



UNICA

UNIVERSITÀ
DEGLI STUDI
DI CAGLIARI



Università di Cagliari

UNICA IRIS Institutional Research Information System

This is the Author's *accepted* version of the following contribution:

Alessio Mattana, "'The Eye to the Object': The Question of Demonstrative Knowledge in Defoe's *The Consolidator*", *English Studies*, 103:5, 2023, 677–694

The publisher's version is available at:

<https://doi.org/10.1080/0013838X.2023.2200318>

When citing, please refer to the published version.

This full text was downloaded from UNICA IRIS <https://iris.unica.it/>

Author: Alessio Mattana

Orcid: <https://orcid.org/0000-0001-7416-2844>

Title: “The Eye to the Object”: The Question of Demonstrative Knowledge in Defoe’s *The Consolidator*

Abstract: This article examines Daniel Defoe’s *The Consolidator* (1705), a prose fiction work on a voyage to China and to the moon, from the perspective of science in the early eighteenth century. By analysing the references to experimental inventions in the text and reconstructing their scientific background, this essay argues that in *The Consolidator* Defoe creates a fictional space in which readers can familiarise themselves with the epistemological ramifications of contemporary scientific ideas, particularly the standard of demonstrative knowledge attached to Newtonianism. In doing so, this essay offers a reassessment of Defoe on two counts. It investigates Defoe’s attention to the questions raised by Newtonianism to challenge the claim that his interest in science mainly lay in early Royal Society empiricism from the 1660s and the 1670s; and it focuses on the imaginative qualities of *The Consolidator* to problematize its interpretation as a work mainly animated by topical concerns.

“The Eye to the Object”: The Question of Demonstrative Knowledge in Defoe’s *The Consolidator*

1. Problematising Topicality in *The Consolidator*

Published on 25 March 1705, Daniel Defoe’s *The Consolidator. Memoirs of Sundry Transactions from the World in the Moon* tells the story of a voyage to the lunar world via China. It was very different from Defoe’s previous acclaimed works such as *The True-Born Englishman* (1700/1) and *The Shortest Way with the Dissenters* (1702), so reactions to it were mixed. Defoe’s friend John Fransham paid a handsome compliment by joking that the work had “too much Wit for Mr De Foe to be the author of it”.¹ Lord Halifax, a prominent Whig who had been attracted by Defoe’s political writings in *The Review*, responded positively as well, possibly gifting (anonymously) £100 to Defoe for his effort.² But, although Defoe felt confident that *The Consolidator* would “make Some Noise in the World”, things did not go his way.³ The book was re-published in November 1705, and yet, apart from the odd response (such as Joseph Browne’s anonymous *The Moon Calf: or, Accurate Reflections on the Consolidator. By the Man in the Moon*, 1705), it fell into virtual oblivion for two centuries or so, and readers and scholars alike have tended to forget about *The Consolidator*.⁴ As a result, relatively little research is available on it, at least compared to Defoe’s other early works.

Part of the reason for the lack of success of *The Consolidator* seems to lie in the considerable number of references to political and religious debates of the forty years past with which Defoe peppered his work. These make for a difficult reading experience although not one as “excruciating” as Paul Alkon regards it.⁵ Scholars tend to agree that *The Consolidator* was written “to express Defoe’s frustration and anger at the hypocrisy of church and state politics” on some of the burning issues of the day, including the War of the Spanish Succession, a new wave of High Church fanaticism and the religious concerns raised by new experimental and scientific discoveries, a task achieved by “veiling the identity of persons in allegory and hiding its fiercest satire in an impenetrable tangle of allusion”.⁶ But the main political attack was on a bill on Occasional Conformity.⁷ As critics have noted, *The Consolidator* took aim at the 134 so-called “Tackers”, those House of Commons members who, in November 1704, had unsuccessfully attempted to “tack” (or “consolidate”, in the parlance of the day) an Occasional Conformity Bill to the Land Tax Bill.⁸ In this respect, *The Consolidator*

¹ Defoe, *Correspondence*, 137.

² Defoe, *Correspondence*, 141. On the relationship between Defoe and Lord Halifax, see Snyder, “Daniel Defoe”.

³ Novak, *Master of Fictions*, 254.

⁴ Novak, “The Defoe Canon”, 100–101. See also Novak, *Master of Fictions*, 253.

⁵ Alkon, “Invisible Man Returns”, 210.

⁶ Sill, “Introduction”, 1–2.

⁷ Borck et al., “Headnote”, xvii. See also Schonhorn, “Defoe and the Limits”.

⁸ Gill, “Introduction”, 5. See also Wilson, “Dark Side of Utopia”, 254.

followed up on *The Shortest Way with the Dissenters* – the work that had earned Defoe four months in Newgate prison and three afternoons on the pillory – to level attacks at those politicians and churchmen who ostracised Dissenters from public life, as well as at fellow Dissenters who acquiesced to the ethically dubious (if socially convenient) practice of Occasional Conformity.⁹ With *The Consolidator*, Defoe sought some form of retribution by ridiculing the political and religious personages who he felt were responsible for sending him to prison and the pillory, and help further the cause of his fellow Dissenters.¹⁰ These, to him, were nothing short of civic duties. In his reply to Fransham's letter of praise on *The Consolidator*, Defoe earnestly stated his happiness for having done something "usefull" which "helps to forward that good which every honest man ought to wish and which I believe I was brought into the world and am suffer'd to live in it only to perform".¹¹

