

Margaret Lucas Cavendish (1623-73)

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Biography

The only seventeenth-century woman to publish numerous books on natural philosophy, Cavendish presented her materialism in a wide range of literary forms. She abandoned her early commitment to Epicurean atomism and, rejecting the mechanical model of natural change, embraced an organicist materialism. She also addressed the relations that hold among philosophy, gender and literary genre.

1. Philosophical influences

Margaret Cavendish, Duchess of Newcastle, made contact with Hobbes, tutor to the Cavendish family, during the English Civil War. She became a member of the 'Newcastle Circle', which included Hobbes, Charleton and Digby, and which was influenced by interaction with Mersenne and Gassendi. While exiled in Paris, Rotterdam and Antwerp, she met Descartes and Roberval. In 1667, she became the first woman to attend a session of the Royal Society of London. She corresponded with Christian Huygens about 'Rupert's exploding drops', and with Glanvill about witchcraft and Neoplatonic notions such as 'plastic faculties' and the 'soul of the world'. She was one of the first Englishwomen to gain recognition for her publications. In addition to writing treatises such as *Philosophical Fancies* (1653) and *Philosophical and Physical Opinions* (1655, 1663) she experimented with a wide range of genres to express her views: poetry, orations, plays, autobiography (*Nature's Pictures...*, 1656), biography (*The Life of ... William Cavendish...*, 1667), allegories (*The World's Olivo*, 1655), epistolary narrative (*CCXI Sociable Letters*, 1664a) and fiction (*The Description of a New World, called the Blazing-World*, 1668). Introduced to twentieth-century readers by Henry Ten Eyck Perry (1918) and Virginia Woolf (1925), her philosophy only came in for serious, sustained evaluation beginning in the 1980s.

2. Organicist materialism

Cavendish's earliest works, such as *Poems*, and *Fancies* (1653), combine a version of Epicurean atomism with Lucretius' strategy of using poetry to achieve the highest form of the good: intellectual pleasure (see Epicureanism §§3–5). But it is her *Philosophical Letters* (1664b), *Observations upon Experimental Philosophy* (1666), and *Grounds of Natural Philosophy* (1668) that present her mature natural philosophy. She attacks the Platonists' and hermeticists' postulation of incorporeals in their theory of natural change. She agrees with Hobbes that an incorporeal substance is inconceivable for 'natural reason', but concedes that, on the basis of faith, one might accept 'supernatural spiritual beings'.

Like Hobbes, she holds that all natural change is change of motion. But instead of mechanism, the model for change in her mature philosophy is one of vital agreement or sympathetic influence of parts, as within a single organism. For, she rejects Hobbes' principle: every motion

in a body is produced by a contiguous body through impact. Rather, motion and vitality cannot be transferred from an external source, but are inherent in corporeal body. Cavendish rejects the transfer model of causation, which she thinks must underlie mechanical philosophy, for two main reasons. First, if motion is a mode of body, then it cannot be transferred outside of the substance in which it inheres. This would give to motion the unacceptable status of a 'real quality': a mere modification of substance that is none the less treated as if a 'complete thing'. Second, since motion is naturally inseparable from material body, if motion could be transferred, then a portion of body would be transferred too. But, since all change reduces to changes in motion, it follows that corporeal body would quickly be diminished. Cavendish here adapts a standard argument against atomism, cited by Lucretius.

Corporeal individuals, that is to say parts of body, can act on others at a distance because of their sympathy and vital agreement, just as a seriously wounded appendage can affect change in the organism as a whole. Cavendish is even committed to a version of panpsychism, whereby all corporeal individuals contain some degree of sense and reason (see Panpsychism). (In *De Corpore*, Hobbes admitted that he could not refute those who would ascribe sense to inanimate bodies.) She holds that corporeal nature is endowed with something analogous to understanding: Bodies know how to 'pattern out' the figure of a distant object in perception; they know how to duplicate themselves in generation. Her views – (1) that nature is a single, unified corporeal body, intrinsically possessing self-motion or vital force, (2) that all parts of corporeal nature have some degree of sense and intellect, (3) that causation is understood through the vital affinity one part of nature has for another, rather than via the mechanical model – are all adaptations from Stoicism. Cavendish appears to have been familiar with some version of Chrysippus' views, for she makes reference to some of his analogies and arguments (see Stoicism §3; Chrysippus).

