

Pre-print

Published version in: *Encyclopedia of Renaissance Philosophy*, edited by Marco Sgarbi. Cham: Springer, 2022, 304–306. DOI: https://doi.org/10.1007/978-3-319-14169-5_458.

Andrea Strazzoni

Author's Affiliation

Università degli Studi di Parma, Dipartimento di antichistica, lingue, educazione e filosofia (ALEF)

National Research University Higher School of Economics, Moscow.

Title*

Baconianism

Abstract*

The philosophy of Francis Bacon was interpreted in various ways in seventeenth century. In England, his utopian project and natural history became the basis for the projects of religious pacification, pedagogical reformation and scientific cooperation of Hartlib, Comenius and Charleton. In the hands of Evelyn, Wilkins and Wren, moreover, Bacon's ideal of cooperative science engendered the birth of the Royal Society, and his natural history guided the experimental activities of Boyle and Hooke. In France and the Netherlands, attention was paid to Bacon's natural history especially within the circle of friends of Descartes. In the second half of 17th century, though Bacon's historical approach was gradually supplanted by mechanical-mathematical science in Europe, Baconianism still served as a source of arguments in the Dutch Cartesian context, as to his theory of error and as a source of criticisms to Aristotelianism.

Innovative and original aspects

The reception of Bacon's philosophy was manifold, as one can distinguish between political, utopian, experimental, and metaphysical Baconianisms (Gigliani 2012). In England, the appropriation of Bacon's philosophy had a relevant social and religious character. For Samuel Hartlib and Jan Amos Comenius, Bacon's program of renovation of philosophy served as the basis for a religious pacification of society based on scientific learning and on improvement of techniques as husbandry and mining. Such learning would have been made possible by the application of Bacon's natural history, and substantiated in a pansophical collection of all knowledge (Bacon 1857a, b, c, 2000; Hartlib 1970). On a metaphysical level, Comenius and Francis Glisson endorsed Bacon's theory of matter as provided with life and appetites (Comenius 1668; Glisson 1672; Gigliani 2010, 2012). Moreover, Bacon's program of establishing a community of scientists ('Salomon's House') and his natural history were the basis of the pedagogical reform of Walter Charleton for the College of Physicians in London, a group of virtuosi aimed at the exchange of

learning, active in 1650s (Charleton 1657; Jalobeanu 2009). Eventually, Baconianism engendered the foundation of the Royal Society: according to the official history of the early Royal Society by Thomas Sprat (Sprat 1667), Baconianism inspired the activities of the ‘Oxford group’ of natural philosophers, including John Evelyn, John Wilkins, Christopher Wren, who assumed a “pure” form of Baconianism i.e. they relied on Bacon’s inductive method and theory of error (Bacon 2004a), opposed to the “vulgar” Baconianism of Hartlib and the London group (Purver 1967). This account has been corrected in more recent years, as also this group was largely relying on the Baconian ideal of a cooperative science and natural history (Hunter 1981; Agassi 2013; Gaukroger 2001; Jalobeanu 2009 and 2015). Also, Bacon’s natural history influenced the experimental philosophy of Robert Boyle and Robert Hooke, using the Baconian distinctions between luciferous, fructiferous, solitary and in consort experiments, and the notion of crucial experiment (Boyle 1665; Hooke 1679, 1705; Bacon 1996a, b, 2004b, 2007; Anstey 2014). Moreover, Baconianism inspired the failed attempt of Sprat, Joseph Glanvill and Abraham Cowley of establishing a College for the Society modelled on the ‘Salomon’s House’ in 1660s (Hunter 1984).

In France, Nicolas Fabri de Peiresc planned to translate Bacon’s natural histories, and Pierre Amboise abridged Bacon’s *Sylva sylvarum* by the technique of common-placing (Yeo 2007; Jalobeanu 2014). Moreover, Marin Mersenne developed an interest for Bacon’s natural history after having first rejected his empirical method as atheist and sceptical. Under the influence of Descartes, who asked him empirical data for the study of meteorology, Mersenne deepened Bacon’s historical study of sound (Mersenne 1648; Buccolini 2013). In the Netherlands, Bacon’s natural history was commented by Isaac Beeckman in his *Journal*, though he criticized Bacon’s relying on the qualitative properties of matter rather than on mechanism and mathematics (Beeckman 1939-1954; Gemelli 2013, 2014). With the emergence of Dutch Cartesianism in 1650s, Bacon’s philosophy offered a theory of error and an account of past philosophical theories which served to criticize the Scholastic approach to science, as by Johannes de Raey and Burchard de Volder. Also, it served as a *medicina mentis* in the introduction of students to philosophy, as in the works of Johannes Clauberg and Arnout Geulinx (Clauberg 1691; Bacon 1996c, 2004a; Geulinx 1665; De Raey 1654; De Volder 1681; Elena 1991; Strazzoni 2012). Eventually, the emergence of a mathematical natural philosophy expounded by the Newtonians supplanted Baconianism in European science (Anstey 2015).