Defoe's political motives in those years, as well as the identification of many of the specific targets of his attacks, seem to uphold Lee Sonsteng Horsley's statement that in *The Consolidator* Defoe "did not go beyond, or intended to go beyond" his satirical reflections on the politics of the past forty years, with only "a few perfunctory changes of name to differentiate the 'Sundry Transactions' in the world of the moon from a nonfictional narrative account of political events".¹² But this claim is over-stated. Defoe's "Allegorick Relation" (as he himself called it) was more contradictory than critics have liked to acknowledge, especially in terms of interpretation. Based on a passage by Defoe, for example, Michael Seidel notes that the "Croalians" stand for the "Dissenters", the "Prestarians" for the "Presbyterians", and the "Solunarians" for the "Churchmen" (meant as the representatives of the Church of England).¹³ Defoe, however, was characteristically coy and, in the same passage, he also desired the reader "by no means to understand me of any Person, Party, People, Nation, or Place on this side the Moon, any Expression, Circumstance, Similitude, or Appearance to the contrary in any wise notwithstanding".¹⁴ Defoe's cautiousness helps appreciate the reason for some potentially discrepant readings, such as the Solunarians having been identified as the English in contrast to the Nolunarians, allegedly the Scots.¹⁵

⁹ Being barred from public roles, some Dissenters found a legislative loophole by taking communion in an Anglican church within one year before an election, which made them eligible for political offices. See Holmes, *Politics, Religion and Society*, 195.

¹⁰ Downie, "Defoe's *Shortest Way*", 122. The "Consolidator" itself was by some contemporary polemicists identified as a symbol of the pillory. See Borck et al., "Headnote", xvi.

¹¹ Defoe, *Correspondence*, 137. Also in Backscheider, "Personality and Biblical Allusion", 2.

¹² Lee Sonsteng Horsley, "Of all Fictions", 99.

¹³ Seidel, "Crisis Rhetoric", 179.

¹⁴ Defoe, *Consolidator*, 37. Except for those to the editors' "Headnote", all future references to *The Consolidator* will be made in-text.

¹⁵ Backscheider, *Daniel Defoe: His Life*, 206.

Defoe's disclaimer might just be a hackneyed way of denying applicability of his allegorical referents to the real world, but it also raises the question of whether *The Consolidator* was just thinly-disguised polemic or, as suggested by Paula Backscheider, a work imaginative enough to deserve being classed among Defoe's first literary endeavours.¹⁶ One way of dealing with this conundrum has been to group *The Consolidator* in the sub-genre of the secret history.¹⁷ This categorisation, however, does not seem to be entirely helpful, partly because the subject matter of *The Consolidator* is much too heterogeneous to fit into neat genres, and partly because its textual mechanics seem to be different to those of traditional secret histories. This latter point was also noted by Riccardo Capoferro: in lieu of a direct correlation between fictional and real characters, *The Consolidator* applies a symbolic, and thus necessarily ambiguous, relationship between narrative and the reality it refers to.¹⁸ Interestingly, Defoe would go on to record his indignation for the 1704 Consolidated Bill in a poem titled the *Dyett of Poland*, which was published in mid-1705 but must have been all but finished by mid-1704, judging from a 7 July 1704 letter to Robert Harley. As John McVeagh clarifies, although one can thematically think of the two as "sister-works", *The Consolidator* was unique in its being replete with "bizarre inventions". This is evidence, at the very least, of "Defoe's restlessly allegorising imagination at work on stubborn material", and, at best, of the mind at play of the soon-to-be novelist.¹⁹

Indeed, to read *The Consolidator* "merely as contemporary polemic", the editors of the Stoke Newington edition remind us, "is to miss some of the larger narrative ideas that Defoe, as an imaginative writer, was beginning to formulate in this work".²⁰ This assessment holds true even if, in the words of a commentator, Defoe "failed signally" in producing a fantastic voyage, especially when compared to Jonathan Swift's *Gulliver's Travels* (1726).²¹ Irrespective of whether its structures would find their way into Defoe's later and more mature fiction, *The Consolidator* is the work of a

¹⁶ Ibid., 141.

¹⁷ Downie, "What if Delarivier Manley".

¹⁸ Capoferro, *Empirical Wonder*, 180.

¹⁹ McVeagh, "Defoe: Satirist and Moralist", 205. See also Prince, *Shortest Way with Defoe*, 57.

²⁰ Borck et al., "Headnote", xviii. Moreover, the very genre of the secret history was by its nature changeful. In her excellent *The Politics of Disclosure* (2009), Rebecca Bullard has persuasively shown that the first three decades of the eighteenth century in Britain witnessed "not only changes in the typical content of secret history, but also the appropriation and adaptation of this form's generic conventions by writers working in genres other than secret history itself" to create "a range of rhetorical effects", and that Defoe was actively involved in this shift, especially with later works such as *Roxana*. Bullard, *Politics of Disclosure*, 3. See also Tavor Bannet, "Secret history", 376.

