

I. Grattan-Guinness

*The Search for Mathematical Roots 1870-1940*

*(Logics, Set Theories and the Foundations of Mathematics from Cantor through Russell to Gödel)*

Princeton: Princeton University Press, 2000

xiv + 690 pp. ISBN 0691058571

## REVIEW

JEAN-YVES BÉZIAU

The history of modern logic is a difficult subject and we are still far from having a good general vision of it. This book surely helps greatly in that direction. At the present time there are many different books focusing on special topics and/or authors: Boole, Cantor, Frege, Russell, the Vienna Circle, the Lvov-Warsaw School, Set Theory, the Incompleteness theorem, undecidability, *etc.* But before Ivor Grattan-Guinness (IGG hereafter), the only man courageous enough to draw a general view was Jean van Heijenoort (JvH hereafter), he did so through his famous book *From Frege to Gödel*, a fine commented edition of some crucial logical papers and also in a series of papers. The work of JvH became a reference work for any historian of modern logic. However as we know nowadays it has severe drawbacks.

Although IGG makes only one explicit reference to JvH (p.228), the ghost of JvH haunts his book. The subtitle of IGG's book is a reformulation of JvH's one and it looks like a correction of JvH's views. The whole story would have started with Cantor rather than with Frege, and Russell would have played a key role. In fact IGG's story started even before Cantor since his first chapter (after the introductory one) dedicates about 60 pages to "Algebraic logic and mathematical analysis up to 1870". Let us note *en passant* that the expression "Algebraic logic" is an anachronism here. In the XIXth century people were talking about "Algebra of logic", the expression "Algebraic logic" was introduced only in the 1950s by Haskell Curry.

IGG's subtitle is in some sense strongly misleading. IGG is not telling us the story whose happy end (or dead end, as you wish) is Gödel's theorem, a story whose main plot would be oriented towards