I. Grattan-Guinness, "Hacia una biografia de Georg Cantor," Mathesis 6 (1990), 1-40.

Reviewed by

Maria J. FRÁPOLLI
Departamento de Filosofia
Universidad de Granada
Spain

This is the Spanish translation of a paper entitled "Towards a Biography of Georg Cantor" which appeared in *Annals of Science* in [*1971*]. Professor Grattan-Guinness is the well-known specialist in the history of mathematics to whom we owe the publication for the first time in [*1970*] of Cantor's *Principien einer Theorie der Ordnungstypen*, and in [*1971a*] the correspondence between Cantor and Jourdain. He has contributed much to our present knowledge of the development of set theory and so the translation of any of his papers into Spanish is very welcome news for readers of that language. The present work offers a survey of Cantor's life including his personal and family origins and also his professional situation at Halle University. Grattan-Guinness's presentation avoids an apologetic tone and at the same time explodes the myth about Cantor's unbalanced personality created by Bell ([*1937*, chapt. 29]) and so cruelly supported by Russell in his *Autobiography* ([*1967*, 217]).

Professor Grattan-Guinness's paper is enhanced by certain manuscript sources and among the topics he touches on, three of them deserve special attention: Cantor's supposed Jewish ancestry, the episode of the succession to Heine at Halle and Cantor's mental illness.

Spanish or Portuguese forebears on his father's side lent weight to rumours of Cantor's Jewish origins, as did the fact that Moritz Cantor, a historian of mathematics at Heidelberg University at that time and no relation to Georg, was indeed Jewish. In fact, Cantor's father was Lutheran and his mother a Roman Catholic.

The second topic of interest treated in the paper is the question of the replacement of Heine, who died in 1881. When Cantor proposed Dedekind as Heine's successor in the following year, he imagined that the presence of this celebrated mathematician and his own at Halle would greatly enhance the prestige of this university as a center for mathematics. But Dedekind's refusal of the offer only served to increase Cantor's sense of isolation.

Thirdly, I would like to comment here how Grattan-Guinness illuminates the origin and significance of Cantor's mental illness. He suffered his first attack in 1884, after a period of cooperation with Mittag-Leffler, editor of *Acta Mathematica*. From 1884 until the end of his life he had several other seizures. Cantor's relations with his German

colleagues were notoriously difficult and in 1884 his friend, Mittag-Leffler, advised him not to publish his paper *Principien*. Cantor had to fight off opposition from the most influential German mathematicians of his day (Kronecker among others), and at a time when he considered Mittag-Leffler as virtually his only ally in the mathematical world, he took offence at his friend's advice. It is usually considered that the cool reaction of some of his colleagues and the aggressiveness of others were to blame for Cantor's mental disorders. Grattan-Guinness maintains, though, that they were stresses, his illness marked his life but did not govern it.

At the end of the paper there is a list of lost documents on Cantor's life which also proves invaluable. The work of Professor Grattan-Guinness does not need any defense for scholars of Cantor and the history of set theory and logic and, in spite of the years which have elapsed since its first publication (and the wealth of new material which has become available since then), this paper is still one that cannot be overlooked by anyone interested in this period.

REFERENCES

E.T. BELL. 1937. *Men of mathematics*, New York, Simon & Schuster; reprinted: 1986.
I. GRATTAN-GUINNESS 1970. *An unpublished paper by Georg Cantor: Principien einer Theorie der Ordnungstypen, Erste Mittheilung*. Acta Mathematica **124**, 65-107.
—. 1971. *Towards a biography of Georg Cantor*, Annals of Science 27, 345-391.
—. 1971a. *The correspondence between Georg Cantor and Philip Jourdain*, Jahresberichte der Deutschen Mathematiker-Vereinigung **73**, 111-130.
B. RUSSELL. 1967. *The autobiography of Bertrand Russell*, vol. 1: *1872-1914*, London, Allen & Unwin; New York, Bantam Books, 1968.

G. Waldegg, "Cantor y la matematizacion del infinito," Mathesis 6 (1990), 75-96.

Reviewed by

Maria J. FRÁPOLLI
Departamento de Filosofia
Universidad de Granada
Spain

Waldegg's paper is the only work which appears in this issue of *Mathesis* which has not been published previously. It is part of the author's doctoral dissertation on the development of Cantor's theory of infinite. Its purpose is to present the origin of