²¹ Eddy, *Gulliver's Travels*, 35. As recently as 2002 it was claimed (somewhat harshly) that *The Consolidator* is "a failure in the mode of fantasy and science fiction". Alkon, "Invisible Man Returns", 210.

proto-novelist, and we need to be wary of assuming too direct a connection between the author and its narrator persona.²²

This brief examination on how topicality and the imagination interact in *The Consolidator* is crucial to introducing the question of Defoe's use of scientific ideas in the text, which is the topic of this essay. Both in the initial China section and in the lengthy lunar one, much of the story is devoted to the description of extraordinary inventions, all of which display Defoe's fascination with contemporary experimental and natural philosophy. Although he modestly called it "a little Book worth no Body's reading", Defoe was pleased with *The Consolidator*, and particularly so with how he developed his idea of a voyage to the moon.²³ In 1705 he went on to author two other, shorter lunar voyages – *A Journey to the World in the Moon* and *A Second, and More Strange Voyage to the World in the Moon* – as well as a *Letter from the Man to the Moon*, all of which were largely derivative from *The Consolidator*.²⁴ And, in later articles published in *The Review* between 1707 and 1711, he kept on bringing up moon voyages and accounts from lunar explorers as fictional ploys to make his points.²⁵ We can only conclude that Defoe had a considerable interest in the way he had developed the lunar theme in *The Consolidator*. Why was that the case? The answer I propose in this article is that, at this stage of his career, Defoe had intellectual investment in epistemological questions, especially those stemmed from recent breakthroughs in natural and experimental philosophy, which offered alternative approaches to understanding mysterious phenomena. As I will contend in the next sections, scientific ideas in *The Consolidator* are not only used for satirical purposes, but are also exploited to construct a fictional space in which readers can reflect on the epistemological ramifications of new advances in experimental and natural philosophy, especially those that had resulted from Newtonianism in the late seventeenth and early eighteenth century.

²² Pritchard, *Before Crusoe*, 9.

²³ Defoe, *Correspondence*, 136.

²⁴ Rodney M. Baine disputed this attribution, arguing that these texts were likely authored by literary pirates. John Robert Moore's checklist included the further lunar voyages in the Defoean corpus; Joyce Deveau Kennedy argued that Defoe was indeed their author; and the more recent editors of *The Consolidator* have tended to add them as appendices as well. However, the authoritative critical bibliography by P. N. Furbank and W. R. Owens agrees with Baine's assessment. See Baine, "Defoe's Imaginary Voyages", 377–380; Moore, *A Checklist*, 39–40; Kennedy, "The Case for Defoe's Authorship", 77–89; Furbank and Owens, *Critical Bibliography*, 60–61.

²⁵ Borck et al., "Headnote", xvii.

2. “Fools, Knaves, Philosophers and Mad-men”: China and the Satire on Science

The Consolidator, in the words of Ilse Vickers, is a “record of Defoe’s imaginative use” of the interests and achievements of early Royal Society experimenters, and examples of this assessment abound.²⁶ Take the description of the very “Consolidator”, the machine used by the narrator to travel from China to the world of the moon:

But above all his Inventions for making this Voyage, I saw none more pleasant or profitable, than a certain Engine formed in the shape of a Chariot, on the Backs of two vast Bodies with extended Wings, which spread about 50 Yards in Breadth, compos’d of Feathers so nicely put together, that no Air could pass; and as the Bodies were made of *Lunar Earth* which would bear the Fire, the Cavities were fill’d with an Ambient Flame, which fed on a certain Spirit deposited in a proper quantity, to last out the Voyage; and this Fire so order’d as to move about such Springs and Wheels as kept the Wings in a most exact and regular Motion, always ascendant. (15)

In terms of scientific antecedents, the word “chariot” hearkens back to John Wilkins, one of the key figures in the foundation of the Royal Society in the early 1660s. In one of his earlier texts, *The Discovery of a New World; A Discourse tending to prove, that ‘tis probable there may be another habitable World in the Moone* (1638), Wilkins claimed “seriously, and upon good grounds” that it was possible to make a “flying Chariot” to reach the moon, and then proceeded to describe how such a machine would work.²⁷ This idea was taken up by later practitioners such as Robert Hooke, who in the late 1650s devised (unsuccessfully) a project for a flying machine of his own which he submitted to Wilkins himself.²⁸ Defoe did not seem to know about Hooke’s design, but he was most likely familiar with Wilkins’s project, as his “Mechanick Motions” and “Mechanick Engines” are overtly mentioned in the text (14, 27).

Although this description, like most other references to science in *The Consolidator*, sounds satirical, the amount of pseudo-experimental detail in the description of the flying chariot displays first-hand familiarity with the experimental science of the 1660s and 1670s, which Defoe had first cultivated during his formative years at Newington Green Academy, Charles Morton’s college for Dissenters.²⁹ In *The Consolidator*, Defoe’s keen interest in budding scientific enterprises appears clearly upon the narrator’s arrival in China, where he is shown a group of astonishing inventions and wonders – a

²⁶ Vickers, *Defoe and the New Sciences*, 73.

²⁷ In Nicolson and Mohler, “Swift’s ‘Flying Island’”, 421.

²⁸ Waller, “The Life of Dr. Robert Hooke”, iv.

