Venus Seen on the Sun: The First Observation of a Transit of Venus by Jeremiah Horrocks translated with introduction and notes by Wilbur Applebaum

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Reviewed by Paolo Palmieri University of Pittsburgh pap7@pitt.edu

Jeremiah Horrocks (1618–1641) is perhaps best known to historians of science for his telescopic observation of the transit of Venus in 1639. This book edited by Wilbur Applebaum offers what might be called, for want of a better word, a 'compilation' into English of Horrocks' manuscript drafts and possibly of the early published text on the transit observations. I hasten to make it clear at the outset that I am uncomfortable with this ambiguous description but am at a loss as to how to explain the puzzling fact that Applebaum does not tell the reader what exactly he is translating. Let me briefly explain.

In 1662, Johannes Hevelius published a tract by Horrocks entitled Venus in sole visa. This was the first appearance in print of some version of Horrocks' manuscript notes on the 1639 transit of Venus [xix]. In 1673, John Wallis edited an *Opera posthuma* of works by Horrocks that did not contain any material on Venus-for, as Applebaum recounts, John Flamsteed proposed to publish separately a more correct version than the Hevelius edition, an intent, however, that came to nothing. Flamsteed had in the meantime acquired some of Horrocks' manuscripts [xx]. In 1859, the first and until now unique English translation was eventually published. The translator and editor, Arundell Blount Whatton, based his translation on Hevelius' text, only correcting punctuation according to a 'Greenwich manuscript' that is not further identifiable without undertaking an extensive philological analysis of the extant sources [1859, xiii]. Applebaum lists four holograph manuscripts currently known. The first draft is 67 folios, the second 72 folios, a fair copy of the second has 72 folios, and a 'final draft' has 58 folios [77]. No further information is given on how the order among the manuscript drafts has been established and by whom. It strikes me that the final draft should be much

shorter that the first, though this might be due to handwriting styles. Another manuscript entitled 'Philosophical Exercises and Astronomical Exercises' is cited by Applebaum in the bibliography but it is not at all clear if this also contains a copy of the Venus material or not [77]; probably not, since this latter manuscript is quoted by Applebaum in reference to Horrocks' opinion on the aether [10n10].

This confused state of affairs as to the exact material that has been used by Applebaum as a basis for his translation unfortunately creates more puzzles. On page 8 (note 1), Applebaum refers the reader to 'the manuscript' [cf. 13n20, 17n2, and 21n1]. On page 47 (note 14), appended to the last word of chapter 12, we are told that '[t]his is as far as Horrocks got with his third draft, which was interrupted by his death on 3 January 1641'. But a third draft is nowhere to be found in the bibliography listed by Applebaum. (Might it be the fair copy of the second one?) Applebaum then adds a 'continuation of final draft' section [48] that he says is 'at the end of his chapter on Lansberge from the second draft' [47n14]. Chapter 13, we are told, comes from 'Horrocks' chapter 12, second draft' [49n1]. Chapter 15 is from chapter 14, second draft [54n1]. Chapter 16 is from chapter 15, second draft [58n1]. Chapter 17, second draft [66n1]. Finally, chapter 18 is from chapter 17, second draft, unpublished until now [71n1].

I speculate that Applebaum has done some interesting collating work in preparation for this edition and that the text which he has reconstructed and used as a basis for translation is the result of a complex situation in which the manuscripts contain more or less different material. This is all too common with archival sources, especially when the author did not have the opportunity to bring his work to publication, as was the case with Horrocks. Regrettably, we are told nothing about this collation process, the philological criteria that Applebaum has applied or, more importantly, the motivation for his choices. One would especially have expected to be told if anything had been left out or if there are different drafts of chapters or sections thereof, all of which would be of great importance in understanding the creative process by which Horrocks came to transform his observational knowledge into a literary piece of work.

Moreover, I think that the choice of not publishing the reconstructed Latin text on facing pages has not only impoverished Applebaum's book but also deprived the reviewer of the possibility of forming an opinion of the character of the translation with respect to the original. More importantly, it has deprived the reader of the possibility of comparing and contrasting Applebaum's modern English rendition with Horrocks' original 17th-century Latin. It seems to me that this is a missed opportunity, for Horrocks' endeavor would have deserved the presentation of a full apparatus of textual variants and especially the alternative texts that, I suspect, are included in the extant manuscript drafts listed in the bibliography but somewhat confusingly referenced throughout the main text.

On a more positive note, I think that Applebaum supplements the translation with an informative introduction to what little is known of Horrocks' life and work, and to the complicated vicissitudes that his manuscripts underwent. Little, however, is offered in the way of a historical, sociological, and/or philosophical assessment of Horrocks' work. Yet there are sparse comments by Applebaum that might have been pursued with more vigor. He suggests that Horrocks' work on Venus

has the power to delight and charm us as the record of a young astronomer's encounter with a rare astronomical event and the manner in which he discovered, observed, and drew conclusions from it. [xi]

Rightly so! But then we are disappointed that Applebaum does not follow up on his brilliant intuition. Again, Applebaum says,

[w]hile pervaded by a spirit of mathematical precision and scientific ingenuity, Horrocks' treatise can be read as an intellectual adventure. It is filled with an unrestrained enthusiasm...written in a style now completely gone from scientific literature, for it was only after Horrocks' lifetime that scientists began to discard from their scientific writing the expressions of enthusiasm, the digressions, the classical allusions, and the personal comments with which Horrocks' brief work is filled. [xxiv]

But again, the insightful promise never comes to fruition in the scant commentary furnished by Applebaum in the footnotes.

Let me suggest an example. Horrocks reflects on the 'manner and history of my observation' in chapter 2, giving a fascinating account of his anxieties in preparing for the great event and of how he was able to alleviate his state of heightened tension. He realized that he could opportunely adapt a fine telescope, an optical tube, for the purposes at hand so as to make sure that his observations would be reliable. The anxiety was discharged in a surprising way. His enthusiasm erupted in a poetic style, and Horrocks sat down to write a long poem on the usefulness of the instrument. Here, at the cost of being repetitious, I emphasize again how disappointing it is to have to base an opinion of the poem and its linguistic resonances solely on Applebaum's English rendition, though it sounds fluent and convincing. And why not expand in the commentary on the questions raised by this interesting psychological event, by which a young astronomer happily discharges his melancholia by writing Latin verses?

In summary, while I welcome the readable English translation offered by Applebaum as a very useful addition to our knowledge of an important episode in the history of early modern science, I think that the effort would have been even more rewarding if a philologically sensitive approach had been chosen, if the Latin text had been printed on facing pages, and if a more incisive commentary had been added to Horrocks' text. In fairness, finally, I must stress that Applebaum offers lucid and helpful explanations of the complicated calculations and the more technical aspects of Horrocks' work.

BIBLIOGRAPHY

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