Bodily Wayfare: Nathaniel Fairfax on Matter and Limit

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Nathaniel Fairfax is often described as an 'antiquarian', sometimes as a 'virtuoso', a word which in the seventeenth century still had overtones of the amateur autodidact rather than the accomplished expert. The historian of nonconformism Edmund Calamy describes him as '[a]n ingenious man, a good scholar, and a popular preacher', adding that 'he practised physic, in which he had great encouragement and success' (Calamy and Palmer 1802, 3.295), the last phrase seemingly warranted by his commemoration slab in Woodbridge church, which says that 'medicinam feliciter exercuit' (Urbanus 1825, 22). Fairfax received his MD from the University of Leiden on 21st June 1670 (Peacock 1883, 34). For historians of early science, the dozen or so lengthy letters he wrote to Henry Oldenburg make him an interesting representative of the network of provincial correspondents who contributed to the work of the Royal Society. His one book, *A Treatise of the Bulk and Selvedge of the World: Wherein the Greatness, Littleness and Lastingness of Bodies are Freely Handled*, (hereafter *Bulk and Selvedge*) has never been reprinted since its first appearance in 1674, though its preface was republished along with that to Richard Whitlock's *Zootomia* in 1949.

Fairfax is often connected with the desire for plain, native style and the reaction against Latinism and Scholastic obscurity that had been articulated from Ascham to Sprat. Reviewing the reprinting of the preface to *Bulk and Selvedge*, one reviewer remarked that 'neither Whitlock nor Fairfax are of much importance; although it is often from the lesser, rather than that we can learn about trends and movements in such matters of style' (Macdonald 1950, 280). The distinctiveness of Fairfax's own style is recognised by the OED, which draws on Bulk and Selvedge for more than 700 illustrative quotations. Many of those who refer to Bulk and Selvedge content themselves with noting the curious features of its style. An 1841 guide to Suffolk calls it 'a whimsical treatise' (Page 1841, 129). In an MS note on the flyleaf of his copy of Bulk and Selvedge, now in the British Library (231 e. 35), Richard Farmer, Master of Emmanuel, Cambridge and University of Cambridge Librarian, observes 'This book is particularly curious for the affected Exclusion of all words borrow'd from the learned Languages'. (Farmer owned a copy of *Bulk and Selvedge*, for it appears in the sale catalogue of his library sold in 1798. Item no. 3160, priced at 5/6d (Bibliotheca Farmeriana 1798, 130).

None of these accounts describe or consider Fairfax as a writer. Most of those who quote him draw on his own preface, in which he articulates his conceptual-stylistic programme, rather than taking seriously the way in which he employs it in the enquiry undertaken in *Bulk and Selvedge*. Fairfax himself maintains that he is more concerned with works than with words, and therefore reaches for a language of practice: 'When I look at things, I can afford to overlook words, and I had rather speak home than fair, nor do I care how blunt it be, so it be strong' (Fairfax 1674, sig B5^v) This leads to the central paradox of Fairfax's writing, a paradox that is essentially bound up with the act of writing itself, namely that his efforts at plainness, practicality and embodiedness

lead to such extraordinary and acrobatic mutations of philosophical discourse. It is not just that, as the editor of Fairfax's Preface notes, that '[t]he movement towards unvarnished expression associated with the Royal Society goes so far in Fairfax as to confound itself – the ideal of Perspicuity is lost in the distracting oddities of the surface we are supposed to look through' (Croston 1949, x). Rather, Fairfax's bristly idiom may be seen as a kind of consciously-sustained experiment in style.

Experiment is, of course, a potent word for the members of the Royal Society. In his correspondence with Henry Oldenburg, Fairfax records his appreciative responses to the experiments described in the copies of the *Philosophical Transactions* forwarded to him, and opens his first letter to Oldenburg on 25th January 1667 by reminding him of the invitation issued in the 5th issue of the journal to contributors

to give in their notices of Madam [illeg. 'Nature'], whither taken whilst walking in her beaten tracke, such as are observations, or hunted into by-paths by ye craft or strength of man, known by ye name of Experiments. You may pleas, Sr, to understand, yt I am one, whose unsettled & *benighted* way of life, has made wholly unfit for ye latter, & I wish I could not wth so much truth say, a mistaking judgment, & few years experience, had not rendred too improper for the former. (Oldenburg 1965-86, 6.316)

Through the 19 lengthy letters he wrote to Oldenburg between January 1667 and June 1669, offering observations and reports on local occurrences that he thought might be of interest to the Royal Society, Fairfax maintains this sometimes rather cringing modesty regarding the status of his contributions, and sometimes reproves himself for the theoretical speculations into which he is increasingly drawn, as though to school himself in a properly scientific outlook.

Fairfax seems to have spent his life in the pursuit, not just of knowledge, but of an ideal fantasy of knowledge. The consistent tone of his correspondence with Oldenburg is one of humility, which sometimes spills into humiliation. We can see him in his letters hesitantly trying out some of the arguments that would later feature in Bulk and Selvedge. In a letter of 18th February 1668, he confesses 'heer I must think yt unbulkie beings have more to do with us then we ar aware off, especially in sleep' (Oldenburg 1965-86, 4.184). He then retreats into a more conventional idea that nightmares may arise from bodily sensations, first quoting Bacon from his De augmentis scientiarum IV.I in solemn Latin, 'quando idem fit ab interna causa, quod fieri solet ab externa, actus externus transit in somnium' ['when the same thing that usually has an external cause is produced from an internal cause, the external act passes into the dream'] and then offering a pungently particularising Suffolk gloss: 'as soon as ever ye incubus goes off, there's an inclination, I am sure, to rasp wind, wch speake ye stomach pent wth forthbearing steams' (Oldenburg 1965-86, 4.184), only immediately to reprove himself, not for his crudity but for letting rip in impetuous speculation: 'But perhaps I shall be thought to begin to dream my self. It goes against the hair with me to reflect at this rate in such a wild business especially' (Oldenburg 1965-86, 4.184).

