THE PHILOSOPHICAL NEWTON

Andrew Janiak, *Newton as Philosopher* (Cambridge: Cambridge University Press, 2008), ISBN 13 978-0-521-86286-8 (hardback), ISBN 13 978-0-511-41404-6 (eBook), pp. 196

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When Newton is referring to his works, he usually speaks about "my Philosophy." The reader who opens the third edition of the *Principia* is announced on the first page that he will learn about "Newtoni Principia Philosophiæ." Moreover, eighteenth-century expositions of the Newtonian achievements – whether by Henry Pemberton, Colin MacLaurin or Voltaire – are always claiming to present "Newton's Philosophy."[1] In those days, a title like *Newton as Philosopher* would have made little sense, since it was obvious that he was one, and not so obvious what else he could have been.

Today, however, such a title can sound provocative. Newton is not a very familiar figure in most of the histories of philosophy. He gets to be mentioned in connection with the Leibniz-Clarke correspondence, as holding a conception of space that is usually so oversimplified that it has nothing to do with Newton's original intention; this happens especially in the caricature view that the main problems of early modern philosophy found their solution in Kant. But here is someone who has arrived at Newton by studying Kant and now devotes a book to the strictly philosophical part of the author of the *Principia*; Andrew Janiak declares from the very beginning that "this is a work in the history of philosophy" (p. vii). He does this after a 2004 edition of Newton's *Philosophical Writings*,[2] where technicalities from mathematics or rational mechanics are carefully avoided. This type of approach is not a novelty; especially J. E. McGuire's studies[3] have shown that the 'philosophical Newton' can be extremely rich. But a monographic treatment of Newton's philosophy such as Janiak's is certainly something rare and to be welcomed, since it does justice to a side of Newton that has an important place among the various other sides (alchemy, scriptural theology etc.) that balance the usual 'hero of science' image.

As it is evident from above and as Janiak writes, "[t]o treat Newton as a philosopher might simply be to avoid an [anachronism]" (p. 1), reflecting in this way Newton's own self-conception. The problem is that Newton's concept of philosophy is radically different from ours and Janiak tends to conflate them. Although sometimes Newton speaks distinctively (and in the same context) about

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"philosophy" and "natural philosophy," there is no clear-cut distinction between the two.[4] As for today, it is hard to define what philosophy is, but it is certainly separated from physico-mathematical inquiries. Instead, natural philosophy could be lacking anything that would be labeled today as 'philosophical' and still be natural philosophy. Of course, natural philosophy could contain elements that we straightforwardly call metaphysical or epistemological, but not necessarily. My point is that taking Newton as a philosopher in our sense does not reflect the way he considered himself. This is worth emphasizing because one might get the impression that Janiak puts weight on historical accuracy; but this is largely an illusion. His analyses are conceptual, while historical considerations play little, if any, role.

Such an approach is absolutely legitimate, but it has some limitations. For instance, Janiak constantly insists on the idea that Newton is "contesting the mechanical philosophy" (chapters 3 and 4 bear this expression in their title). He takes Newton to be using the word "mechanical" in a technical sense, namely as something operating only on the surfaces of bodies; consequently, the cause of gravity cannot be mechanical, since it is proportional to the whole quantity of matter in a body (pp. 75-76). But "mechanical" could mean a lot of things in the seventeenth century and the "mechanical philosophy" is something sufficiently vague so as to have Newton included within it (like Richard Westfall or the Halls did). [5] To be sure, Newton changed his mind so many times regarding the cause of gravity, that it is hard to ascribe him an overarching position; he was very cautious about committing himself and it seems that he always left the door open for a mechanical explanation. The ether-queries appended to the second English edition (1717) of the *Opticks* are his last words on this subject and they bear a strong 'mechanical' flavor.

The technical meaning of "mechanical" also helps Janiak to argue that although Newton rejects the mechanical philosophy, he does not accept action at a distance: not all local action is impact or surface (i. e. mechanical) action, as Leibniz contended. For Janiak the denial of distant action as "unconceivable" in the famous letter to Bentley[6] is fundamental. God's actions are always local, since he is everywhere and, moreover, bodies do not encounter resistance from his presence; this makes God a serious candidate for the cause of gravity (although it should be noted that Newton oscillated on this topic). The way Janiak puts these things together certainly makes sense, but some recent critics of his interpretation (most notably John Henry and Eric Schliesser)[7] hold that the letter to Bentley is not only overemphasized, but it can also be put upside down on a careful reading, so that Newton is in fact not denying that gravity acts at a distance – and this is how eighteenth-century readers understood Newtonian gravity.

But Janiak makes another interesting point about action at a distance. Sometime in the final stages of editing the second edition of the *Principia*, Roger Cotes sent Newton a letter in which he pressed him to accept distant action, as being implied by the application of the third law of motion to bodies that are not

contiguous. In his reply, Newton avoided to answer Cotes' objection. Usually Newton was persuaded by arguments from physical theory, but this case seems to be an exception. For Janiak, Newton's reluctance is explained by his unwillingness to change his conception about God acting only locally. This means that Newton's ideas about God, or what Janiak calls "divine metaphysics," are immune to revisions determined by physical theory; such revisions are restricted only for the "mundane metaphysics" or "physical metaphysics." The latter one was put forward by adepts of Newton "the radical empiricist" - like Howard Stein or Robert DiSalle, - and Janiak essentially agrees with them, except when it comes to God. It could be argued, however, that the interaction between Newton's theology and his natural science is less static than Janiak presents it, especially if we think at Newtonian cosmology.

Although debatable, Janiak's theses are composing a coherent picture and they can also set up an agenda.

References

[1] Pemberton, H., *A View of Sir Isaac Newton's Philosophy* (London, 1728); MacLaurin, C., *An Account of Sir Isaac Newton's Philosophical Discoveries* (London, 1748 – posthumous); Voltaire, *Elémens de la philosophie de Neuton* (Amsterdam, 1738).

[2] Newton, I., *Philosophical Writings*, ed. A. Janiak (Cambridge: Cambridge University Press, 2004).

[3] An important part of them is collected in McGuire, J. E., *Tradition and Innovation: Newton's Metaphysics of Nature* (Dordrecht: Kluwer Academic Publishers, 1995).

[4] McGuire, J. E., "Newton's «Principles of Philosophy»: An Intended Preface for the 1704 *Opticks* and a Related Draft Fragment", *British Journal for the History of Science* 5 (1970): 178-186. See also "Of Educating Youth in the Universities", in *Unpublished Scientific Papers of Isaac Newton*, eds. A. Rupert Hall & Marie Boas Hall (Cambridge: Cambridge University Press, 1962), 369-373.

[5] See Westfall, R. S., *Force in Newton's Physics: The Science of Dynamics in the Seventeenth Century* (London: Macdonald; New York: American Elsevier, 1971); the comments by Hall & Hall in their edition of Newton's *Unpublished Scientific Papers*.

[6] *The Correspondence of Isaac Newton*, eds. H. W. Turnbull, J. F. Scott, A. R. Hall, L. Tilling (Cambridge: Cambridge University Press, 1959-1977), 7 vols., vol. III, 253-254.

[7] Henry, J., "Gravity and *De gravitatione*: The Development of Newton's Ideas on Action at a Distance", *Studies in History and Philosophy of Science* 42 (2011): 11-27; Schliesser, E., "Without God. Gravity as a relational Quality of Matter in Newton's *Treatise*", in *Vanishing Matter and the Laws of Motion: Descartes and Beyond*, eds. D. Jalobeanu & P. R. Anstey (London: Routledge, 2011), 80-100.