## **REVIEW ARTICLE:**

DALE JACQUETTE, Frege: A Philosophical Biography, Cambridge: Cambridge University Press, 2019. xiv + 667 pp. Hardcover \$45.00, ISBN: 978-0-521-86327-8. Ebook \$36.00, ISBN 978-1-108-36504-8.

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Note: This is a longer, somewhat more detailed version of a review which has been published in *History and Philosophy of Logic* in January 2020. The author is much indebted to Michael Scanlan, the review editor, for his very helpful suggestions towards improving, organizing and shortening this review. This longer version is offered to those readers who may be interested in some of the more detailed items of criticism, including a few extra references.

From a 600-page Frege biography we would expect: A fairly detailed account of Frege's work, derived from the series of his works, published and unpublished, and from his correspondence; and a portrait of the man, and of his environment; and preferably both parts of the story should be illuminating each other.

"In addition to seeing how the basic documentable facts of his chronology can be fit together into a likely depiction of his life" (5), this book claims to give answers to these questions:

"1 What exactly did Frege hope to achieve in his mathematical and philosophical writings?

2 Should Frege's efforts be considered to have succeeded or failed, and in either case for what reason and in what sense?

3 What meaning should Frege's success or failure be understood to have for his significance in a wide-screen panorama of the history of logic and newly emergent analytic philosophy?" (5)

What we get in the book under review is, however:

1 A part about Frege's writings, quite systematically minded and focused on the logicism project;

2 A part about his life, translated after Kreiser's biography, relating mostly lots of insignificant details. This includes numerous annoying cases of purely imagining how Frege might have been.

3 There are also quite a number of surprising cases of ignorance and misinterpretation which only somebody quite out of touch with Frege's world and work could come up with. And finally, there are some obvious editorial defects to this book.

The book is offered as a "philosophical biography". In it, Frege's scientific work is basically equated with his logicism project, with some glimpses at his semantical work. The book offers chapters discussing Frege's main works: his three books, the three seminal papers on logic and semantics, and the essays in *Logical Investigations*, as well as the Husserl review. Some of these chapters contain critical notes, about "defects, circularity and omissions" (255-7) in Frege's definition of number, there are seven numbered objections against his account of identity-statements (324), and we are told "what Frege should have answered Russell" (482). These chapters taken together come

close to a systematically-minded Frege introduction, even if the distribution is quite uneven: *Grundgesetze* II, apart from the *Afterword* on the Russell paradox, is discussed on just one page, while the late essay on 'Compound Thoughts' receives ten pages (587-597). At the end of these ten pages we get a table of the six compounds Frege discusses. It seems quite obvious that every reader would want to know why Frege omits the ten remaining ways to connect two propositions (compare e.g. Künne 2011, 642–646 on this question). 'Negation' is justly discussed in some detail, yet the author seems not to know that Frege's opponent regarding the correct conception of negation has since been identified to have been Bruno Bauch (Schlotter 2006).

The account justly (and repeatedly) stresses the importance of Frege's introduction of propositional negation (even over the invention of quantifiers) on pp. 299, 401, 561, 576-587. We are mostly told what the author takes to be the correct view, rather than learning about Frege's own reasons for his views. Taken together these chapters could have resulted in another 150-page introduction to Frege.

However, the book also tries to relate the story of Frege's life. The material for this is almost entirely taken (and translated) from Kreiser's biography, with some information based on earlier sources already available in English. Also, introductory information given by the German editors of the *Posthumous Writings* and of Frege's *Correspondence* (sometimes not fully included in the translated versions) is quoted at (often distracting) length.

Unfortunately, Kreiser had found very little material of a more personal nature (his chapter 'What we can say about Frege himself' runs to five pages), and thus he had filled his pages with material he had found in the university archives, giving information about Frege's employment, the state of the university of Jena in general, the founding of the mathematical seminar, etc. Thus, the book gives an account of the facts we know about Frege's life and academic surroundings, but it offers no original research, and the author apparently never took the trouble to visit Jena where he could easily have found answers to some of his questions (more on this below). One of the few more personal pieces included in Kreiser's book, Frege's account of the last days of his mother, is simply omitted. Instead we read twice that during her last years his mother lived at the "Catholic Sisters' Home", located at "Carl-Zeiss-Straße 10", only on one version (269) this is "in Fulda" (presumably the city of that name), while on the second version the institute is called "Catholic Sisters' Home Fulda" (418). This address could have raised a minor question, one not raised by the author: why Frege's mother stayed at a Catholic place when the entire family was resolutely Lutheran and Protestant.