Cross-References (if there are any; please include a list of other entries in this encyclopedia that may be of further interest to your readers.)

Bacon, Francis

Hartlib, Samuel

Boyle, Robert

Matter

Observation

Natural History

Descartes, René

Technology

Wilkins, John

Education

Comenius, Jan Amos

References* (please provide the most important references for your topic)

Primary literature

Bacon, Francis. 1857 [1623]. De augmentis scientiarum. In *The Works of Francis Bacon*, vol. I, ed. J. Spedding, R.L. Ellis, and D.D. Heath, 415-840. London: Longman et al.

Bacon, Francis. 2000 [1605]. The Advancement of Learning. In *The Oxford Francis Bacon*, vol. III, ed. M. Kiernan. Oxford: Oxford University Press.

Bacon, Francis. 1857b [1626]. Sylva sylvarum. In *The Works of Francis Bacon*, vol. II, ed. J. Spedding, R.L. Ellis, and D.D. Heath, 325-686. London: Longman et al.

Bacon, Francis. 1857c [1626]. New Atlantis. In *The Works of Francis Bacon*, vol. III, ed. J. Spedding, R.L. Ellis, and D.D. Heath, 119-166. London: Longman et al.

Bacon, Francis. 1996a [1612]. Descriptio globi intellectualis. In *The Oxford Francis Bacon*, vol. VI, ed. G. Rees. Oxford: Oxford University Press.

Bacon, Francis. 1996b [1611]. Phaenomena universi. In *The Oxford Francis Bacon*, vol. VI, ed. G. Rees. Oxford: Oxford University Press.

Bacon, Francis. 1996c [1623-1624]. De principiis atque originibus secundum fabulas Cupidinis et Coeli. In *The Oxford Francis Bacon*, vol. VI, ed. G. Rees. Oxford: Oxford University Press.

Bacon, Francis. 2004a [1620]. The Instauration Magna: Part II. Novum Organum. In *The Oxford Francis Bacon*, vol. XI, ed. G. Rees and M. Wakely. Oxford: Oxford University Press.

Bacon, Francis. 2004b [1660]. Parasceve ad historiam naturalem et experimentalem. In *The Oxford Francis Bacon*, vol. XI, ed. G. Rees and M. Wakely. Oxford: Oxford University Press.

Bacon, Francis. 2007 [1622]. The Instauration magna Part III: Historia naturalis et experimentalis: Historia ventorum and Historia vitae & mortis. In *The Oxford Francis Bacon*, vol. XII, ed. G. Rees and M. Wakely. Oxford: Oxford University Press.

Beeckman, Isaac. 1939-1953. *Journal tenu par Isaac Beeckman de 1604 à 1634*, ed. C. de Waard. The Hague: Martinus Nijhoff.

Boyle, Robert. 1665. *New experiments and observations touching cold, or, An experimental history of cold begun*. London: Printed for John Crook.

Clauberg, Johannes. 1691 [1658]. *Logica vetus et nova modum inveniendae ac tradendae veritatis, in genesi simul et analysi, facili methodo exhibens, editio secunda*. In *Opera omnia philosophica*, 815-910. Amsterdam: ex typographia P. & T. Blaev. Repr. Hildesheim: Georg Olms, 1968.

Comenius, Jan Amos. 1668. *Via Lucis, Vestigata & Vestiganda*. Amsterdam: apud Christophorum Cunradum.

Charleton, Walter. 1657. *The Immortality of the Human Soul demonstrated by the Light of Nature, In two dialogues*. London: Printed by William Wilson.

Hartlib, Samuel. 1970 [1647]. *Considerations tending to the happy accomplishment of Englands Reformation*. In Samuel Hartlib and the advancement of learning, ed. C. Webster, 119-139. Cambridge: Cambridge University Press.

Hooke, Robert. 1679. *Lectiones Cutlerianae, or a Collection of Lectures*. London: printed for John Martyn.

Hooke, Robert. 1705. *A General Scheme, or Idea of the Present State of Natural Philosophy*. In *Posthumous Works*, ed. R. Waller. London: printed by Sam Smith.