²⁹ Vickers, *Defoe and the New Sciences*, 18–31.

machine that allows instant speech-to-text transcription; an engine to turn book pages automatically; a pair of glasses allowing one to see the wind – on which he comments scathingly that, by comparison with their Chinese counterparts, “[a]ll our Philosophers are Fools, and their Transactions a parcel of empty Stuff, to the Experiments of the Royal Societies in this Country” (6). This caustic reference is of course to the Royal Society and to its journal, the *Philosophical Transactions*, which had then been published for some forty years and was broadly read not just by the community of philosophers and experimenters but by polite citizens too. Indeed, as the editors of the Newington Stoke edition explain, the *Philosophical Transactions* are alluded throughout the text, and so is the Royal Society.³⁰

These allusions to the activities of the Royal Society were hardly encomiastic. Once the narrator is shown this first batch of inventions, he states his wish to make himself master of them so as to convey them “to our Royal Society, that once in 40 Years they might have been said to do something for Publick Good” (14–15). But, as it appears from the portrayal of China in the same pages, the extent to which Defoe meant this as an actual attack on contemporary science is not so clear. Before it became fashionable for English writers to write about Far Eastern countries, *The Consolidator* used China as a narrative displacement for Defoe’s critique of English society.³¹ In light of the praise showered on the Eastern experimental discoveries and the concurrent criticism on English experimenters, one may reasonably conclude that China works here as the exotic background against which Defoe can freely lambast the useless scientific inventions produced in Britain. But this reading is complicated by Defoe’s manner of intervening in the quarrel between the ancients and the moderns.³² As many commentators have noted, Defoe’s depiction of Chinese scientific culture works antiphrastically. Defoe stood firmly on the side of the moderns, and the praise heaped on China’s experimental prodigies is grotesquely hyperbolised to ridicule those who, like William Temple, used the Eastern country as an example of the superiority of the ancients over the moderns in point of scientific advancement.

Which is the real satirical target then, and which is the foil? The narrator’s claim that Chinese inventions expose the “monstrous Ignorance and Deficiencies of *European Science*” (2) might well be exaggerations made to defend the opposite view, much in the same manner Defoe had done in *The*

³⁰ Borck et al., “Headnote”, xxi–xxii.

³¹ Ross, *Swift and Defoe*, 37–38. See also Backscheider and Cotton, “Spiro Peterson”, 93. It has been pointed out that Defoe’s depiction of China as a symbolic land of “political repression and false religion” was largely inaccurate and must have been perceived as such by his contemporaries. See Markley, “‘I have now done with my island’”, 37–41.

³² Min, *China*, 51.

Shortest Way.³³ But there are other moments in *The Consolidator* where Chinese inventions are mentioned as being “very useful ... to abate the Pride and Arrogance of our Modern Undertakers of great Enterprizes, Authors of strange Foreign Accounts, Philosophical Transactions, and the like” (3). This incursion against the lack of religious modesty by European and British philosophers echoed a common argument made at the turn of the century, so one wonders whether Defoe was being sarcastic at all.

One can never be too sure with Defoe, and it is helpful to recall (as a commentator memorably put it) that “what we know for certain” with him is “that we do not know much of anything for certain”.³⁴ To extend a point made by Penny Pritchard, Defoe is ambiguous at core, not only in his treatment of the Royal Society, but of scientific ideas more broadly.³⁵ Indeed, Defoe’s depiction of science in *The Consolidator* is a convoluted affair which reflects the author’s conflicting attitude towards natural and experimental philosophy, one best defined as an unsteady mixture of fascination and concern. A further example illustrates this well. One of the most striking discoveries made in the Chinese library of Tonkin is a “Learned Tract of Winds, which outdoes even the Sacred Text” (6). This learned tract offers:

an Account how to make Glasses of Hogs Eyes, that can see the Wind; and they give strange Accounts both of its regular and irregular Motions, its Compositions and Quantities; from whence, by a sort of Algebra, they can cast up its Duration, Violence, and Extent: In these Calculations, some say, those Authors have been so exact, that they can, as our Philosophers say of Comets, state their Revolutions, and tell us how many Storms there shall happen to any Period of time, and when; and perhaps this may be with much about the same Truth. (6)

The reference to Boyle’s enquiries on the nature of air seems evident. Building on the famous air-pump experiments, Boyle sought to explore the nature of all air-related phenomena, including winds, in *The General History of Air* (1692). This work, which was published posthumously thanks to Locke’s supervision just after Boyle’s death, was an attempt at compiling “a Natural History of the Air” by interspersing Boyle’s own “loose Observations ... about some *Phaenomena* and *Qualities*, and

³³ Shaw, “Ancients and Moderns”. This point is also made in passing by George A. Starr, who claims that Defoe parodied the “uncritical adulation of Chinese wisdom and knowledge” defended by William Temple in the quarrel between ancients and moderns. Starr, “Defoe and China”, 443. For an application of this argument in the context of aesthetics, see Regunathan, “An Incongruous Monster”, 45–64.

³⁴ Marshall, “Fabricating Defoes”, 22.

³⁵ Pritchard, *Before Crusoe*, 36.

especially the *Changes in the Air*", with those of "Travellers and Navigators", as well as fellow virtuosi.³⁶

Boyle was not above being mocked in *The Consolidator* (nor was Locke, for that matter), but the reference to the winds being understood via algebra, motions and quantities seems to conflate his enquiry on air with an interest in mathematics that was more germane to Newtonian natural philosophy than to the Christian Virtuoso's intellectual outlook. As Defoe surely knew from his education at Morton's academy, Boyle's method made precious little use of mathematics and always made its conjectural nature clear. An instance amongst the many occurs in the very *General History of Air*, when Boyle clarifies that he does not seek to "methodize [his] incoherent Notes", but just to make some observations with no aim at generalization.³⁷ By contrast, Defoe's description of the special glasses suggests a different knowledge-making approach, one in which the nature of winds is to be determined with exactness, up to the point that even future storms may be predicted. In their calculations, the narrator explains, the Chinese authors of this book on the winds "have been so exact, that they can, as our Philosophers say of Comets, state their Revolutions" (6) – that is, predict their course.