Some letters written to the university administration in 1917, published in *Dathe* 2008, where Frege asks to be relieved from teaching and for permission to return to his native Mecklenburg, because he had suffered from hunger in Jena during the previous year and had "decreased in weight by ten percent", seem to be unknown to the biographer.

The book shows no interest in giving a view of Frege's work as a whole; particularly the *Posthumous Writings* are practically dismissed in a few words as "a world of their own", but one into which the biographer does not wish to enter because they do little to "further the logicism project" (602). The exchange of letters with Hilbert is briefly discussed (442-447) but Frege's rather long and detailed articles developed from that exchange are not even mentioned. We learn of Schröder's review of *Begriffsschrift* (157-8), but the chapter about the crucial interval between that book and *Grundlagen* does not even mention Frege's published response to Schröder: 'On the Purpose of a Begriffsschrift' (1882), except in a list of lectures, translated from Kreiser (177) – much less his careful and detailed answers that contained slightly revised versions of his *Begriffsschrift* while remaining unpublished (just a brief aside on negation is mentioned, 585). We also read that Schröder believed that Japanese script (to which he compares Frege's notation) is written "from bottom to top" (158, n. 30). (Actually Schröder simply remarks that it is "written vertically", without deciding on a reading direction.)

From the *Lectures on Logic*, published from Carnap's student notes, and since translated into English as *Reck and Awodey 2004*, we get some quotes from the editors' Preface (185). Frege's lecture course "Begriffsschrift II" is mentioned, as having been announced in "1913, 1915, and 1917" (497). Kreiser and Kratsch (1979) list no such course (only "General Mechanics II" in 1913 and 1915). The source of this particular piece of misinformation seems to be page 14 of the Introduction 'Freges persönlichkeit und Werk' to the 1979 Frege volume which also includes the piece by Kratsch.

We then read: "An interesting thing to know would be whether 'Begriffsschrift II' referred to a more advanced treatment of Frege's *Begriffsschrift* [...]" (497-8), and also that "to some commentators" (501) this title suggests that Frege stuck to his logicism "throughout the Russell paradox episode". Actually, the answer is easy, as the printed lectures give us the content of the advanced course. As the lecture notes do not even mention the logicism project, there is no need for any spurious commentators.

The advice in a postcard from Stumpf to present the issue of logicism in more accessible form is mentioned, yet there is no discussion at all of Frege's preceding 1882 letter to Stumpf<sup>1</sup> where he develops several of his key ideas for the first time (the letter is justly included in the *Frege Reader (Frege 1997))* – well except for a complaint about the difficulty of getting *Begriffsschrift* notation into print (192). We read about a short polemical piece against Thomae, published in 1908: "Four pages, it should be remarked, was not much space in which to prove a colleague's rival arithmetic logically impossible." (532) The preceding piece against Thomae from 1906 (and even more so the 50-odd pages against Thomae in *Grundgesetze* II) remain unnoticed.

One might also expect some comments on the piece the editors called '17 Key Sentences on Logic', the dating and significance of which has been much discussed, by Dummett and others; or on the 'Dialogue with Pünjer about existence', commenting, among other issues, on the ontological proof, one of the few traditional philosophical questions Frege remarked on repeatedly.

We further read about *Grundgesetze*: "The original manuscript of the book is in the possession of the library of Jena. It shows, say those who have seen it, that Frege had already completed the entire book in 1893 [...]." (380, see also 384, n. 8, promising even "more details on the manuscript copy of the *Grundgesetze* [...]".) This exciting, but unfrtunately false, rumor seems to be based on a list simply giving the Jena library signatures of Frege's publications (Kratsch 1979). But who might be "those who have seen it"? Also, we are left wondering why the author did not take the trouble to enquire any further into such a matter.