3. Theory of sense perception

Cavendish characterizes her anti-mechanist model of change in the following way:

A Watch-maker doth not give the watch its motion, but he is onely the occasion, that the watch moves after that manner, for the motion of the watch is the watches own motion, inherent in those parts ever since that matter was.... Wherefore one body may occasion another body to move so and so, but not give it any motion, but everybody (though occasioned by another, to move in such a way) moves by its own natural motion.

(Cavendish 1664b: 100)

She uses this vital concomitance model in her theory of sense perception: the 'corporeal motions' of external objects are the 'occasion' for the 'sensitive and rational motions' in creatures to imitate or 'pattern out' the motions and figures of the external objects. An 'occasion' is any circumstance which has no intrinsic connection to or direct influence on the effect, is not necessary for the production of the effect, but has an indirect influence on the production of the effect by inducing the primary cause through command or example. For Cavendish, a 'primary cause' is that which is necessary and sufficient for the production of the effect. An external object cannot be *necessary* for perception since 'the sensitive organs can make such like figurative actions were there no object present' (1668b: 56). But neither is it *sufficient*; when the

sense organs operate 'irregularly', misperception of objects takes place. So, the sensitive body is the principal cause of perceptions, and external objects are the exemplar causes that induce the body to pattern out one sense perception rather than another.

Cavendish's main argument against Descartes and Hobbes on perception is that their talk of translation of motion, or of imprinting an image, can only be interpreted via a transfer model of causation. But, as has been shown, such a model is inconsistent with their substance/mode ontology. Cavendish also has specific criticisms of Hobbes' theory of memory that derive from Stoic arguments. If sense is produced by imprinting and if, as Hobbes suggests, the bodily organs retain these imprints, then mechanism entails an eventual jumble of corporeal images. This criticism, derived from Chrysippus, was also proffered by Digby and Glanvill. Hobbes would have charged his critics with interpreting his metaphors too simplistically, since the impressions he refers to are infinitesimal motions. But without the mathematical model later provided by the calculus, the only models in terms of which to depict the impact of infinitesimally small motions were crude mechanical ones. So, however quaint these criticisms may seem to us, they were contemporary demands for an intelligible mechanical model of perception.

4. Philosophy and gender

In 'Female Orations', a section of *Orations of Divers Sorts* (1662), Cavendish explores the following questions: Is woman's social subordination to man a fact or no? If the former, is it due to oppression by men, to a natural inferiority in women, or to unfair cultural practices such as inferior education and constricted possibilities for acquiring moral, physical and intellectual experience? Finally, is woman's subordination to man inevitable? Rather than arguing for a position, Cavendish is content to lay out the logical space of the gender politics of her day. The prefaces and introductions to her books also contain defences of her desire to publish and her ability, as a woman, to do philosophy. Her experimentation with varied philosophical genres is, in part, an attempt to find a form which her readers would find acceptable: one in which a seventeenth-century woman, explicitly seeking fame as a natural philosopher, might give voice to her views.

List of works

Cavendish, M. (1653) *Poems, and Fancies*, London; facsimile repr. Menston: Scolar Press, 1972; *Poems, and Phancies, The Second Impression, much Altered and Corrected*, London, 1664; *Poems, or Several Fancies in Verse: with the Animal Parliament, in Prose, The Third Edition*, London, 1668.

(Atomism expressed in verse form, together with poems on moral topics such as cruelty to animals, and whimsical verses about fairies and other incorporeals.)

Cavendish, M. (1653) *Philosophicall Fancies*, London.

(A prose exposition of her materialist natural philosophy.)

Cavendish, M. (1655) *Philosophical and Physical Opinions*, London; 2nd edn, London, 1663.

(This revised version of *Philosophicall Fancies* is a transitional work, in which Cavendish begins to reject mechanistic atomism in favour of an organicist materialism; the substantially revised second edition, reissued as *Grounds of Natural Philosophy* (1668), expounds her mature system of natural philosophy.)

