



Margaret Cavendish: Socialite Scientist

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Throughout her prolific body of writing, ranging from scientific theory engaging her contemporaries to plays and epistolary fiction, Cavendish reckons the place of women in academic spheres, and appropriates these literary forms as scientific discourses. In this essay I will draw comparisons between Cavendish's academic satire in *The Blazing World*, and her observations on friendship and artifice in *Sociable Letters*, attempting to demonstrate the ways that this sense of place influences her work and her philosophy.

The term 'science' prior to the reformation period was applied to a myriad of various academic, economic and political professions, of which theology was the prime. Cawdrey defines 'science' broadly as 'knowledge, or skill', while 'theologie' is styled 'the science of living blessedly for euer'¹. As theology was considered a fundamental logic which defied the application of theory and evidence in the subordinate sciences, the foundation of the Royal Society in 1660 presented a direct challenge to this supremacy. While many natural philosophers attempted to establish definitive boundaries between these disciplines, Robert Boyle argued the case for trans-disciplinary study: 'Mechanical Philosophy...strives to deduce all the *Phoenomena* of Nature from Adiaphorous Matter, and Local Motion. But neither the fundamental doctrine of Christianity nor that of the powers and effects of matter and motion seems to be more than epicycle... Of the great and universal system of gods contrivances, and makes but a part of the more general theory of things, knowable by the light of nature, improved by the information of the scriptures'². This 'physico-theological' theory asserted that research into the lesser philosophy of physics could be utilised to illuminate and fortify theological conclusions. If Cavendish's engagement with Boyle and his contemporaries throughout *Observations Upon Experimental Philosophy* and *Philosophical Letters* questions the conclusions her physicist contemporaries reach attempting to rationalise the natural world, *The Blazing World* as a companion piece questions the morality of this pursuit. Cavendish brings the scientific theorems and technologies she had previously scrutinised and parodies the hypocritical logic of their proponents. This is most apparent in the Empress' criticism of her logicians: 'Nature her self cannot boast of any perfection, but God himself; because there are so many irregular motions in Nature, and 'tis but a folly to think that Art should be able to regulate them, since Art it self is, for the most part, irregular.'³ The circular logic of the Bird-men is criticised for its abstraction from common sense, and alienated from the natural world it seeks to contextualise. Her argument that the irregularity of the natural world defies scientific rationale is a rebuke to the application of worldly science to questions of universal truth beyond it.

Similar anxieties of obfuscation are evident in her discourse with the bear-men, whose observations trigger academic infighting: 'they could not agree neither in this observation: for some said, It was but one Star which appeared at three several times, in several places; and others would have them to be three several Stars.'⁴ The utility of scientific apparatus is determined by its efficacy in determining motion. When observing lice through a microscope, 'she desir'd to know, Whether their Microscopes could hinder their biting, or at least shew some means how to avoid them? To which they answered, That such Arts were mechanical

¹ Robert Cawdrey, *A Table Alphabetical* (London: Edmund Weaver, 1604)

² Robert Boyle, *The Excellency of Tehology, Compar'd With Natural Philosophy* (1674) p.66; quoted in Peter Harrison, *The Science of Nature in the Seventeenth Century* (Sydney: Springer, 2005) p.173

³ Margaret Cavendish, *THE DESCRIPTION OF A NEW WORLD, CALLED The Blazing-World*, 1604 (London: S. Harding, 1799) p.60

⁴ *The Blazing World*, p.27.

and below the noble study of Microscopical observations⁵. Satisfied with scientific observance for its own sake, the academic culture takes pride in being inutile. The level of insight offered by scientific observation becomes transgressive, and the aesthetics and mechanics of nature are made mundane, and grotesque. In Cavendish's vitalism, the telescope becomes innately paradoxical as a tool of observance. The applied science of astronomical observation is unable to truly perceive the celestial.