To readers in 1705, talk of comets and mathematical calculations could not but have brought to mind the astronomical discoveries in Isaac Newton's *Philosophiae Naturalis Principia Mathematica* (first published in 1687), while the special lenses allowing people to see invisible phenomena must have recalled the astounding experiments with light and colour in *Opticks*, which had been published just the year prior. Similarly, reading in *The Consolidator* that the "Learned Tract of Winds" was so perfect that it outdid even the Bible (6) must have been interpreted by contemporary readers as a reference to then-raging debates on revealed and natural theology, which at that time often took Newton's laws of nature as their point of departure. It helps here to draw a quick parallel with *The Storm* (1704), a work which, along with *The Consolidator*, was the first lengthy prose work in which Defoe's imagination shapes its contents. For all of Defoe's claims that the Great Storm that struck the south of England in November 1703 was "the strong Evidence God has been pleas'd to give" of the need to punish sinners, *The Storm*, in the words of Scott Juengel, actually works as a "peculiar archive" in which providential interpretations are mixed with "weather myths", "crude attempts at meteorology" and even "a hastily penned eclogue in imitation of Virgil".³⁸ The topicality of sinning does play a key part in explaining the Great Storm, but so do a number of other ideas, most prominently innovative approaches such as the experimental collection of meteorological data,

³⁶ Boyle, *Works*, XII, 70–71.

³⁷ *Ibid.*, XII, 70.

³⁸ Juengel, "Early Novel and Catastrophe", 447.

which stood in direct contrast with providence-based readings.³⁹ Both *The Storm* and *The Consolidator* were published at a crucial juncture in time, when religious attitudes were rapidly changing to the point that, while still retaining the idea that God was the first cause of natural phenomena, it was no longer taken for granted that these necessarily concealed divine messages or were due to direct divine interposition. A decisive contribution to this shift in intellectual climate came from the activities of the “Newtonians”, the influential group of religious commentators (mainly Richard Bentley, Samuel Clarke and William Whiston) who had been close to Newton and used his ideas on the regularity of the universe as a springboard to mount their arguments for natural religion. Their positions, which were mostly spelled out in the Boyle Lectures they delivered between the 1690s and early 1700s, held that the universe was God’s perfect creation that worked according to the laws of nature discovered by Newton.⁴⁰

This context helps understand why, when the narrator of *The Consolidator* first meets the famous lunar naturalist responsible for the wonderful engines seen in China, he describes him as a semi-divine creature who revealed the secrets of nature and “furnisht us with such unheard-of Demonstrations” (10). Science had changed radically from the early days of the Royal Society, and the early eighteenth century marked the beginning of Newton’s glorification, one that would retrospectively be summed up by the inscription in the Temple of British Worthies in Stowe, where Newton was said to be the one to whom “the GOD of Nature made to comprehend all his Works; and from simple Principles to discover the Laws never known, and to explain the Appearances never understood, of this stupendous Universe”.⁴¹ Like Newton, the great lunar philosopher described in *The Consolidator* had allegedly discovered everything in nature and was therefore to be considered a supernatural entity. As Presbyterian minister Henry Grove put it some ten years after *The Consolidator* was published, Newton’s genius was such that it made him “appear like one of another species”.⁴²

Defoe could not have ignored Newton’s semi-divine status, especially since, by the time he was writing *The Consolidator*, the natural philosopher had become more famous than ever. He had been elected President of the Royal Society in 1703 and knighted by Queen Anne in 1705. As shown by Mordechai Feingold and Patricia Fara, this time marked the beginning of Newton’s public sanctity.⁴³ In this final period of his life, he appeared in scores of portraits and sculptures, a feat only matched

³⁹ Defoe, *The Storm*, 6–7.

⁴⁰ Jacob, *Newtonians and the English Revolution*. See also Gascoigne, “From Bentley to the Victorians”.

⁴¹ Quoted in Defoe, *Tour*, 229.

⁴² Grove, *The Spectator* 635 (20 December 1714).

⁴³ Feingold, *Newtonian Moment*; Fara, *The Making of Genius*.

by the royalty and high-ranking aristocrats.⁴⁴ Indeed, the celebratory description of the great lunarian philosopher responsible for all the extraordinary scientific inventions in *The Consolidator* seems to be along the same lines:

[He was] no Native of this World, but was Born in the *Moon*, and coming hither to make Discoveries, by a strange Invention arrived to by the *Virtuoso* of that habitable World, the Emperor of *China* prevailed with him to stay and improve his Subjects There was abundance of vast Classes full of the Works of this wonderful Philosopher: He gave the *how*, the *modus* of all the secret Operations of Nature. (17)

But this is not to say that this “great Searcher into Nature” certainly stood for Newton. Again, we must tread carefully with topicality in *The Consolidator*, and there is reason to believe that Defoe’s allegorical figure of the lunar philosopher was a conflation of several experimenters and philosophers, as it appears, for example, by the fact that the lunar philosopher is said to have created “wonderful Tellescopes” by which he discovered about other habitable planets (Newton had invented an innovative telescope in 1668, but so had other famous experimenters before and after him).