Geulincx, Arnout. 1891. [1665]. *Saturnalia, seu (ut passim vocantur) Quaestiones Quodlibeticae in utramque partem disputatae*. Editio secunda ab auctore recognita et aucta. In *Opera philosophica*, vol. I, ed. J.P.N. Land. The Hague: M. Nijhoff.

Glisson, Francis. 1672. *Tractatus de natura substantiae energetica*. London: typis E. Flesher.

Mersenne, Marin. 1648 [1635]. *Harmonicorum libri XII*. Paris: sumptibus Guillelmi Baudry.

De Raey, Johannes. 1654. *Clavis philosophiae naturalis, seu introductio ad naturae contemplationem, aristotelico-cartesiana*. Leiden: ex officina Joannis et Danielis Elsevier.

Sprat, Thomas. 1667. *The History of the Royal-Society of London for the Improving of Natural Knowledge*. London: printed by T.R.

De Volder, Burchard. 1681. *Disputationes philosophicae sive cogitationes rationales de rerum naturalium principiis*. Middelburg: typis Remigii Schreveri.

Secondary literature

Agassi, Joseph. 2013. *The Very Idea of Modern Science. Francis Bacon and Robert Boyle*. Heidelberg, New York and London: Springer.

Anstey, Peter. 2014. Philosophy of Experiment in Early Modern England: The Case of Bacon, Boyle and Hooke. *Early Science and Medicine* 19/2: 103-132.

Anstey, Peter. 2015. Experimental pedagogy and the eclipse of Robert Boyle in England. *Intellectual History Review* 25/1: 115-131.

Buccolini, Claudio. 2013. Mersenne Translator of Bacon? *Journal of Early Modern Studies* 2/1: 33-59.

Elena, Alberto. 1991. Baconianism in the Seventeenth-Century Netherlands: A Preliminary Survey. *Nuncius. Annali di Storia della Scienza* 6: 33-47.

Gaukroger, Stephen. 2001. *Francis Bacon and the Transformation of Early-Modern Philosophy*. Cambridge: Cambridge University Press.

Gemelli, Benedino. 2013. Isaac Beeckman as a Reader of Francis Bacon's *Sylva Sylvarum*. *Journal of Early Modern Studies* 2/1: 61-79.

Gemelli, Benedino. 2014. Bacon in Holland: some evidences from Isaac Beeckman's Journal. *Journal of Early Modern Studies* 3/1: 107-130.

Gigliani, Guido. 2010. Mastering the Appetites of Matter. Francis Bacon's *Sylva Sylvarum*. In *The Body as Object and Instrument of Knowledge: Embodied Empiricism in Early Modern Science*, ed. Charles T. Wolfe, Ofer Gal, 149-168. Dordrecht: Springer.

Gigliani, Guido. 2012. How Bacon Became Baconian. In *The Mechanization of Natural Philosophy*, ed. Daniel Garber, Sophie Roux, 27-54. New York: Springer.

Hunter, Michael. 1981. *Science and Society in Restoration England*. New York and London: Cambridge University Press.

Hunter, Michael. 1984. A 'College' for the Royal Society: The Abortive Plan of 1667-1668. *Notes and Records of the Royal Society of London* 38/2, 159-186. doi: 10.1098/rsnr.1984.0011.

Jalobeanu, Dana. 2009. The Fascination of Solomon's House in Seventeenth Century England: Baconianism Revisited. In *Branching Off. The Early Moderns in Quest for the Unity of Knowledge*,

ed. Vlad Alexandrescu, 225-255. Bucharest: Zeta Books.

Jalobeanu, Dana. 2014. The French reception of Francis Bacon's natural history in mid seventeenth century. In *Bacon et Descartes. Genèses de la modernité philosophique*, ed. Élodie Cassan. Lyon: ENS Editions.

Jalobeanu, Dana. 2015. *The Art of Experimental Natural History: Francis Bacon in Context*. Bucharest: Zeta Books.

Purver, Margery. 1967. *The Royal Society: Concept and Creation*. Cambridge, MA: The M.I.T. Press.

Strazzoni, Andrea. 2012. The Dutch Fates of Bacon's Philosophy: Libertas Philosophandi, Cartesian Logic and Newtonianism. *Annali della Scuola Normale Superiore di Pisa - Classe di Lettere e Filosofia* 4/1: 251-281.

Yeo, Richard. 2007. Between Memory and Paperbooks: Baconianism and Natural History in Seventeenth-Century England. *History of Science* 45/1: 1-46.