In addition to satirising the inapplicability of science to theological questions, Cavendish also explores the inverse in *Sociable Letters*, applying these principles to the mundane; the incongruity of the appearance of explicit scientific discourse is most evident in Letter 160, which applies her observations on evaporation to the theory of baking: 'I say, the same reason that much Butter makes Pye-crust Heavy, for it is much Moisture that causes such things to be Heavy, like as Dough is much Heavier than when it is throughly Baked, for the Fire Drying up the Moisture, causes it to be Light'.⁶ In the context of the neighbouring letters, which discuss the validity of theories of atoms and vacuums, physics is applied with inappropriate detail to the sphere of domestic life. She ends on a note of irony admitting that 'tis Probable my Cook can give better Reasons than I can'⁷. While observations on physics are beneath the divinity of the theologians, they are made inappropriate and redundant when applied to more tangible questions. In the intellectual structures women are confined to, the natural philosophers' elaborate theories of the governing principles of the universe are placed in a redundant perspective. Cavendish's satire reflects on the contradictory nature of her intellectual identity, and the innate hypocrisies of philosophical theory, which expresses its conceits as universal truths, while being simultaneously unable to offer greater insight on trivial domestic matters.

While Cavendish criticises the application of scientific logic on both universal and trivial scales, her recognition of its imperfection is peculiar in the context of her vision of a world governed by the principle of order: 'it was composed onely of the Rational, which is the subtlest and purest degree of Matter; for as the Sensitive did move and act both to the perceptions and consistency of the body...[it] appear'd so curious and full of variety, so well order'd and wisely govern'd, that it cannot possibly be expressed by words',⁸ The 'irregular motions' in the natural world are a defining point of reference for Cavendish's philosophy. Her curated world defies the discordant 'chopt logick'⁹ of academia and irregularity of nature. In clarifying the inapplicability of 'physico-theological' theory to divine questions, Cavendish also admits that her philosophical vision is inarticulable. Her vision of a rational world is one governed by a synchronicity of motions unobservable in the context of the natural world. The discord Cavendish notes in nature is applied to the tumultuous social climate of the Restoration; when asked to observe her realm, 'The Duchess used all the means she could, to divert her from that Journey, telling her, that the World she came from, was very much disturbed with Factions, Divisions and Wars'. Cavendish's vision of a world governed solely by rational motion becomes contextualised by her royalist political views; her protagonist justifies restricting the school of logicians 'lest besides the Commonwealth of Learning, they disturb also Divinity and Politic, Religious and Laws, and by that means draw an utter ruine and destruction upon Church and State.'¹⁰ Cavendish's idyll of a natural harmony between matter is reflective of her support for monarchal rule; as Sarasohn notes, 'Nature often faces discord, just as the good monarchy Cavendish had hoped for was destroyed by civil war... The sensitive matter sometimes rebels against the rational matter, and the rational matter sometimes agitates the sensitive matter.'¹¹ The discordant world political climate of the 17th

⁵ Ibid, p.33

⁶ Margaret Cavendish, *Sociable Letters* ed.by James Fitzmaurice (Toronto: Broadview, 2005) p.223

⁷ Ibid, p.223

⁸ *The Blazing World*, p.101-102

⁹ Ibid, p.58

¹⁰ Ibid, p.60

¹¹ Lisa T Sarasohn, *The Natural Philosophy of Margaret Cavendish : Reason and Fancy during the Scientific Revolution* (Baltimore: John Hopkins University Press, 2010) p. 108

century contextualises Cavendish's priority of the institutions of power over scientific endeavour.

Reckoning Cavendish's position within this academic community presents the complexity of her intellectual sense of belonging. In her introductory message 'To all Professors of Learning and Art, she assures that 'were I Emperess of the World, I would Advance those that have most Learning and Wit, by which I believe the Earth would rather be an Heaven, since both Men and Government would be as Celestial'¹². Though this idyll of a society governed by science and philosophy becomes inverted in *The Blazing World*, which concludes that "'tis better to be without their intelligences, then to have an unquiet and disorderly Government'¹³, here Cavendish presents the enlightening power of the sciences as not only rationalising, but potentially spiritual. Cavendish also acknowledges her writing as peripheral, and expresses her difficulty in reckoning herself with a scientific culture, and once beautiful and paradigmatic, but with the intangibility and esoteric properties of the divine.

