

Gray, Jeremy**Geometry – formalisms and intuitions.** (English) [Zbl 1059.01504](#)

Gray, Jeremy (ed.), The symbolic universe. Geometry and physics 1890–1930. Selected papers presented at a conference, Open University, Milton Keynes, UK, March 1996. Oxford: Oxford University Press (ISBN 0-19-850088-2/hbk). 58-83 (1999).

This is a survey, in captivatingly readable prose, of answers to the question "What is geometry?" given during the second half of the 19th century and the first decade of the 20th century by Helmholtz, Klein, Pasch, the Italian Formalists including Pieri, by Hilbert, Poincaré, Mach, F. Enriques, Riemann, and Einstein. Common features, such as the recourse to psychology as a means to justify a particular understanding of space, as well as a certain agreement on "the central terms" of the debate, which provide a narrative thread to the survey, are highlighted throughout.

For the entire collection see [\[Zbl 0923.53039\]](#).

Reviewer: [Victor V. Pambuccian \(MR1750421\)](#)

MSC:

- [01A55](#) History of mathematics in the 19th century
- [01A60](#) History of mathematics in the 20th century
- [51-03](#) History of geometry
- [53-03](#) History of differential geometry