But a month later, in a letter of 18th March, Fairfax is again drawn into larger reflections on body, spirit and language:

That one body can't work upon another aloof off without coming up to it, nor upon its own limms, without ye stirring of its constituent particles, I doe verily believe, but as for thinking beings, I am inclind to suspect, (yet farr enough from dogmatizing) that their workings upon another, have as little to doe with distance, as their workings wthin ymselves have wth motion; & as ye earth is a punctum to ye Dialler, so I conjecture ye whole world to be some such thing to a ghost, its bulkiness being somewhat, (to me) purely respective and secundum analogiam numeri & corporum, so yt wht we call a vast distance, may be at hand, or unspeakably otherwise to a bodyless being, wht ever we work upon we must either bring it home to ourselves by ye senses, or some more hidden fetchers, or els we must waft ourselves to yt by some bodily wayfare. (Oldenburg 1965-86, 4.260)

It may perhaps be that Fairfax was hoping for some kind of recommendation from, or perhaps even employment with the Royal Society. Following his MA at Corpus Christi College, Cambridge in 1658, he had been ordained deacon and installed in a curacy in Willisham in 1661. But a year later came the Act of Uniformity of 1662, enjoining adherence to the Book of Common Prayer and requiring episcopal ordination of all ministers in the Church of England (Appleby 2007, 2). Fairfax was unable to subscribe to these conditions and, along with his father, who was Rector of Rumburgh, and his older brother Thomas, Fairfax joined 2000 ministers expelled from the Church of England, thereafter known as the Great Expulsion. The Act of Uniformity was followed in 1664 by the Conventicle Act, which forbade religious gatherings of more than 5 persons, and the 'Five Mile Act' of 1665, which forbade preachers to come within five miles of their previous livings. Taken together, these provisions in effect inaugurated systematic nonconformism in Britain, by making it impossible for dissenters to participate in public life.

Fairfax may have been an itinerant preacher, possibly combining this, as was not uncommon, with some sort of unofficial medical practice. He was in fact licensed as a physician in Norwich on 10th June 1665, probably, despite his likely attitude towards episcopal authority, by the Bishop of Norwich. Bishops had been given responsibility for licensing physicians in an Act of Henry VIII of 1511, partly because, as John Raach suggests, 'the Church was apparently considered the one institution whose influence was extensive and potent enough to be effective in suppressing quacks' (Raach 1944, 274), and more particularly, as John R. Guy emphasises (Guy 1982, 529-30) because of the assumption of ecclesiastical competence in respect to magical and forbidden arts:

forasmuch as the Science and Cunning of Physic and Surgery ... is daily within this Realm exercised by a great Multitude of ignorant Persons, of whom the greater Part have no manner of Insight in the same, nor in any other Kind of Learning; some also can no Letters on the Book, so far forth, that common Artificers, as Smiths, Weavers, and Women, boldly and accustomably take upon them great Cures, and things of great Difficulty, in the which they partly use Sorcery and Witchcraft (Raithby 1811, 3.12)

Learning, religion and medicine were still involved closely enough in the seventeenth century for the possession of a degree from Oxford or Cambridge to give quite a lot of credibility to anyone offering medical treatment, even without a licence: it does appear that many licences were issued to doctors who had been practising in their communities for many years without one (Raach 1944, 282). Thomas Sydenham, a strenuous Puritan who, like Fairfax, found his prospects of advancement blocked by the Restoration, sought a licence only in 1663, though he had been awarded a Bachelor of Medicine by the University of Oxford in 1648, on the basis of the slimmest and most preliminary acquaintance with the subject (Meynell 1988, 69-70). This probably helped form his view that 'Physick ... is not to be learned by going to Universities ... one had as good send a man to Oxford to learn shoemaking as practising physick' (Ward 1839, 242). Medicine was a common alternative choice for dissenting clergy excluded from other professions (Birken 1995).

Fairfax seems still to have been itinerant for the years during which he was corresponding with Oldenburg, referring as we have seen, in his opening letter to his 'unsettled & *benighted* way of life' (Oldenburg 1965-86, 6.316), and again on 7th March 1667 to his 'hovering way of life' (Oldenburg 1965-86, 6.360), and signing off with indications as to where letters might be left for him. On 25th January 1667. he wrote from Rumborough and ended with a request to Oldenburg to write to him care of Thomas Blackerby in Stowmarket, or, after three weeks, his father, Benjamin Fairfax in Halesworth. (1965-86, 3.315, 321). On 7th March, he wrote from Brightwell Hall (Oldenburg 1965-86, 3.358), ending with the indication that 'a letter directed to Sr Samuel Barnardistons of Brightwell Hall near Ipswich will come at me' (Oldenburg 1965-86, 3.360). When he wrote again on 10th April, it was from Woodbridge (Oldenburg 1965-86, 3.386), ending with the assurance that 'Yours, wn yu please, will find me at ye place of ye date of this' (Oldenburg 1965-86, 3.389), after which he seems to have been settled in Woodbridge, where he was in fact to end his days.

The ending of his correspondence, enthusiastically prolific on his side, though, given that Oldenburg's replies do not survive, we know not how gratefully received, seems to have been precipitated by Fairfax's awkwardness about a couple of incidents reported in his letters and subsequently printed as communications in *Philosophical Transactions*. The first concerned a young woman suffering from fluid in the chest (very likely some form of pulmonary oedema), who had also consulted Thomas Browne in Norwich, without relief. This incident seems to be the origin of statements occasionally made that Fairfax was intimate with Browne, or even in his circle, though I have found no other evidence of contact between them, beyond the fact that a copy of *Bulk and Selvedge* was in Browne's library (Finch 1986, 74). The woman eventually died, following which, with her advance agreement and that of her family, Fairfax conducted an autopsy, the results of which he reported in detail in his letter. Oldenburg includes Fairfax's account of bleeding the young woman 'to make way for a

freer Circulation, and room for Nature to disburthen her self' (Fairfax 1667, 547), and, because she claimed that she never sweated, and obtained no benefit from '*ordinary* Sudorificks'. Fairfax then adds these compromising words: 'Being desirous to adde an Empirical remedy, I gave her three of Matthews pills; which did sweat her lightly, but beyond what ever she remembred. Several daily *doses* of *Lockiers* Pills, 4. per dose, remov'd the Julking, *as she said*, lower to the Mid-riff' (Fairfax 1667, 547).

