CHAPTER 6

“The Spirit of Invention”

_Hooke’s Poetics for a New Science in An Attempt to Prove the Motion of the Earth by Observation_

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An _Attempt to Prove the Motion of the Earth by Observation_\(^1\) was the first of Robert Hooke’s famous Cutlerian Lectures, delivered in 1670 and published in 1674. It is an account by the experimentalist of his work following the path of a star in the head of the constellation of Draco. The stellar parallax he could see and measure was the proof, said Hooke, of the motion of the earth around the sun. Though the last page of this _Attempt_ is frequently alluded to,\(^2\) as it formulates the famous “System of the World” that Newton read and completed, the rest of the text has received little attention.

My concern here will not be these famous pages of the _Attempt_, but rather, the rest of the text and its preface. When the preface and the _Attempt_ are considered together, what appears is a pervading “Spirit of Invention,” in Hooke’s own words. This Spirit of Invention relates to the text and its projects in two ways: first, the invention and construction of instruments that can prove the Copernican Hypothesis; second, the conception and construction of texts that can faithfully convey the discoveries, both of art and nature. I would like to show how these mechanical and poetical programmes were thoroughly intertwined in Hooke’s conception of and plea for a new science and a new method.\(^3\) What

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\(^1\) Robert Hooke, _An Attempt to Prove the Motion of the Earth_, London, Printed by T.R. for John Martyn, Printer to the Royal Society at the Bell in St. Pauls Church-yard, 1674. I would like to thank Jonathan Morton for his careful reading and help with the English.


\(^3\) My study is thus in line with John Harwood’s pioneering work on Hooke’s rhetoric. Harwood showed that the specific rhetoric of _Micrographia_ should be understood in the context of the “identifiable social and political concerns of the early Royal Society. The early Royal Society simultaneously pursued two activities, one scientific and the other rhetorical: ‘doing’ the New Philosophy and ‘writing’ about it.” In this context, printing was “a way to establish, enhance, and protect its public image.” John T. Harwood, “Rhetoric and Graphics in Micrographia,” in _Robert Hooke. New Studies_, eds. Michael Hunter and Simon Schaffer (Woodbridge, Suffolk, Boydell, 1989), 131.
are the literary strategies by which Hooke tried to convey both his results and his method? To what extent did he use or disregard the existing conventions of scientific writing? I shall try to answer these questions in relation to the general theme of this journal’s issue: was Hooke still writing in the age of Bacon? I shall answer that insofar as one reads Bacon the way Hooke did, he definitely was.

The preface has generally been read as a text written in 1679, the date of the publication of the Cutlerian Lectures as a whole. The two original copies of the Attempt that still exist in the Wren Library at Trinity College, Cambridge, demonstrate that the preface is in fact a text from 1674, published with the Attempt. With this revised dating in mind, I shall analyse what Hooke himself presented as a programme—not only a programme of research, but also a method, and indeed a poetics suited to the new science. In studies of Hooke, it has been common to deplore the incomplete aspect of his work. I shall try to reconsider this fragmentary aspect in the light of Hooke’s poetics, and shall suggest that the style he adopted in his various writings was in keeping with his method of inquiry. For the sake of clarity, I will follow the three main parts of rhetoric that can be recognised in Hooke’s preface: inventio, dispositio and elocutio. However, I will mostly be concerned with questions of poetics and I will try to show that these categories (invention, arrangement and style) are intended to shape a new scientific genre.

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4 Koyré, Alexandre, op. cit., 319.
5 The traditional evaluation of Hooke is recalled, for instance, by Koyré, op. cit., 314, n16: Hooke “totally lacked Newton’s powers of concentration. His mind was restless, continually disturbed by fresh ideas, but they were nearly all good, and many were of first importance.” And 319: “Hooke certainly is perfectly right in insisting on his priority. Yet it cannot be denied that the lacuna which we discovered in his earlier work has not been filled: Hooke still does not know, ‘what the several degrees are’ by which the attractive power varies with the distance. In 1678, when he published his Cometa, he is as far from the solution of that problem as in 1674 and that is probably why, feeling that he is unable to keep his promise and to ‘explain’ his ‘system of the world,’ he simply reissues, in 1679, his old Attempt under the new cover of Lectiones Cutlerianae.” In my opinion, the publication of the Lectiones is not a “new cover” but rather the realisation of Hooke’s precise programme of publishing as announced in 1674: to collate his discoveries in one volume. Again, 320, n. 45, Koyré quotes a long passage from the preface (dating it from 1679) with the following comment. “Yet, it was this very restlessness, the inability of concentration, and therefore, of obtaining conclusive results, that made him unacceptable to Newton.” Newton, according to Professor Pelseneer, was a “classical” mind and must have shuddered when reading Hooke’s “profession de foi.”
6 See also the bibliography by Keynes which notes this preface in the edition of 1674. Geoffrey Keynes, A Bibliography of Dr. Robert Hooke, Oxford, 1960, 30.
7 For Hooke “invention” should be understood broadly in its rhetorical sense. Indeed, it is taken in this broad sense by the various ars poetica written in the same period: inventio, the first part of rhetoric, generally encompasses the two others, dispositio and enunciatio.