As it becomes clear from the language of demonstration and mathematics employed in *The Consolidator*, the point is rather that the values attached to the lunarian philosopher, and with the world of the moon more broadly, are closely associated to those of Newtonianism. The eulogising depiction of the lunar “naturalist” (a term that in the early eighteenth century referred to natural philosophers) as the being who discovered everything there was to know about nature with the certainty of demonstrative knowledge resonates with contemporary discourses on Newtonian science.⁴⁵ Experimenter Francis Hauksbee claimed in 1709 that the “learned World” was already “almost generally convinced” that “there’s no other way to Improving Natural Philosophy but by Demonstrations and Conclusions founded upon Experiments judiciously and accurately made”.⁴⁶ As it will be shown in the next section, Defoe agreed that these changes amounted to a major epistemological shift, and, as these were being increasingly applied beyond the domain of natural philosophy, he used *The Consolidator* as a fictional platform to explore their ramifications.

⁴⁴ Keynes, *Iconography of Sir Isaac Newton*.

⁴⁵ In Johnson’s 1755 *Dictionary*, a “naturalist” was defined as “A student in physicks, or natural philosophy” rather than a person who collected and studied natural specimens.

⁴⁶ In Stewart, *Rise of Public Science*, 118.

3. Defoe's Allegory of Demonstrative Knowledge

Words related to mathematics, demonstrative knowledge and accuracy permeate the descriptions of the lunar world in *The Consolidator*. The great lunarian philosopher is said to have devised a number of "unheard-of Demonstrations" (10) and the "Consolidator" itself is described as being part of a set of lunar engines "squar'd by Lines and Rules" and composed by feathers all "of a length and breadth exactly, whose accurate proportions are absolutely necessary to the *floating Figure*" (15). In the world of the moon, the workings of memory have been described mathematically (7) and the human soul has been "*Spherically and Mathematically discover'd*" (39). Demonstration is mentioned as the expected result in questions as diverse as determining whether the moon is a satellite of the earth, examining the doctrine of passive obedience to a monarch or investigating how state policy works.

While meant sarcastically, claims like this pointed to a serious problem in knowledge-making. Defoe was concerned with the increasingly widespread use of the language of demonstration to examine moral phenomena, and he says as much when he has his narrator claim that, by comparison with the world of the moon, "our Learned Doctors" on earth keep "puzzling themselves about Demonstrations, squaring of Circles, and converting *oblique* into *right Angles*, to bring out a *Mathematical Clock-Work Soul*" (40). This quotation refers to the fact that the allure of what Peter Dear calls the "privileged reputation for certainty that attached to mathematical demonstration" was starting to expand beyond natural philosophy.⁴⁷ For instance, in George Cheyne's *Philosophical Principles of Natural Religion* (1705), a famous book published in the same year as *The Consolidator*, the argument for natural religion is based on a conception of the universe as a "vast, if not infinite *Machine* of the *Universe*, the Perfect and Wise Production of Almighty God consisting of an infinite number of lesser *Machines*, every one of which is adjusted by Weight and Measure". The "System of Universe", he contends, must be "liken'd to a finish'd Piece of Clockwork form'd upon *Geometrick Principles*".⁴⁸ While the issue of the expansion of mathematics to other domains must not be superimposed with the longer-standing conflict between natural and revealed religion, the latter still provided the basis for the former. Mysterious forces like attraction or baffling phenomena like sunlight had been traditionally thought to lie beyond the powers of human understanding, and thus within the remit of providential explanations. By the early eighteenth century, however, these phenomena were increasingly discussed with the precise language of numbers. This shift is clearly represented in *The Consolidator*, where the narrator states that "among the Generality of our People,

⁴⁷ Dear, *Discipline and Experience*, 31.

⁴⁸ Cheyne, *Philosophical Principles*, 2, 5.

who being not much addicted to Revelation, have much concern'd themselves about Demonstrations, a Generation have risen up ... to solve the Difficulties of Supernatural Systems" (25).

This helps understand the sustained metaphor of improved vision which animates the lunar part of *The Consolidator* and which, as Rodney M. Baine noted, would later become "a favourite device" of Defoe's, one employed in prose works including *Serious Reflections* (1720) and *History of Apparitions* (1727).⁴⁹ In *The Consolidator*, the ability to see clearly is thematised as the alleged proficiency of natural philosophers in decoding the secrets of nature. The narrator writes that the members of this new generation who do not believe in revealed religion "imagine a mighty vast Something" which "has no Form" but is nevertheless there, and one can reasonably conjecture that this intangible entity that keeps the entire universe together is a jibe at Newton's claim to have discovered a universal force of gravity notwithstanding its being invisible and thus impossible to prove. Perhaps more importantly, however, is the conceptualization of God as a "Great Eye", an "infinite Optick" that the new generations "imagine to be *Natura Naturans*, or Power-forming" (25), which begs the question of why nature is conceived of with a visual metaphor. The answer to this question lies in Defoe's explicit linking of the lunar glass-assisted sight with demonstrative knowledge. One of the main occupations in the lunar world of *The Consolidator* is the grinding of lenses that improve one's eyesight to the point of perfection. By the help of these Glasses, "strange things, which pass in our World for Non-Entitites, are to be seen, and very Perceptible", as for example something as invisible as "state polity". On a surface level, this absurd exaggeration rehashes the common criticism directed to those experimenters who spent their time looking at the heavens or at insects with telescopes and microscopes.⁵⁰ But in a deeper sense, the narrator is contending that the lunar lenses are so good that they make mysterious phenomena into non-controversial ones. Once they put their glasses on, for example, the inhabitants of the moon can solve "all the vast Contradictions" of state policy, making them "Rational, reconciled to Practice, and brought down to Demonstration" (34). The technological advancement in the lunar world, the narrator explains, has exceeded nature "and the Power of Vision was assisted to that prodigious Degree, as even to distinguish Non-Entity it self" (36), making it rational and verifiable by demonstration.