Lockyer's Pills, manufactured and marketed energetically by Lionel Lockyer for some decades in the second half of the century, were rather notorious. Lockyer, who styled himself a 'Licensed PHYSITIAN' characterised them as containing extracts of sunbeams - Pillulae Radiis Solis Extractae - explaining that their properties were 'of a solar Nature, dispelling of those Causes in our Bodies which continued, would not only darken the Lustre, but extinguish the Light of Our Microcosmal Sun' (Lockyer 1664, 2). Lockyer made the usual claims for their universal effectiveness, against gout, leprosy, dropsy, cancer, pox and 'the Mother'. Like most such preparations, they probably were a fairly effective purgative, an all-purpose better-out-than-in effect which reassured many doctors and their patients: Lockyer was very likely justified in his claims that the pill exercised its effects on the body 'by expelling the Disease; Sometimes it works upwards, and sometimes downwards, and it may be, both Waies at once' (Lockyer 1664, 4). Despite, or maybe even because of being publically denounced by rivals, Lockyer did well enough for an elaborate memorial to be erected to him in Southwark Cathedral on his death in 1672, along with a verse that solemnly, and ludicrously, promises: 'This verse is lost, his PILLS embalm him safe/To future times without an epitaph' (Colwell 1915, 126). Lockyer's bitterest rival was an American alchemist called George Starkey, who styled himself 'MD' and also published numerous alchemical works under the name 'Eirenaeus Philalethes' (Peaceful Lover of Truth) (Newman 2003). Starkey claimed that Richard Matthew, or Matthews, the distributor of 'Matthew's Pills', stole the recipe from Starkey's own 'Diaphoretick Diuretick and Anodynous Elixir' (Starkey 1660, 2; Kendall 1664; Newman 2003, 193-6). Matthews's Pill was still being recommended as 'Physick for the Poor' in an allpurpose manual of useful information of 1681 by William Mather, who said:

It purges by Sweat and Urine, [124-5] causes ease in sleep and sickness; it cures Agues, by getting into a sweat by one of them half an hour before the fit is expected to come. I need not write but little of it's Commendation, it being so well known by the name of *Matthews* his Pill, which, if rightly prepared, is an excellent thing. I had it from one of my Uncles who was a Chymist, who said he had it of a Servant of the said *Matthews*, and therefore I commend it to all who are able, and well inclined, to do their poor Neighbours good when in sickness, and may dwell far from an honest Physician. (Mather 1681, 124-5)

The little detail about prescribing Lockyer's and Matthews's pills in Fairfax's letter, reproduced in the version of it that Oldenburg published in *Philosophical Transactions*, would cause Fairfax awkwardness. He wrote to Oldenburg on 30th April 1669 that a friend of his had met two doctors in London who

importund him to give me this message as from ym. viz. yt by 2 passages especially falling from me, I had exposed yu, & others through yu. 1. yt in relating ye case of ye maid, with so strang a collection of matter in ye thorax. I intimated my advising her first to Lockers pills & yn for sweating to Mathews's. heerby giving occasion to strengthen ye scandal raysed on ye S. as too friendly to Quacks & yourself corresponding wth a declar'd one (Oldenburg 1965-86, 5.505)

Lockyer and Matthews were not uplifting intellectual company for an aspirant scholar and contributor to the *Philosophical Transactions* to be keeping, though Fairfax defended himself gamely, and reasonably, to Oldenburg:

should I plead for ye use of Empiricalls (as I think I am not heer put upon it) I would say yt if ye use of remedyes found out by others by luck, more yn witt. or [punctuation sic] by ourselves a posteriori rather yn a priori be enough to denominate one, I am afraid we shall all be so in good earnest. (Oldenburg 1965-86, 5.505)

The word 'empirical', which Fairfax had used in his letter of 25^{th} April 1667 (Oldenburg 1965-86, 3.402), had a respectable scholastic lineage, deriving from Greek ἐμπειρικός, experienced, and referring to the Empiric school of medicine, which was contrasted with the systematic philosophy of Galen. The first-century Roman writer, Aulus Cornelius Celsus, begins his explication of empiricism in *De Medicina* by observing sourly that the association between medicine and distinguished writing only began because literary studies 'are a necessity for the spirit, but at the same time are bad for the body'. The link between philosophy and medicine is therefore that the former makes the latter necessary: 'healing was needed especially by those whose bodily strength had been weakened by restless thinking and night-watching' (Celsus 1935, 1.5).

Although Galen was very sympathetic to empiricism, regarding observant experience as essential to the successful practice of medicine, he did not regard it as sufficient on its own, uninformed by logical and theoretical explanation (Galen 1985, xxxi-xxxiii), and empiricism came to be understood as any practice of medicine opposed to dominant Galenian theory. By the mid-fifteenth century, the word 'empiric' had come to refer not to a school of thought, but to an uneducated quack, or dangerously doltish dabbler. (I remember that the same curling of the lip could be inferred in the way in which the term 'empiricist' was applied during the 1970s to old-fashioned literary critics by critics informed by the new and lustrously austere forms of literary theory during the 1970s). The emphasis on experiment among members of the Royal Society meant that they were indeed exposed to criticisms of being untheoretical and of opening the way to unqualified amateurs. None of these criticisms would be more vehement than those of Henry Stubbe, who had been a protégé of Robert Boyle and sympathetic to the work of the Royal Society, but who mounted an all-out assault on the Society from 1669 onwards. In the preface to *The Lord Bacon's Relation to the* *Sweating-Sickness Examined* (1671) Stubbe told members of the College of Physicians that modern practitioners and philosophers inspired by Francis Bacon

have usurped *YOUR OFFICE*, pretending to reform the *Ancient Rules*, *Methods*, and *Medicaments*, and giving encouragement to all manner of *Empiricks* and *Quacksalvers*, so that the *Faculty* is in danger to be overthrown, and the Nation to be subjected to all those incon|veniencies which the defect of *able Physicians*, and the multiplying of cheating *Mountebanks* can introduce. (Stubbe 1671, sig. A4^r)

The final words of Fairfax's account of the dissected woman are 'Whether the Liquor proceeded from the falling down of the Chyle from the Axillars, is a Quaere, but seems to carry in it something of probability. But I must not reflect' (Fairfax 1667, 548). But Fairfax found it rather difficult to bridle his instinct to reflection in a case he reported to Oldenburg on 18th September 1668, and which Oldenburg duly printed in the Philosophical Transactions shortly afterwards on 19th October (Fairfax 1668). These speculations seem to have been more injurious to Fairfax's reputation and sense of self-esteem. Fairfax wrote of a middle-aged woman who had been persuaded by her neighbour to swallow two 'Qualiver bullets' (a caliver being a small musket) to assist with 'a torment of ye bowells' (Oldenburg 1965-86, 5.47), in ways not easy to divine, though it is tempting to speculate on its influence on the phrase 'magic bullet'. Some years later, following a dose from Fairfax's apothecary of 'Hollands powder', a relatively harmless mixture of ground seeds used as a laxative (Burgis 1648, 62), and an abdominally troubled night, 'during ye private use of the chamber pot, together with ye urine, there came yt form her, wch giving a twang agt ye side of ye pot, surprisd her wth wonder what it should be' (Oldenburg 1965-86, 5.48). The object turned out on inspection to be one of the bullets (of the other, we hear no more).