The Blazing World reckons this disparity between the scientific and spiritual bodies of thought. In her meeting with the Spirits, the Empress attempts to determine the nature of their relation to the physical world: 'I pray inform me, whether you Spirits give motion to Natural Bodies? No, answered they; but, on the contrary, Natural material bodies give Spirits motion...Then the Empress asked them, Whether they could speak without a body, or bodily organs? No, said they; nor could we have any bodily sense, but onely knowledg.'¹⁴ Her efforts to determine the extent of the corporeality are reflective of her use of an inverted microscope to observe a whale, which 'appear'd no bigger then a Sprat'¹⁵; the application of natural philosophy to natural phenomena strips the spectacle of its majesty. later, when Cavendish herself is transported self-insertion becomes literary artifice, and makes the physical principles of her universe lapse into the magical. Her inappropriate application of physical properties to the omnipotent ethereal beings and supernatural occurrence appears to criticise the encroachment of a subordinate logic to a purer knowledge. Cavendish meditates on the nature of 'physico-theological' cross-reference, satirising its inapplicability to questions only comprehensible in the philosophical framework of the theologian.

Cavendish meditates on her experience as an academic spectator in Letter 199 of *Sociable Letters*; her protagonist describes a dream in which she enters a 'Banquet of Wit...in which room were a number of Poets met, as Nature's Guests, which when I Saw, I was extremely out of Countenance, as being all Men'.¹⁶ Confronted with the illusion of equality with her male peers, her protagonist is intimidated by this notion and resigns to 'bashfulness'. The table of the feast is fashioned from 'Famous old poets Skulls, and the tablecloth...was made of their Brains'; the wisdom of the men who preceded her is made the foundation of her pleasure in consuming the results of modern academic labour, manifested as dishes representative of various academic pursuits. The 'Dish of Natural Philosophy, a Dish I love to Feed on, although the Meat is very Hard, and not Easily to be Digested' becomes representative of her place – despite her participation in philosophical writing, Cavendish finds identity reckoning her role as a consumer of natural philosophy. Cavendish argues that the female intellectual experiences the advance in modern science through the confines of the domestic sphere. At the end of her feast, she is handed a 'Prospective Glass, where we saw other Worlds, Creatures, and Celestials, but some saw not so far, or so Much as others'. Her description of her observances approach spiritual epiphany, but are ultimately only partially realised by herself and the myopic perspective of her peers. As an observer, the inquisitive female is unable to actualise these discoveries – she experiences the world of scientific observation vicariously through literature, reading and correspondence with members of academic institutions.

¹² *Sociable Letters*, p.40

¹³ *Ibid*, p. 122

¹⁴ *Ibid*, p.70

¹⁵ *Ibid*, p.72

¹⁶ *Sociable Letters*, p.268-269

The significance of motion to defining Cavendish's philosophy extends beyond its application to universal physical principle, taking on a mode of spiritual significance. In *Philosophical Letters* 33, her protagonist describes nature as 'an infinite self-moving body; where by the body of Nature I understand the inanimate matter, and by self-motion the animate, which is the life and soul of Nature, not an immaterial life and soul, but a material, for both life, soul and body are and make but one self-moving body or substance which is corporeal Nature. And therefore when I call Animate matter an Extract, I do it by reason of its purity, subtilty and agility, not by reason of its immateriality'¹⁷. Cavendish's concept of the 'soul' is reckoned in terms of a motion unobservable by scientific apparatus.

The significance of motion to Cavendish's philosophy, however, is actualised in the context of the confining domestic sphere. In Letter 159, Cavendish clarifies her doubt over the theory of atomic composition, arguing that were they to exist 'they must be both the architects and materials, neither could they do they do that work, unless every atome was animated with life and knowledge...passions and appetites, as well as wit and ingenuity, to make worlds, and world of creatures, as also passions and appetites that sympathise and antipathize'¹⁸. The composition of the world on a molecular level is not fundamentally matter, but the society that holds the matter together. Cavendish's relation of scientific principle to the spheres of domesticity, rather than demonstrating a scientific basis for social life, suggests the opposite – that for these physical laws to exist, they must be governed by a harmony of social motions. Cavendish goes on to note that a world of atomic synchronicity is not one of conformity, but one where actions and reactions correspond: 'Sympathy and Antipathy might cause the Continuation of the World, for if they did always Agree, there would be no Change, an if they did always Disagree, where would be a Confusion'. Despite her idyll of synchronicity, Cavendish acknowledges that this belief cannot be reckoned with her vitalist approach. In her perspective, the atomic universe can only be realised through a reactive and discordant relationship between all matter, a principle reflected in social artifice and the dynamics of friendship and correspondence.