<sup>&</sup>lt;sup>1</sup> Mistakenly published as a letter to Marty in *Frege 1980*, pp. 99 – 102.

On one occasion Kreiser is criticized for stating about Frege that "discouragement had temporarily caused him to deal with other issues" (432). In that case, however, Kreiser had merely paraphrased a well-known passage which was quoted verbatim fifty pages earlier (385, the term used there was 'despondency'). To argue the point that Frege did not, during the time before 1893, abandon thinking about arithmetic, we read that the unpublished paper 'On the concept of number. A Criticism of Biermann' is about Lorenz Biermann, *Neue Arithmetische Schatzkammer* of 1667 (432). A brief look at the piece would have shown that Frege was concerned with: Otto Biermann, *Theorie der analytischen Funktionen*, 1887. If we read of Edmund Husserl and Heinrich Scholz as the "editors of the second edition of *Begriffsschrift*" (138), what can one say? (Well, maybe that curiously a footnote just one page further on quite correctly attributes editorship of that volume to I. Angelelli.) In the presentation of the *Begriffsschrift* axioms it is explained that Frege's two laws of negation could be expressed much more simply in one axiom (145), yet Frege had found this out himself in late 1878 and expressly said so near the end of the Preface to his *Begriffsschrift*.

The author discusses Frege's version of the Square of opposition in some detail, explaining that the word "contrary" where the traditional square has "subcontrary" must be a "typo", or "maybe a typesetter's fault" (138); yet he seems unaware of the fact that the *Begriffsschrift II Lectures* also contain such a square, which also has "contrary" in the "subcontrary" position. We then read of "several important mistakes" (136) in Frege's Square, all concerning the truth-conditions – yet Frege omitted the judgment-stroke (or assertion-sign) in the square, thus indicating that his square was to be not about truth at all, but just about presenting four types of judgeable contents.

After all this we would not expect points that are intended to be more subtle to be correct. We thus read the observation: "Frege uses italics where Kerry uses quotation marks" (313), yet this is true of some Frege translations, while Frege's original article uses spacing (and in his German text he says so).

And we learn that Frege used the one-to-one correlation as a "principle" to define number, and that he "named it after Hume" (244). Frege did refer to Hume in this case, but he never spoke of a "principle": the expression "Hume's Principle" was coined by George Boolos in the 1980s.

In the parts on Frege's home town we read that through the port of Wismar, "iron and copper from Hungary" (15) was shipped to Sweden. The reviewer was unable to find out what country could possibly have been meant by "Hungary", which has no river connection to Wismar and neither iron nor copper to be shipped anywhere – especially not to Sweden, one of the main European producers of these metals.

Some further confusions stem from translation errors, including the translation of Grundlagen by Jacquette (for many more details on this compare Kremer 2008). A slip on Frege's part is pointed out because he says that the concept of relation is "like other simple concepts", which semmes to amount to "saying that simplicity alone is the mark of pure logic" (235). Actually, Frege had contrasted two concepts, both of them logical: the more complex (two-argument) concept of a relation against the (one-argument) "simple concept" (*Grundlagen*, §70).

We also read that Frege took "contemporary set-theoretical strictures at face value" in believing "that numbers cannot be sets because there are no corresponding sets for the numbers 0 and 1" (229). As a matter of fact, Frege criticized such contemporary views and called such restrictions a "setback" (here translated as "difficulty").

While a reliable version of *Grundlagen* has been readily available in English since 1950, this is not true of Frege's five habilitation theses (106). They are given thus: "II. Figure belongs to things only insofar as they are objects of our attention." Frege then is criticized for this "outdated suggestion"– well the first word in this sentence should read: "Number". The next thesis is given as: "III. The concept of number is not innately given, but can be defined." Frege had simply written: "Number is not immediately given, but can be defined." Nothing innate here, and no concept.