In other words, the glass-assisted perfect vision in the lunar world works as a totalising trope for demonstrative knowledge. Glasses and lenses allow a direct, unmediated apprehension of natural phenomena, as opposed to the imperfect interpretation of conventional signs. It is significant that in

⁴⁹ Baine, "Defoe and the Angels", 347.

⁵⁰ Cook, "Drawn for the Mind's Eye", 171.

The Consolidator the narrator talks about the nature of the soul, meant as the most mysterious phenomenon of all, by distinguishing between two opposite epistemic modes by which different discoveries may be made: one is “the Hieroglyphical, and Emblematical”, while the other is “the Demonstrative” (38). The former is that possessed by the human narrator himself, who, he reports, “had read a *certain Book* in our own Country, called, *Nature*”, which concluded always with the injunction to “look up” to God (37). Being based on faith, this epistemic mode is characterised by a lack of certainty which leaves room for providential explanation, but also tends to be exploited by cunning people like politicians (38). The demonstrative mode, by contrast, is the one used by the great lunar philosopher met in China and, after his example, by all lunar inhabitants. This epistemic mode works by collapsing sight and understanding together: what is seen is immediately and instantaneously apprehended and its findings appear as if they had been mathematically demonstrated. The lunar inhabitants simply put their “Explicative Optick-Glasses” on and “the Nature and Consequences of Secret Mysteries” are “seen” and, thus, “plainly prov’d” immediately (38).

Again, a double layer is at work here. One is the attack seemingly directed at religious enthusiasts such as John Asgill, a banker and member of the House of Commons, and William Coward, a well-known physician and materialist thinker, on account of their “indulging in flights of extravagant imagination” when intervening in then-lively debates on the nature of the soul.⁵¹ But, at a deeper level, Defoe was also pointing to a question of knowledge-making. In the world of the moon, which boasts such superior scientific discoveries, “symbolic” interpretation is mistrusted as an inferior epistemic mode. The fact that the “emblematic” epistemic mode is linked to the Machiavellian ability of politicians to twist facts undercuts the satire on demonstrative knowledge and introduces the possibility that the lunar world in *The Consolidator* is a utopia of perfect knowability. This is the reason why the inhabitants of the lunar world are described as not abounding in books. The rational for this, as the “Old Lunarian” explains to the human narrator, is that “You see nothing to what some of our Great Eyes see in some Parts of this World, nor do you see any thing compar’d to what you may see by the help of some new Invented Glasses” (30). Simply put, in the moon world books are not needed because thanks to their “Incomparable Glasses” (37) the inhabitants of the moon are able to apprehend natural phenomena and immediately understand them, so there is no quibbling about whose textual authority is superior.

⁵¹ Thomson, *Bodies of Thought*, 132. At that time Asgill’s blasphemous beliefs were something of a favourite subject for Defoe and were discussed in *An Enquiry into the Case of Mr. Asgil’s General Translation* (1703) and *An Elegy on the Author of the True-Born-English-Man. With an Essay on the Late Storm* (1704).

This process of self-evidence through visualization is emphasised by the narrator, who insists that, in the lunar world, one is able to “resolve all Beings to Eyes”. Clear eyesight is the supreme ability and everything that impedes a clear visualization of nature must be gotten rid of. In this sense, they are the application of Newton’s motto *hypotheses non fingo*: the lunar glasses are as free from impurity as they are from conjectures, those unreliable products of the human mind that Newton wished to banish from proper reasoning.⁵² Notably, this parallel is drawn by the narrator when he mentions “Accidents ... from within” as causes of impurity in the glasses, which, if not taken care of, will lead to misinterpretation of phenomena. Subjective issues such as “*wandring Errors, wild Notions, cloudy Understandings, and empty Fancies*” are likened to physical disturbances like “Vapours, Clouds, liquid Air, Exhalations”, all of which “darken” and “prevent” the operation of the glasses (25). Once all subjective impurity is cleaned, the lunar glasses will allow one to understand everything perfectly and effortlessly. Their demonstrative knowledge-making potential is attained because they are able to let themselves be fully guided by their prosthetic eyes, which erases all interpretation to reach the point where the observer is fully identified with the object of observation. In the world of the moon there is no symbolic reading, but only demonstrative equivalence: or, as the narrator puts it, with the aid of the lunar glasses “the Eye” is instantaneously brought “to the Object” (31).

4. *The Consolidator* as a Utopia of Perfect Knowability

Sara Landreth has noted that *The Consolidator* is Defoe’s attack on the “absurd and hubristic” position that “human agency could achieve a divine vision through pneumatic experiments or mechanical engines”.⁵³ In this reading, the flight to the moon is the “metaphoric equivalent” to madness – religious and political one, primarily, but also the scientific madness of aiming at demonstrative knowledge.⁵⁴ But, as usual with Defoe, we need to be careful not to be too clear-cut with our assessments. Defoe’s satire on the language of demonstrative knowledge is undercut by the narrator’s desire of being able to produce knowledge in the same rational way as the lunar inhabitants, and to extend it to his readers. It is significant that, for all the jokes on science, the narrator of *The Consolidator* is also subject to the desire of artificially improving his knowledge-making abilities by making use of the lunar glasses. As this “sort of *Eye-sight* we call *General Knowledge*” is easily attainable in the lunar world, the narrator longs to undertake the “earnest search after this thing call’d *Demonstration* [which] fill’d me with Desires of seeing every thing” (26).