In both Cavendish's epistolary fiction and *The Blazing World*, female friendship is foundational to her scientific, social and political discourse. Barnes notes that 'in *Philosophical Letters* she defies the masculine bias of philosophy by anchoring her critique of contemporary philosophers to a rational dialogue between female friends'¹⁹. In Letter 83, Her protagonist describes how 'you Chid me for Loving too Earnestly, saying, Extreme Love did Consume my Body and Torment my Mind, and that whosoever Love to a High Degree are Fools'²⁰. She responds by assuring her that My Love is not Fix'd Suddenly, for it takes Experience and Consideration...which have been my Guides and Directors to Love you, which makes me Love you Much, and shall make me Love you Long.' The rational nature of this exchange is fundamentally an exercise in friendship and mutual betterment. Correspondence between philosophers of many disciplines indicate a sense of familiarity and obligation – scientific correspondence received by Charles Cavendish from Francois Derand declares himself 'je vois suis, Monsieur, Serviteur tres humble et tres obeissant'²¹. While cordial, the modes of scientific exchange centered primarily on decorum and mutual respect. Cavendish's social correspondence with Constantijn and Christiaan Huygens and the Oldhams indicates politeness and acquaintance above sincere friendship; Cavendish closes as 'your humbled Servant'²², while Oldham excuses himself as 'Your humble servant to Command'²³. Here,

¹⁷ *Philosophical Letters*, p. 533

¹⁸ *Sociable Letters*, p. 222.

¹⁹ Diana Barnes, 'Familiar Epistolary Philosophy: Margaret Cavendish's *Philosophical Letters* (1664), *Parergon*, 26:2 (2009) p.11

²⁰ *Sociable Letters*, p.137.

²¹ Stephen Jordan Rigaud, *Correspondence of Scientific Men, I* (Hildesheim: Georg Olms, 1965) p.29

²² Nottingham, University of Nottingham Manuscripts and Special Collections, Newcastle Collection, Nec15, 335/336.

²³ Nottingham, University of Nottingham Manuscripts and Special Collections, Portland Collection, Pw1.481

friendship and courtesy is not recognised by mutual friendship, but by deference. In both *Philosophical Letters* and *Sociable Letters*, her protagonist's affirmation as 'Your Faithful Friend' before 'servant' cements the context of their exchange, regardless of content, as a correspondence between friends. In the context of decorum, Barnes notes that the relation of the unnamed protagonists to the unidentified socialites who surround them 'represent two modes of social relationship: one based upon sameness and equality, and the other upon heterogeneity or difference.'²⁴ This description of the dynamic of friendship reflects the vision of a homogenously synergetic world governed by motion in *The Blazing World*; the synchronicity of the feminine friendship, despite being an intangible idyll, becomes a vision worthy of pursuit.

While rejecting the vision of interdisciplinary philosophy shared by members of the Royal Society, Cavendish's appropriation of plays, epistolary fiction and the novel contextualises her scientific observations through their representation in various forms. Both *Sociable Letters* and *The Blazing World* are intimately concerned with the feminine perspective of the spheres they occupy; before her departure, Cavendish is asked for counsel from the Empress, 'she being her dear Platonick Friend...could not forbear, before she went from her, to ask her Advice concerning the Government of the Blazing-world'²⁵. Removed from the confinement of the domestic, Cavendish now determines the fate of the academic world. In the inversion of social roles, feminine friendship is made a more powerful mode of social influence than the male spheres of academics and politics, eclipsing their logic and philosophy and ending the narrative on a note of clarity.

While her epistolary fiction celebrates the mutually fulfilling experience of feminine friendship, Cavendish is openly satirical of feminine conceit and artifice. In Letter 66, intending to send a letter extolling the admirable qualities of a correspondent, her protagonist mistakenly sends a message penned earlier with 'all the Defects I could Think or had observed in her'. She argues that 'I am not guilty of a Crime to her, for I was free from Malice or Envy, or any Evill Design...since I onlely writ it as a philosopher'²⁶. Cavendish appropriates the objective gaze of the scientist and applies this outlook in the context of social discourse for comic effect – although acknowledging the clarity offered by scientific analysis, she recognises its inappropriateness in the context of social decorum. This satire is applied more seriously in Letters 200 and 201, in which Cavendish's persona writes to her sister comparing the love they share to their obliged bonds with their husbands, then telling another sibling 'I Cannot Advise you to Marry, unless Men's Souls, Minds, and Appetites, were as Visible to your Knowledge as their Persons to your Eyes, for though there may be much Deceit even in Outward Forms'. Her persona restricts her honest observation in the intellectually stifling context of epistolary decorum. Cavendish's satirical hypocrisies in *Sociable Letters* can be read as a treatise on the application of scientific observation on the social sphere – at times socially inappropriate and dangerous, but necessary for open and honest correspondence.