Trusting somewhat ill-advisedly to the woman's insistence that the stone came 'by ye passage of urine & not by siege' (Oldenburg 1965-86, 5.48), Fairfax once again diffidently, but with determination, embarks on speculation about the passage taken by the bullet:

The main use yt I would make of ye instance (if it be worth mentioning) is to strengthen a suspition, yt I have a long tyme had, of some other passage from ye stomack to ye bladder, besids what Anatomists have hitherto given accounts of. For yt this bullet never came at ye ureters, through ye veins, arteryes, nerves, or lympaeducts, (the onely vessels yt can be charg'd with it) is, I think, beyond dispute, if it shall be sd. yt nature put to shifts, finds out strange conveyances, to rid ye body of yt wch should not be within it, I shall grant it, because I know instances making yt way. (Oldenburg 1965-86, 5.48)

Fairfax urges in favour of this hitherto unsuspected anatomical short-cut the fact that somebody drinking 4 or 5 glasses of Rhenish might find they have a strong desire to urinate a shorter time after ingesting the fluid than would be required for it to make its way to the bladder, and that nursing women may similarly find their breasts full a short time after drinking a glass of milk (Oldenburg 1965-86, 5.49). He ends this report on his customary note of modesty:

But Sr, I remember I am speaking rather from my self then from things, & therefore I design this latter as much for ye exercise of your Candor, as I do ye former for yt of your judgmt, assuring yu yt I will have as mean thoughts of my own reflections on things, as ye candidest of readers shall. (Oldenburg 1965-86, 5.49)

In his lightly-edited reprinting of this letter in *Philosophical Transactions*, Oldenburg (one presumes) makes a clear distinction between the report of the case, adding the sentence 'That is the plain relation of the matter of Fact' before the sentence 'The Maine use, I would make of the Instance' (Fairfax 1668, 804) and Fairfax's surprising anatomical speculations. He also shortens the final qualifying sentence, while marking the difference between fact and reflection: 'But I am perhaps too prolix in my reflexions, of which I desire you to believe I have as mean thoughts, as the Candidst of Readers shall' (Fairfax 1668, 805).

This, along with the prescribing of empirical medicines, was the other matter to which the London doctors took exception, as indicated in Fairfax's apologetic letter to Oldenburg of 30th April 1669. It was not so much the suggestion of unsuspected means of internal transport for fluids in the body that embarrassed Fairfax, so much as the apparent suggestion that fluid might travel along veins or nerves, even though Fairfax had mentioned this possibility only to rule it out. But it was the fact that it should even need to be ruled out that exposed him to ridicule: '2ly. reflecting on ye leaden bullet &c I had this – yt it never came at ye ureters through ye veins, arteryes, nerves, or lympheducts, is, I think, beyond dispute, wch by like was soe hideously beyond dispute, yt it was very unanatomicall, & a sorry weaknes to hint it so (Oldenburg 1965-86, 5.505). With a last attempt to justify himself on what he must have thought to be practical Royal Society principles, Fairfax apologised both for mentioning quack medicines and for his apparent amateurishness in anatomical affairs: 'had I consulted warynes, more yn truth I had bin inoffensive: but indeed yt was but purely my self, who use to set ye homelyness of experiments before ye hatchings of words. Ile indeavour to learn by it' (Oldenburg 1965-86, 5.505).

It may be that Fairfax is being over-sensitive here. Possibly, Oldenburg might have responded as the Master of Trinity did when J.G. Frazer confessed to an erroneous translation of a passage from Pliny and offered in consequence to resign his fellowship: 'Pecca fortiter'. But the episode does indicate how much professionally and psychologically might seem to be at stake for a young man still attempting to find some kind of settled existence and public role under the inauspicious conditions that regional dissenters faced.

Fairfax subsequently regularised his position, like many other dissenters, by taking his M.D. in Leiden in 1670 (Birken 1995, 199-200) and setting up his practice in Woodbridge. His dissertation (1670) was entitled *de Lumbricis* (*On Intestinal Worms*), and was dedicated to his supervisor, Franciscus Sylvius, whom he described

as 'viro summo, spectatissimoque', 'greatest and most observant of men'. Sylvius, the Latin cognomen of Franz Dele Boë, was celebrated both as a clinician and teacher, establishing bedside teaching as an essential part of medical training. He helped popularise Harvey's discovery of the circulation of the blood, and, as a founder of the iatrochemical school based on the ideas of Jan Baptist van Helmont, effected a move away from Galenic theory to chemical-mechanical ways of understanding physiology (Parent 2016, 597). A central part of his system was the interplay of acids and alkalis in the body, and he employed tasting as a diagnostic method (Ragland 2012). Jan Swammerdam, Thomas Bartholin and William Petty were among his students, the last-named conveying his chemical and neuroanatomical ideas to Thomas Willis in Oxford (Parent 2016, 598).