In addition to translated information, some omissions, and misunderstandings, we also get a fair amount of idle ruminations about things we simply do not know. Did Frege have to pay for the printing of the two volumes of *Grundgesetze* himself? This idle question is discussed at some length, with very lengthy quotations from earlier biographical publications: "Frege may have hoped that Grundgesetze I would do well enough to partly subsidize the publication of Grundgesetze II." (382) The fact of the matter is: a) Frege often complained about receiving no attention from his fellow mathematicians, but never about sales, b) Pohle was no publisher at all but he had a printing company specialized in printing dissertations and the like, so he would have no reason whatsoever to print Frege's book at his own expense, and c) we have absolutely no information about any details. (We do know, however, that Schröder, too, who had his three-volume Algebra of Logic printed with the leading publisher in the field, Teubner complained about having to pay for the printing. Thus, Carnap's remark in his Intellectual Autobiography (first published in 1963; an expanded version from the Carnap Nachlass is included in full in Awodey and Reck 2004, 18–21) that Frege "had it printed at his own expense" (a remark which is not quoted in the book) remains still by far the most reasonable guess. In another place we read with surprise that "quantifier logic [...] was embryonic in his habilitation of 1874" (110) – but are left without any explanation for this rather wild statement.

In a similar vein there are reasonings about Frege's mother (née Bialloblotzky) being Polish, and to what degree, which do not need to be repeated here. It could have been related that Kreiser explains that her father, Johann Heinrich Siegfried Bialloblotzky (1757–1828), went to school in Lüneburg; and he writes that the Bialloblotzky ancestors had left their native Poland some time during the 17<sup>th</sup> century (Kreiser 2001, 10–11). It must be admitted that it is a nice thought that Frege was partly Polish (Peter Geach would have liked that); and we might add that, after all, Frege was also Swedish, coming from Wismar (a thought Göran Sundholm likes to emphasize).

One more example of many: What about Frege and his wife, and how they may have met? Obviously we don't know any details, but we get some anyway: "Hiking may have also been a pretext for the two sweethearts to meet." All very well – and we go on to read: "We can more or less imagine what we like." (268) On the next page we find a list of unanswerable (and still fairly conventional) questions about "what importance" his wife had for Frege, questions like: "Was he trying throughout his adult life to make himself worthy of Margarete?". Finally, we may mention: "Frege loved mathematics." (89) And: "Frege must have loved Margarete as he loved mathematics, as he loved his devoted mother." (270) The author seems to enjoy using as many German words and expressions as possible acroos his text, and it must be admitted that almost all of them are spelled correctly. A few words still have an unusual ring, like the strikingly innovative noun "Urgrundplan" (3).

The overall editorial standard of the book is quite poor. This may be connected to the fact that Dale Jacquette died in 2016, three years before the book was published. The publisher gives no information whatsoever on this matter, suggesting that the volume was prepared by the author to the last stage. The note "References to Frege's Writings" repeatedly introduces a (non-existent) essay "Function and Object" (xi). There are a number of figures in the text, some of them evidently taken from other published sources, but there are no credits. In general, these figures are poorly executed, worst of all the Square of Opposition in three versions (137-8). We get some verbal descriptions of the few photographs depicting Frege, but none are included with the book, except on the dust jacket.

No proofreader should let sentences like this one pass where Kreiser is quoted as relating: "The ministries were granted despite the already-started summer semester leave of absence" (521-2) Readers may, or may not, guess that this should read: "The administration had granted the leave of absence despite the fact that the summer semester had already started." Such a standard is characteristic of the overall impression of the book: We get a series of often blurry pictures, but all of this is very far from a unified picture of who Frege really was and what he did and how he lived. In the end one wonders why this book was written in the first place, and in the second place why it was ever published – except for the obvious reason that to date there exists no readable and reliable biography of Frege in any language. (And in the third place we might ask why it the book is being reviewed – well, probably out of anger and disappointment and in order to warn people and in the hope that maybe sometime a biography of Frege which deserves that name will be written.)

## Concluding Note:

Any future biographer of Frege should take the trouble to notice and exploit the Fregerelated publications of Gottfried Gabriel, Uwe Dathe, Sven Schlotter, Matthias Wille, and Tabea Rohr – and maybe also my own book on the Development of Frege's Thought (Kienzler 2009).

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