Ultimately, despite the eclectic and occasionally disorderly and hypocritical nature of this correspondence, Cavendish's satire of social artifice embraces hypocrisy. Her persona sends a poem in Letter 198 expressing the centrality of this artifice to the human condition: 'If we must nothing Artificial wear,/Then go stark Nak'd, and all the Body Bare...But if thou Artificial things think'st Vain,/Then like a Beast in Woods and Fields remain/,And feed on Grass Vnmow'd...For if that Art did not Increase the Store/Of every thing, the World would be but Poor'²⁷. Although Cavendish identifies the social conceits of herself and her peers, her work simultaneously champions women's social and intellectual independence.

As with her extended satire of the esoterics of academic culture to the spheres in which women operate, she noting their incompatibility with her own vision of a state governed by the principle of order, she celebrates this imperfection, and frames her account of its shortcomings in the framework of feminine friendship. Her eccentric public persona, her incisive criticism of

²⁴ Diana Barnes, *Epistolary Community in Print, 1580-1664* (Taylor & Francis, 2013)

²⁵ *The Blazing World*, p.121

²⁶ *Sociable Letters*, p.120

²⁷Ibid, p.265

circular and meaningless scientific logic, and her championing of feminine self-improvement mark her unique inquisition among those she considered her peers.

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Hant. 29 Durbest

What matter could for fear yo grant, or the Noble Duke yo Husband
 should suppose and ingratefull to give you many humble and hearty
 than God, not onely for yo^r Honourable entertainment when we
 were with you, but also for yo^r Noble reward at our departure from
 you, for the which we are obliged to pray for the Continuance of
 yo^r health, and the health of the Noble Duke yo^r husband, and for the
 Eternall Happiness of you both in this life to come, wishing nothing
 so much, as to be thought worthy of some employment under
 yo^r gracious husband and yo^r grace, if you in yo^r wisdom shall
 receive us Capable thereof, of the which might we be assured
 we should be glad, and would not fail, to sell our Estate howe
 some to do you the best service, that should remain in o^r power
 Duke yo^r grace booke have bene Communicated, to severall good
 of worth of o^r Neighbourhood and according to their desire great
 approbation, and yo^r grace highly applauded and admired, for writing
 of them, for humbly begging, that you will vouchsafe yo^r
 answer to these our humble requests bearing by testimony for
 to offend in hard we rest

Burton in Cheshire
 October 3^o 1668 /

Yo^r humble servant to Command
 Edw. Allham
 Pleasance Allham:

Nottingham, University of Nottingham Manuscripts and Special Collections, Portland Collection, Pw1.481.

Nec 15, 336

worthy Sr

I did not think I should have troubled
 you to do me any other favors but was
 in hope fortune and fate would make
 give me some opportunity one way
 or other to serve you to express
 my gratitude to you for the obligation
 I have received from you, but
 I must desire your favor, but
 as to desire the Stat, of holding
 in my name presenting my services
 to them, that they would be pleased
 to send me a pass for my goods to
 pass by the frontiers, had one
 taken as the King was at the
 Hague that my Lord had of the
 King, but I am told that now
 that pass will not serve, I have
 sent it that you may show it the
 Stat if you please, but this favor
 they must if they will favor me
 with one to soon for I goe a way
 the next week, and my Lord having
 sent for me and my Lord having
 so presenting my services to
 your daughter and your sons
 especially to your son archemedeas
 rest your humble servant

MARGARET CAVENDISH

I have not sent of the Stat of holding in my name
 presenting my services to them, but I have
 sent it that you may show it the Stat if you
 please, but this favor they must if they will
 favor me with one to soon for I goe a way
 the next week, and my Lord having sent for
 me and my Lord having so presenting my
 services to your daughter and your sons
 especially to your son archemedeas rest
 your humble servant

Nottingham, University of Nottingham Manuscripts and Special Collections, Newcastle Collection, Nec15, 335/336.