

**HISTORICAL ESSAY ON
THE FIRST PUBLICATION
OF SIR ISAAC NEWTON'S
PRINCIPIA**

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Historical Essay on the First Publication of Sir Isaac Newton's Principia by Sir Isaac Newton & Stephen Peter Rigaud

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Alexander Givens

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Prof. Alex. Ziwet
of
1-30-1923

PREFACE.

SIR DAVID BREWSTER is well known to be engaged on an enlarged edition of his *Life of Newton*, for which, in addition to other valuable documents, he has had access to the papers belonging to the Earl of Portsmouth. It may be right, therefore, to mention, that no steps were taken towards printing this *Essay*, before it had been ascertained that he would not consider the publication of it as an interference with his more important object. Indeed, minute details on a particular point would hardly be compatible with a general history, although it is hoped that they may supply some materials for the greater work.

From the MSS. of David Gregory, and other writers, several facts have been either recovered or illustrated; but the two great sources of original information have been the collections

of the Earl of Macclesfield, and the papers belonging to the Royal Society. The first contain a number of Newton's own MSS., and having belonged to Mr. W. Jones are of indisputable authenticity; the second have indeed been often examined, but not so completely as to preclude some new facts being recovered from them by a repeated search. The extracts in the following tract sometimes vary from what has been printed by Birch in his History of the Royal Society: but the difference will be found not to affect the sense; and has been occasioned by the use of the originals, which he did not always copy verbatim.

For these last papers some references are used, which may not be obviously intelligible to every one, and any future examination may be facilitated by giving a short explanation of the different terms used to describe the arrangement of them.

The *Journals* contain an abridgment of the business transacted by the Society at large in their weekly meeting.

The *Minutes* are the records of what has passed in the Council.

The *Registers* contain copies of the papers, which have been communicated.

The *Letter Books* preserve copies of letters, and, in some instances, of shorter papers, which have been drawn up in that form.

There are likewise original papers and letters, pasted into *Guard Books*, and arranged according to the initials of the writers' names.

The examination of collections, which lie so wide apart from each other, could only be undertaken by one, who was permanently resident in England: and, supported by this accidental advantage, I have sometimes ventured to differ from so able a writer as M. Biot. Truth, however, has been our common object, and it has always the best chance of being elicited by the fair statement of honest opinions.

It may be thought that the Essay is prolonged beyond its immediate purpose by what is said, at the end, on the publication of the second and third editions of the *Principia*; but this, having been made as concise as possible, seemed to obviate what otherwise might appear to be an abrupt termination of the work; and it may not be without some use to those, who shall have the means and the inclination to continue this History to the time, when Newton set his last hand to the greatest work of his most powerful mind.

CORRECTIONS. ✓

- P. 19. lin. 14. "such oversights" add "(as, in this instance, of 1683 for 1684)"
P. 35. note f. for "III." read "IV."
P. 48. lin. 12. "which he adopted," add "in this correspondence with Hooke"
P. 49. lin. 8. "order of effect varied" read "this law of the effect ceased"
P. 78. head line: "Printing" read "Printing."

HISTORICAL ESSAY
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PRINCIPIA.

DR. PEMBERTON tells us^a that the first thoughts, which gave rise to Newton's *Principia*, occurred to him when he had retired from Cambridge into Lincolnshire, in 1666, on account of the plague. Voltaire^b had his information from Mrs. Catharine Barton, Newton's favourite niece, who married Conduitt, a member of the Royal Society, and one of his intimate friends: from having spent a great portion of her life in his society, she was good authority for such an anecdote, and she related that some fruit, falling from a tree,

^a Preface to his *View of Sir Isaac Newton's Philosophy*. See *Append.* XII. p. 49. From Dr. Hodges's *Δοιμολογία*, we learn that the plague began first in Westminster, at the end of 1664; that in London it was most violent in the hotter months of 1665, and had so far abated in the following winter that the inhabitants returned to their homes in December. The Royal Society did not indeed resume their regular meetings till March, 1666; but the disease had then subsided, and some writers have therefore referred Newton's speculation to 1665. Pemberton,

however, is certainly right in assigning his retirement into Lincolnshire to the following year. In the sixth volume of the *Philosophical Transactions* there is a paper, in which he says, (p. 3075,) that in the beginning of the year 1666 he procured a glass prism "to try therewith the phenomena of colours;" and, after further particulars, he adds, (p. 3080,) "Amidst these thoughts I was forced from Cambridge by the intervening plague."

^b *Philosophie de Newton*. 3me partie, chap. iii.