Cavendish, M. (1655) *The World's Olio*, London; The Second Edition, London, 1671.

(A collection of mostly prose works, it also contains some poems on atomism first published as Part I of *Poems, and Fancies*.)

Cavendish, M. (1655/6) *Nature's Pictures Drawn by Fancie's Pencil to the Life*, London; 2nd edn, *Natures Picture Drawn by Fancies Pencil to the Life*, London, 1671.

(The first edition of this collection of largely fictional sketches includes her autobiography, 'A True Relation of my Birth, Breeding and Life', which is not found in the second edition.)

Cavendish, M. (1662) *Playes*, London.

(Some plays include discussions about gender politics, such as *The Female Academy* and *Bell in Campo*; excerpts from the latter play appear in *Women Writers of the Seventeenth Century*, ed. K. Wilson and F. Warnke, Athens, GA: University of Georgia Press, 1989.)

Cavendish, M. (1662/3) *Orations of Divers Sorts, Accomodated to Divers Places*, London; 2nd edn, London, 1668.

(Includes 'The Female Orations' reprinted in *The Norton Anthology of Literature by Women*, ed. S. Gilbert and S. Gubar, New York and London: W.W. Norton & Co., 1985.)

Cavendish, M. (1664a) *CCXI Sociable Letters*, London; facsimile repr. Menston: Scholar Press, 1969.

(An epistolary narrative praised by Charles Lamb, which has been compared to Samuel Richardson's works, it provides details of the historical and intellectual setting in which Cavendish was writing.)

Cavendish, M. (1664b) *Philosophical Letters: or, Modest Reflections Upon some Opinions in Natural Philosophy, maintained By several Famous and Learned Authors of this Age, Expressed by way of Letters: By the thrice Noble, Illustrious, and Excellent Princess, the Lady Marchioness of Newcastle*, London.

(Letters to a fictitious noblewoman, in which she criticizes the views of Descartes, Hobbes, More and van Helmont in light of her own system of natural philosophy; letters concerning Descartes are reprinted in *Women Philosophers of the Early Modern Period*, ed. M. Atherton, Indiannapolis, IN: Hackett Publishing Company, 1994.)

Cavendish, M. (1666) *Observations upon Experimental Philosophy, To which is added, The Description of a New Blazing World*, London; the additional text was reissued as *The Description of a New World, called the Blazing-World*, London, 1668; repr. in *The Blazing World and Other Writings*, ed. K. Lilley, London and New York: Penguin, 1992.

(A treatise of her natural philosophy, published with a utopian fiction that intimates some of her philosophical positions and parodies views about incorporeal spirits.)

Cavendish, M. (1667) *The Life of the thrice Noble, High and Puissant Prince William Cavendish, Duke, Marquess, and Earl of Newcastle...*, London; 2nd edn, 1675; Latin trans. W. Charleton as *De vita et Rebus Gestis...Guilielmi Ducis Novo-Castrensis...*, London, 1668; numerous reprints.

(This early English biography has gained Cavendish a place in literary history; she has been known primarily for this work.)

Cavendish, M. (1668a) *Plays, never before Printed*, London.

(Some plays include discussions about gender politics, such as *The Convent of Pleasure*, excerpts from which appear in *First Feminists: British Women Writers 1578–1799*, ed. M. Ferguson, Bloomington, IN: Indiana University Press, 1985.)

Cavendish, M. (1668b) *Grounds of Natural Philosophy... The Second Edition*, much altered from the First which went under the Name of Philosophical and Physical Opinions, London.

(A reissue of the 1663 work; together with *Philosophical Letters and Observations upon Experimental Philosophy*, this work constitutes the expressions of her mature natural philosophy.)

References and further reading

A Collection of Letters and Poems: Written by several Persons of Honour and Learning, Upon divers Important Subjects, to the Late Duke and Duchess of Newcastle, (1678), London.

(Documents important for reconstructing her intellectual circle, including letters to her by Hobbes, Glanvill, Charleton and Digby.)