Establishment in his practice in Woodbridge seems to have given Fairfax the leisure and confidence to write more systematically, with *Bulk and Selvedge* appearing in 1674 (his preface is dated 1678, but the book is advertised in other books of 1674 from his publisher, Robert Boulter). In his dedication and preface, the 'handle' (Fairfax 1674, sig B1^r) by which most readers of *Bulk and Selvedge*, such as there may ever have been, have laid hold of the book, Fairfax praises the new philosophy of the Royal Society, as centred on experiment rather than speculation, and so requiring practical and substantial action rather than the airy self-propagations of discourse: 'I love the *New Philosophy* so much the more; For why, It sets the hand a working not a striking, and answers the noise of *Talking* by the stilness of *Doing*, as the *Italians* clam rowt and tattle into nodding and beckning' (Fairfax 1674, sig A7^r). What matters most to Fairfax about the language he approves and fosters is not that it is local rather than general, but that it is a linguistic doing, that is, principally, of craft and trade:

Whence he that is best skill'd in it, is so hard put to it, in the Kitchin, the Shop, and the Ship; and ever will be, though *Plautus* should be as well understood as *Tully*. For the words that are every day running to and fro in the Chat of Workers, have not been gotten into Books and put aboard for other Lands, until this way of Knowing by Doing was started amongst us. (Fairfax 1674, sig. B8^r)

Fairfax seems to have been a Puritan in religion and outlook, like his father and brothers. Many Puritans had an interest in the advancement of learning, and Fairfax was among the many amateur 'virtuosi' who were both attracted and welcomed by the Royal Society (Stimson 1948, 34). Latin, which was regarded as 'at once the language of the Papal beast, paganism, and traditional scholastic learning' (Knowlson 1975, 33) was a particular target for educational reformers. It was part of the intellectual apparatus of exclusion, mystification and magical thinking against which many Puritan educational reformers campaigned, often asserting the importance of practical understanding and experience over the disputatious hairsplitting and fractious quibbling to which Latin seemed to lend itself. The suspicion of language has its seventeenth-century beginning in Francis Bacon's discussion of the 'idols of the marketplace' in his *New Organon* (1620). These, he wrote

are the biggest nuisance of all, because they have stolen into the understanding from the covenant on words and names. For men believe that their reason controls words. But it is also true that words retort and turn their force back upon the understanding; and this has rendered philosophy and the sciences sophistic and unproductive. (Bacon 2000, 48)

Fairfax expressed an interest in John Wilkins's work on a universal language in his correspondence with Henry Oldenburg, and may perhaps have been encouraged by it in his project of writing a plain-talk metaphysics. In fact, though, Fairfax's book ends up as a very different thing from that which he seems to promise in this prefatory material. Though Bunyan-like he assures his dedicatee William Blois, 'I waited upon the youngest and most Housewifely Daughter of Philosophy, named Workful' (Fairfax 1674, sig A5^r) and asserts that ''tis behoving Mankind, to have houses on the earth for settled and easeful dwelling, than such capering Castles in the Air, whose Groundsils are laid with Whims, their Overwayes with Dreams, and rooft with Cream of thinking' (Fairfax 1674, sig A5^r), Bulk and Selvedge does not in fact deal with matters that seem experimental or experiential, or seem to exemplify the 'Working Philosophy' (Fairfax 1674, sig B7^v) of the Royal Society. It consists neither in reports of experiments nor in the out-of-the-way observations that caught his attention, about such notes-andqueries matters as the eating of spiders and toads (both, despite their reputation, 'innoxious', Fairfax 1665-6; spiders 'have an excellent sweet tast', Oldenburg 1965-86, 3.317), premonitory dreams, monstrous births and unusually large hailstones. Rather than drawing on observation and experiment, it takes its cue, like so many of the disputations of the Schoolmen, from elaborate disagreements with other writers, notably Samuel Parker and Henry More, and depends much more upon logical deduction than factual demonstration. It is in fact the friction between this metaphysical enterprise and the language in which it is conducted that makes the book so strange, singular and, in its exacting way, exciting. But the epistle dedicatory and preface to the book seem to indicate a kind of hardening of intent, as the simple and spontaneous mannerisms of the letters were worked into a conscious and sustained experiment in stylistic possibility.

Fairfax's words are certainly in tune with the many other writers associated with the Royal Society who attempted to strain out rhetoric in favour of linguistic plain dealing. But, as James Knowlson points out, schemes for the reform of language were actuated by more than a suspicion of learned languages, for there was also the sense of 'grave obstacle that the use of any existing language, whether ancient or modern, could present to the progress of learning'. As Knowlson observes, schemes such as John Wilkins's 'arose not only out of attitudes that were condemnatory of existing languages, but also from a keen desire to forge a new, more direct relationship between words and objects' (Knowlson 1975, 36).

Fairfax is not in a position to perform experiments as the members of the Royal Society do – except perhaps insofar as his book constitutes a kind of experiment in the possibilities of language, and in this he goes further than most in effecting his project of linguistic renewal. For he did not simply avoid inkhorn terms and convoluted

syntax; he sought as much as possible to restore his language to something like an Anglo-Saxon condition, avoiding as far as possible all words deriving from Greek and Latin, to the point of confecting Saxonist terms, such as *talecraft* for mathematics and *throughsomeness* for transparency. The effect of this is that, unlike other writers, like Joseph Glanvill, who contented themselves with simplifying and abbreviating their language, Fairfax makes the necessary participation of language in his reflections an unignorable part of the 'bulk' – the heft and nap – of his writing. A word like throughsome is just the opposite of transparent, for it arrests the mind, interposing its imaginary mass in the work of thought and understanding.

Fairfax's speculations on the relations between body and the bodiless – time, space, matter and motion – are tests of the limits, and liabilities, of embodied speech. Fairfax asserts repeatedly the principle that 'almost the whole of those words, that we speak in things or knowledges of things that are not body, are taken from things that are body, and spoken in a borrowed meaning from thence, either as they have Beings from God, or a Suchness of being from our handy-work'. What this gives in advantage in speaking of material things, it subtracts when it comes to speaking of the immaterial things that, so to speak, bulk so large in Fairfax's book, since 'The words and Grammar that we speak by, are matcht to time, and can't speak forth eternity' (Fairfax 1674, sig. c1^v). The problem of abstractness that Fairfax seeks to remedy with a language conceived as bodily handiwork is matched by the problem of distortion offered by a language that leaves us always 'word-bound' (Fairfax 1674, 15), the very advantage of doing-words becoming their liability.

Fairfax's book seems not to have been read by many during his lifetime, and after his death in 1690 seems to have dwindled to the status of a curio, known more by reputation than by actual contact. Hugh Ormsby-Lennon suggests that Swift may include a glance at *Bulk and Selvedge* in the conclusion to *The Tale of a Tub*, (Ormsby-Lennon 2011, 331 n.29), which begins with some mock-homely reflections on the seasonal nature of book-production:

No Man has more nicely observed our Climate, than the Bookseller who bought the Copy of this Work; He knows to a Tittle what Subjects will best go off in a *dry Year*, and which it is proper to expose foremost, when the Weather-glass is fallen to *much Rain*. When he had seen this Treatise and consulted his *Almanack* upon it; he gave me to understand, that he had maturely considered the two Principal Things, which were the *Bulk* and the *Subject*; and found, it would never *take*, but after a long Vacation, and then only, in case it should happen to be a hard Year for Turnips. (Swift 2010, 134)

If there is a sneer here at Fairfax's bumpkin materialism, or an allusion to his title in the bookseller's workmanlike weighing of 'the *Bulk* and the *Subject*' it is of a very specialised kind, and it does not seem likely to have been picked up by many. Whether or not Swift meant a particular jeer at *Bulk and Selvedge*, it was common to mock at the exaggerated plainness of nonconformist language, especially among Puritans and

Quakers. Fairfax's writing may well have exhibited to many the stubbornly homespun character that was the signature of the nonconformist.

