenth century it became more common for eminent scholars to turn to programmatic or foundational questions. Among mathematicians, David Hilbert was a prime example. His *Zahlbericht* of 1897, a report on the status of algebraic number theory, enriched with many original observations, was an organization of this entire branch of mathematics. His *Grundlagen der Geometrie* of 1899 was the first precise axiomatic study of geometry, significantly refining the foundational geometry done since Euclid. It was only natural for Hilbert to use his lecture at the 1900 (second) International Congress of Mathematicians in Paris to attempt to lift the veil behind which the future of mathematics lay hidden. Different from Henri Poincaré's presentation at the 1897 ICM in Zürich, Hilbert chose to execute his intentions through a list of Problems. By so doing he offered current and future mathematicians immediate questions to work on. Ten Problems were briefly discussed during the lecture. The complete list of 23 was made available in print.

The success of the list may have even surprised Hilbert. The individual Problems widely vary in significance, difficulty, and clarity. The third Problem was solved before its official publication. Others are still open. Some Problems are very specific, while others are research programs. One is wrong, or at least needs serious re-statement. The solutions to some Problems, particularly Problems 10 and 13, are contrary to Hilbert's expectations.

Yandell's book joins a vast literature on Hilbert's Problems and related matters. There are many ways to tell the story of its effects on mathematics and the mathematical community. Since no single book can cover everything, we consider two questions. What aspects stand out in the book under review? How well are these aspects presented?