Alic, M. (1986) *Hypatia's Heritage: A History of Women in Science from Antiquity through the Nineteenth Century*, Boston: Beacon Press.

(Historical information about her natural philosophy.)

Ballard, G. (1752) *Memoirs of several Ladies of Great Britain...*, Oxford; repr. ed. R. Perry, Detroit: Wayne State University Press, 1985.

(Biographical information.)

Bowerbank, S. (1984) 'The Spider's Delight: Margaret Cavendish and the "Female Imagination"', *English Literary Renaissance* 14; repr. in *Women in the Renaissance: Selections from English Literary Renaissance*, ed. K. Farrell, E.H. Hageman and A.F. Kinney, Amherst, MA: University of Massachusetts Press, 1991.

(A feminist examination of Cavendish's natural philosophy.)

Cavendish, W. (1676) *Letters and Poems in Honour of the Incomparable Princess Margaret, Dutchess of Newcastle*, London.

(Documents important for reconstructing her intellectual circle.)

Clucas, S. (1994) 'The Atomism of the Cavendish Circle: A Reappraisal', *The Seventeenth Century* 9 (2): 247–273.

(Chronicles Cavendish's changing views in natural philosophy, arguing that she never entirely rejected atomism, broadly construed.)

Dumée, J. (c. 17th century) *Entretien sur l'opinion de Copernic touchant la mobilité de la terre* (Discussion of the Opinion of Copernicus Concerning the Mobility of the Earth), Paris: La Veuve Bertrand, ms. Bibliothèque National Fonds français 1941.

(One of the only other works on natural philosophy written by a seventeenth century woman.)

Grant, D. (1957) *Margaret the First: A Biography of Margaret Cavendish, Duchess of Newcastle, 1623–1673*, London: R. Hart-Davis.

(A standard source for biographical information.)

Jones, K. (1988) *A Glorious Fame: The Life of Margaret Cavendish, Duchess of Newcastle, 1623–1673*, London: Bloomsbury.

(A biography which places Cavendish within the context of other women intellectuals of the period.)

Kargon, R.H. (1966) *Atomism in England from Hariot to Newton*, Oxford: Clarendon Press.

(One of the few histories to treat the 'Newcastle Circle'; only Cavendish's earliest publications are discussed.)

Merchant, C. (1980) *The Death of Nature*, San Francisco, CA: Harper & Row.

(A feminist/environmentalist revisionist history of science, which treats her rejection of mechanism.)

Meyer, G.D. (1955) *The Scientific Lady in England 1650–1760*, Berkeley, CA: University of California Press.

(Focuses on her *Observations upon Experimental Philosophy* and places it in the context of other early modern scientific works by Englishwomen.)

Rogers, J. (1996) *The Matter of Revolution: Science, Poetry, and Politics in the Age of Milton*, Ithaca, NY and London: Cornell University Press.

(Comparable to earlier treatments of Hobbes, this work explores the connection between Cavendish's natural philosophy and political views.)

Sarasohn, L.T. (1984) 'A Science Turned Upside Down: Feminism and the Natural Philosophy of Margaret Cavendish', *Huntington Library Quarterly* 47 (4): 299–307.

(A treatment of Cavendish's natural philosophy that draws conclusions about the feminist implications of her work.)

Schiebinger, L. (1991) 'Margaret Cavendish, Duchess of Newcastle', in *A History of Women Philosophers*, vol. 3, ed. M.E. Waite, Dordrecht: Kluwer.

(A survey of Cavendish's natural philosophy.)

Smith, H. (1982) *Reason's Disciples: Seventeenth-Century English Feminists*, Urbana: University of Illinois Press.

(Focuses on the feminism in her non-scientific works.)

Ten Eyck Perry, H. (1918) *The First Duchess of Newcastle and Her Husband As Figures in Literary History*, Boston, MA and London: Ginn & Company.

(An examination of Cavendish's corpus and a historically useful account of its critical reception.)

Woolf, V. (1925) 'The Duchess of Newcastle', *The Common Reader*, London: Published by Leonard & Virginia Woolf at the Hogarth Press.

(An introduction of Cavendish to twentieth-century readers.)

Taylor & Francis
Not for distribution