Fairfax is determined to demonstrate what can be done in English, and to defend against the fact that its workers 'seem lessened by the unluckiness of the slur, That *English-men* can do by their own Hands, what they can't speak in their own Tongues' (Fairfax 1674, sig B8v). And yet, Fairfax's Englishness is a mingle-mangle thing. He compares what he is doing to 'the larding of Latine with *High-Dutch*, in what is written to the whole world, as some *Germans* in their Motley Books have already done' (Fairfax 1674, sig B6^v). This is to say, the body of Englishness is a compound body, as Fairfax himself insists that all languages, like all bodies, must be:

And as for a tongue that borrows not nor spends, I believe 'tis no where to be found, or ever will be: all tongues through time being so far blended, that there are not any of those now in the world in whole, that were at the great *Speechbreak* at *Babel*, any more than there would be the same bodies crew of atoms to those Speakers now that they had then, or the same kinreds of men unmingled with Out-setters that were among them then, should they have liv'd and jugg'd together to this day. (Fairfax 1674, sig B6^v)

It is not the plainness of Fairfax's language that is disconcerting, as the fact that he stays so close to the grain of 'English' as to reveal its own striated complexity - which includes a rich receptiveness to East Anglian dialect. John Greaves Nall's 1866 glossary of East Anglian dialect draws on Fairfax for examples of auk, awkwardness (Nall 1866, 508), dodman, snail, (Nall 1866, 542), doak, indentation (Nall 1866, 543), giffling, fidgety (Nall 1866, 565), rist, origin (Nall 1866, 635), snarl, twist (Nall 1866, 655), snicking and sneeing, cutting (Nall 1866, 655), stamme, astonishment (Nall 1866, 661), threap, beat down in argument (Nall 1866, 672), thwack, thump (Nall 1866, 673), and '(as wise as) Waltham's calf' (that walked nine miles to suck at a bull) (Nall 1886, 680). Nall, who makes the odd suggestion that *Bulk and Selvedge* is remarkable 'for its attempt to clothe some of the most incomprehensible of theological quiddities in the terms of mathematical formulae', also notes that Fairfax's dialectal dialectic goes beyond 'the raciest East Anglian rustic dialectic words', since '[i]n his Epistle dedicatory, it is noticeable that the provincialisms introduced are all West country ones; ex., tee-hees, Exmoor; rowt, Devon; haulier, Cornish' (Nall 1866, 471n). So it is the very homeliness of Fairfax's language that is so outlandish.

The advocacy of nonrhetorical plainness dissimulates the rhetoric of plainness itself. Indeed, stylistic lessness can have has its own kind of voluptuous extravagance, of which Fairfax's writing provides a conspicuous example, his language at once humbly penurious and as such opulently *de trop*. What might be called Royal Society rhetoric was governed by strict and straitened economy, in which it was imagined that words might provide an absolute match for things, with neither deficiency or surplus. But this introduces paradox. 'It seemed to me that all language was an excess of language' writes Moran in Beckett's *Molloy* (Beckett 2009, 121). The only truly transparent discourse would be one for which there was absolutely no need, and which had

absolutely no function. Only such a language could be counted on (counting seemingly being to the fore) to add absolutely nothing to the existence of the object to which it pointed. But this would make such a discourse pure vacancy, which is its own kind of extravagance, indeed just the kind of piling excess to which language reformers objected in the scholastic inheritance of academic learning. The language of pure denotation would constitute language as both immaculately noiseless medium and gratuitous parasite. The more purely demonstrative and instrumental a language became, the more apt it would be to demonstrate its instrumentality.

Tina Skouen and Ryan Stark point to the rhetorical function of the Royal Society's seeming assault on rhetoric:

The reputedly anti-rhetorical academy thus placed rhetoric at the very heart of the scientific endeavor, not merely because of its emphasis on performance and audience, but also because of its insistence on an open mode of [14-15] communication. Extending, as it were, their hands to the public, the natural philosophers chose the open palm of rhetoric over logic, traditionally conceived of as a closed fist. (Skouen and Stark 2015, 14-15).

An ambivalent outsider-insider in relation to the Royal Society, Fairfax restages its performance of open accessibility, producing a grotesque exaggeration of its economy of semiotic diminution.

The passage from Fairfax's two-and-a-half year correspondence with Oldenburg from January 1667 to June 1669 to the writing of *Bulk and Selvedge*, probably three or four years later, involves some interesting developments. As one might expect, his letters are much more impromptu, associative, digressive, even, at times, rather rambling. Claire Preston discusses Fairfax's style as part of the rhetorical negotiations involved in what she terms the 'scientific civility' of the correspondence engaged in by members of the Royal Society. As Preston astutely observes, long after the period of the 'Invisible College', and following its institutionalisation and identification with Gresham College, even though it never had an official home there, this civility was forced to be largely epistolary:

The truth was that a physical gathering of scientists was, before the era of the university department and the governmental research lab, essentially impossible... For the seventeenth-century natural philosophers, political, professional, familial, even microbial [148-9] necessity stood in the way of such congregations for any meaningful length of time, and Oldenburg found it difficult enough to keep even the chartered and constituted Royal Society going on a regular basis. (Preston 2013, 148-9).

Preston puts Fairfax with Robert Boyle and John Ray at the anti-rhetorical end of the spectrum of Royal Society correspondents, even as she notes that Fairfax 'copiously deploys several striking tropes that seem to contradict his professions of plainness' (Preston 2013, 141).

The predicament in which Fairfax finds himself here makes it clear how far the epistolary episteme of the Royal Society was from being a utopian commonwealth of letters. Fairfax's letters in particular are full of what seems sometimes like a rather servile desire to please, as much petition, breaking sometimes into muted protest, as man-to-man collegial intercourse. Their addressivity, in particular, is complex. Though nominally a personal correspondence with Oldenburg, Fairfax must have had at least some expectation that Oldenburg might publish them in the *Philosophical Transactions*, as indeed he did on a number of occasions, so that he seems to be writing with the prospect being as it were overheard, or overread by other readers in a very different context. This explains some of their caution, and self-deprecation, which turned out to be fully justified in the case of the doctors' criticism that Fairfax embarrassedly reports in 1669.

Fairfax also notes a particular concern with the mode of scientific correspondence in which he is himself engaging. Though it is not completely clear to whom he is referring, he notes that 'they could have little kindnes for ye way of commerce by letters philosophicall in ye generall; for it should seem tis given out by some yt ye drolling pack ar upon a mock correspondence to confront ye Phi: Tr:' (Oldenburg 1965-86, 5.505). Fairfax sensitively notes the difficulty of Oldenburg's editorial responsibility and congratulates him, somewhat soapily, on the manner in which he carries it out:

yr task is ye techyest of any members of ye S. as being bound therby to study not only things but men, & humours. Yet, without flattery, I can really say, yt, (setting aside what my weaknes may [505-6] have blemisht) I never read any thing managed more unexceptionably, both as to ye weight of things & comlynes of words, than your own well deserving publications & question not but they who have bin pleased to censure in earnest, or may hereafter jestingly descant, would scarce be able to furnish so much of circumspection & handsomeness of penmanship, as has bin imploy'd by yourself already' (Oldenburg 1965-86, 5.505-6)

Fairfax here seems to recognise explicitly what is enacted implicitly by his mode of expression throughout his writing, that things and words are intermixed in complex ways, most complex, curious and often comical of all, when words are taken to have the density, givenness and tractability of things. In complimenting Oldenburg on his circumspect negotiation between 'weight of things & comlynes of words', Fairfax gently but unmistakably arrogates the right and qualification, as all complimenters do, to make the judgement in question.

In a sense, then, the ethics of the word performed, rather than declared, by Fairfax's text, is antagonistic to the principles articulated by and underpinning the New Philosophy. The followers of Sprat prized the idea of a direct adequation of word to thing, in which every signified would have its unique signifier. This is the sense in which the linguistic ideal of the Royal Society may indeed be called, as John Greaves Nall calls it, mathematical. But the very conception of a mathematical relation between God and what signifies him must be regarded as a gratuitous excess, precisely because

signs cannot have the same necessity as things. Fairfax's constant theme is that God cannot be captured in words, for words belong to the world of extension and divisibility. Words can only shadow God, pointing to him as what exceeds them, even as exceeding involves just the kind of spatial relation that betrays God into time and space. And yet only words can do this: in Fairfax's practice of writing as doing, only words will do to undo the work of words.

There is perhaps another possibility. Fairfax seems well aware of quite how strange his language will seem. What is merely apparent in his letters becomes programmatic in Bulk and Selvedge. If a certain mulishness is at times to the fore in his preface – 'Every man has his way of writing and speaking, and I have mine; which as I allow it to others, I may look it should be allow'd me' - the very steadiness of his purpose may allow us to see it as a kind of comic lure for the unwary reader, who is first permitted his sniggers at the rude rustic mechanical's efforts at high talk and elevated thought, but is then snared in a web of comic exaggeration. One might linger on that word 'allow', for example, in the phrase which moves to the measure of the Lord's Prayer: 'as I allow it to others, I may look it should be allow'd me'. The primary meaning is certainly that Fairfax allows others to use their ways of writing and speaking, just as he asks to be accorded the same allowance. But, even if only for an eyeblink, the phrase 'as I allow it to others', allows us to take the 'it' not to be the right to write in your own manner, but the assumption that everyone has their own style, so that what Fairfax may be allowing is the fantasy that this is the spontaneous and rough-hewn way in which a country doctor might speak – whereas nothing could be more laboriously contrived. But, quite apart from the odd grandiosity of the idea that people speak in approved and authoritative ways only with Fairfax's permission, it is not at all clear that this is a permission that he is in fact disposed to grant. He certainly acknowledges what would nowadays probably be called, hegemonically enough, 'hegemonic forms of discourse', but his entire manner of writing is not merely an idiomatic departure from it, but rather a standing and grimly systematic rebuff. It is not diversification, but divergence. Far from allowing scholarly discourse, he will in fact, and act, have none of it.

Fairfax seems to have been a very moderate kind of Puritan, but there is something in his stylistic performance that, in his own phrase, 'smells pretty strong of quirk' (Fairfax 1674, 173), and so recalls the extravagant stylistic displays of more radical kinds of Puritan writing explored in Nigel Smith's *Perfection Proclaimed* (1989). Quirk, which sounds like a self-instancing word, nowadays refers to something odd, outlandish or idiosyncratic: but in the seventeenth century, it could also mean a quip, riddle or puzzle – or even what might in the eighteenth century have begun to be called a quiz, a word that, like quirk itself, has no easily assignable etymology (even if, like quibble or quiz, it seems to hint at some learned Latin origin). In fact this phrase of Fairfax's is one of the instances given by the *OED* of quirk being used also to mean 'evasive or cunning argument'. And perhaps the obviousness of Fairfax's quirkiness is part of his design: a quirk is also a technical term, used for example in Moxon's *Mechanick Exercises* to mean an extra piece added to a regular building design (Moxon 1677, 1.130). Perhaps the word *quack* is somewhere, uneasily or teasingly, in the vicinity. If

there is the kind of provincial naivety in Fairfax's writing that might have provoked the disdain of a Swift, there is also perhaps something of the holy fool deliberately prancing, or at least declining to conceal, his distance from orthodox worldly authority, a distance that is its own form of connection, like a towing-cable that keeps him attached to what it keeps at arm's, or bargepole, length. Modern writers are easily drawn into the supposition of Fairfax's untutored naivety. For the editors of the Oldenburg correspondence, Fairfax is 'an almost incredibly rustic physician of Suffolk' (Oldenburg 1965-86, 3.xxiv), and Claire Preston also describes him, ambiguously, as 'a curious physician in Suffolk' (Preston 2013, 141), even though they are talking about an MA graduate from Corpus Christi, Cambridge, who was to go on to attain an MD and engage in detailed critique of demanding theological works in Latin. Fairfax's imposture may therefore be double: an imposture of scholarly discourse that is also an imposture of that act of imposture.

Fairfax closes his first letter to Oldenburg on 25th January 1667 with a telling and characteristic piece of occupatio: 'And heerin Sr I have imployed thus many words & no more yt I may neither quoit ye paper into your hands, after ye bluntnes of a Thorpsman, nor overmodishly wave it in my own, with its answering honours & footings, after ye anticknes of a Kickshaw' (Oldenburg 1965-86, 3.320). The antithesis is beautifully and comically exact, being focussed on the manual gestures that enact uncouth carelessness and self-admiring ceremony (in the opening words of this letter, Fairfax calls his own discourse 'this address, so uncuth & surprising' (Oldenburg 1965-86, 3.315); a quoit is spun like a discus, or a frisbee, the Thorpsman's flip of the wrist being transformed into the waving in the air that accompanies an elaborate bow, and the 'footing' of the heel scraping the ground being answered in the word 'Kickshaw'. This word gives the sense of being a dialect word, and is indeed glossed by the editors of Oldenburg's correspondence as 'a rustic, a frivolous person' (Oldenburg 1965-86, 3.322.n.18). But rustics, or 'thorpsmen', to use the antique-sounding word which is actually recorded by the OED as making its first appearance in print in this text, are not usually thought of as frivolous. The ambiguity of register is shared with the word 'anticknes', which combines 'antique', meaning aged, and 'antick', meaning grotesque, fantastic, or clownishly ludicrous. Fairfax hereby allows his own discourse to be seen as both antique and newfangled. A kickshaw enacts the same ambiguity of register, in its mocking degradation, along the lines of pitter-patter (from Paternoster) and hocuspocus (hoc est corpus), of the preening and precious quelquechose.

Indeed, the comedy of Fairfax's performance may not be all involuntary. For many of the bodily paradoxes he contrives have the form of the Irish bull, in which language engineers impossible encounters between the embodied and the bodiless (Connor 2017).

Fairfax's intentions are signalled in his title, in which the words bulk and selvedge are used where one might expect terms like extension and limit, or substance and finitude. *Bulk* is probably of Scandinavian origin, signifying a pile or heap. The word is also used as a spelling for *bouk*, belly, trunk or thorax, also used to mean dead body or carcase. The word evokes both a concreted mass, Danish *bulk* meaning a lump or clod, and a

loose, disordered heap, hence the expression 'in bulk', to mean arrangement. Bulk perhaps develops its abstract sense of magnitude or volume from its use to signify an empty space intended to receive an object – the *bowk* of a ship being its hull or hold, perhaps comparable to German *Bauch*, stomach; in the fifteenth century, the *bowlke*, *bouke*, *bowke*, or *boke* of a church meant the nave, interior, or perhaps crypt, possibly with a link to Latin *bucca*, cheeks or mouth and Italian *buca*, cavity or pocket (cf. *osso buco*, hollow- or marrow-bone). A 1548 account of the funeral of Henry VIII describes the royal corpse being 'reverently setled in the bulk of the chariot' (Strype 1822, 2.299). This relation between the idea of some solid volume and the space containing, or intended to contain it, accounts for the sense of excess attaching to many uses of the word *bulk*, which refers not just to size in general but to large, awkward, or excessive size – hence the apparently tautologous phrase 'to bulk large'. There may even be some relation to *bolk*, *boke*, to belch or vomit, the latter recorded in 1674 as a Lincolnshire word (Ray 1674, 6).

The fact that Fairfax uses the spelling *boak* interchangeably with *bulk* may be intended to keep some of these meanings active. There seems to be no etymological link with the word *book*, though *bulk* does have a specialist bibliographical sense, as the ratio of fibre volume to total volume in paper (Bromley 1920, 161). But Fairfax does sometimes seem to allow for this play, as in his discussion of the careful coordination of materiality or 'curious frame of well-ranged bulks so featly set together by a boundless cunning' (Fairfax 1674, 74), which, he assures us, 'may be made out by instances, enough to fill up a book of bulk, bestowed upon us from that wealthy and yet growing store-house wherewith the Royal Society have enricht the world' (Fairfax 1674, 75).

Fairfax's faith in God is sincere, unconditional and unswerving. But a central principle of that faith is the absoluteness of God, that is, his transcendence of everything mortal and earthly, in particular, and essentially, finite space and time. Although Fairfax expends much time affirming the irreducibility, indivisibility and illimitability of God, his method throughout is aimed at the establishment of limit – or selvedge. His project is Cartesian in its efforts at establishing definite truth through elimination of doubt. His mode is therefore a strange mixture of the cataphatic, the affirmation of the positive terms in which God must exist, and the apophatic, which by the indirection of the finite and bodily which cannot form any part of the divine, finds its direction out.

Perhaps the reason that Fairfax is so rarely mentioned in the many studies of early Royal Society rhetoric is that his antagonism is not to ornamentation so much as to abstraction. Most of the anti-rhetorical rhetoric associated with the Royal Society assumed that language must be persuaded to stand aside from things in order to render them more clearly and immediately perceptible. Fairfax reproduces much of this rhetoric but takes a dramatically different view of its implications. Rather than purging the physical world of language, his aim is to corporealise language, urging it into a cosubstantiality with what it names. His is not a plain or parsimonious language but a copiously concrete one. As such, it is oddly aligned with the magical thinking which the itself magical ideal of plain speaking opposed. Fairfax offers a kind of poetics, a sacramental magic of embodiment, rather than a mere style. It is this which makes his purpose and performance so hard to make sense of. For it is possible to read *The Bulk and Selvedge* both as an example of the mad enthusiasm that attracted Swift's satiric mockery and as itself a kind of parodic intensification *ad absurdum* of Royal Society linguistic principles, and so itself a Swiftian-Borgesian demonstration of the madness of this kind of knowledge. Fairfax's sacramentalism of the word is close to that rapt, incantatory enactionism that Jackson I. Cope finds in seventeenth-century Quaker style, animated by the Johannine assertion that in the beginning was the word, a guarantee that, lay at the root of the conception of 'language as a key to the essence of proper reality' (Cope 1956, 729). In Fairfax's case, of course, the reader must be kept aware, in the most obtrusively 'bulky' of ways, of idolatrously mistaking the bulkiness of language for the unbulkiness of the divine, even as his arguments remain implicated in the form and force of his language.

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