⁵² On the subtleties of this famous sentence, see Cohen, “First English Version”.

⁵³ Landreth, “Defoe on Spiritual Communication”, 144.

⁵⁴ Borck et al., “Headnote”, xxvii.

Not only does Defoe shy away from clarifying where the boundary between satirical and serious claims lies, but, as it would often be the case with his later novels, he does not tell where fiction ends and fact begins.⁵⁵ Adopting an ambivalent stance between satire and utopia, Defoe does not commit to a fixed answer to the question of whether the equivalence between perfect sight and demonstrative knowledge of nature could extend to his readers. The lunar inhabitants believe that nothing is unknowable in principle: if something is visible, it can be known; and this means that everything can be known, for “as to things Invisible, they reckon nothing so” (25). But the moon world is declaredly the mirror image of England, so this belief must apply to Defoe’s contemporaries too, to some extent. “I shall not enter into the Customs, Geography, or History” of the moon, the narrator explains, because there was “no manner of Difference in any thing Natural”. The inhabitants of this planet, likewise, are exactly the same – “Men, Women, Beasts, Birds, Fishes, and Insects, of the same individual Species as Ours” – and even their behaviour is the same. The “Men no wiser, better, nor bigger than here; the Women no handsomer or honester than Ours” (24). This means that the possibility of perfect knowability enjoyed by the lunar inhabitants must extend to their English counterparts, a scenario supported by the narrator, who argues that all “received Truths no doubt would be so every where else, if the Eyes of Reason were open’d to the Testimony of Nature” (37).

In *The Consolidator*, Defoe draws from a number of literary antecedents, especially the tradition of fantastic journeys to the moon.⁵⁶ These include, for example, Lucian, the controversial Greek author who had a reputation as an atheist but was frequently translated and imitated in late-seventeenth-century Europe;⁵⁷ vastly popular works such as Bishop Godwin’s *The Man in the Moone* (1638) and Cyrano de Bergerac’s *L’Autre monde ou les états et empires de la Lune* (1657);⁵⁸ Louis LeComte’s *Nouveaux memoires sur l’etat present de la Chine* (1697), which Defoe elaborated on to develop his attack on the ancients;⁵⁹ and, closer to Defoe’s time, Jonathan Swift’s *Tale of a Tub* (1704).⁶⁰ But it is important to note that Defoe conflated these literary texts with scientifically-minded ones.⁶¹ Thanks to his “privileged knowledge” of the various developments in experimental and natural philosophy, *The Consolidator* shows awareness of theories on the plurality of the world.⁶² So, on top of Wilkins’s *The Discovery of A World in the Moone*, Defoe must have been familiar with Fontenelle’s widely read

⁵⁵ McKinlay, “Foucault, Plague, Defoe”, 172.

⁵⁶ Mullan, “Swift, Defoe”, 258.

⁵⁷ Prince, *Shortest Way with Defoe*, 64–72.

⁵⁸ Capoferro, *Empirical Wonder*, 178.

⁵⁹ Shimada, “A Possible Source”, 45.

⁶⁰ Cook, “Mr. Examiner”, 128. See also Clark, “Lapponia, Lapland, and Laputa”, 350.

⁶¹ Baines, “Able Mechanick”, 2.

⁶² Cook, “Drawn for the Mind’s Eye”, 171.

Entretiens sur la pluralité des mondes (1686), which was so successful that three translators (one of them being Aphra Behn) worked to produce an English version of it almost at once.⁶³ Thinking in terms of intertextuality is crucial here for, as Marjorie H. Nicolson correctly observed many decades ago, the value of *The Consolidator* lies less in Defoe's originality than in his ability to weave "complex themes into an elaborate pattern".⁶⁴ This pattern, however, is not solely that of different kinds of topicality and source texts mingled together, but that of fact and fiction, at a time when these two concepts were increasingly influenced by scientific developments.

The result, as Prince puts it, is a "suturing together" of "allegory and history, lunar fable and scientific realism" which provides a platform for Defoe to explore the epistemological consequences of a fully widespread use of mathematical demonstration to determine moral questions and mysterious phenomena.⁶⁵ This use of fiction as a space to experiment with forms of knowledge-making is exemplified in *The Consolidator* by the "The Cogitator", or "Chair of Reflection". This machine is able to carry the "Man that puts himself into it ... into *vast Speculations, Reflexions, and regular Debates with himself*":

This is a most wonderful Engine, and performs admirably, and my Author gave me extraordinary Accounts of the good Effects of it; and I cannot but tell my Reader, That our Sublunar World suffers Millions of Inconveniencies, for want of this thinking Engine: I have had a great many Projects in my Head, how to bring our People to regular thinking, but 'tis in vain without this Engin; and how to get the Model of it I know not; how to screw up the Will, the Understanding, and the rest of the Powers; how to bring the Eye, the Thought, the Fancy, and the Memory, into Mathematical Order, and obedient to Mechanick Operation; help *Boyl, Norris, Newton, Manton, Hammond, Tillotson*, and all the Learned Race, help *Philosophy, Divinity, Physicks, Oeconomicks*, all's in vain, a Mechanick Chair of Reflection is the only Remedy that ever I found in my Life for this Work. (41)

As noted by Michael Seidel, the Cogitator is a creation which anticipates Defoe's attempt to "work out the ramifications of conscience and literary form" which would be showcased in his later prose fiction.⁶⁶ As a scientific instrument that successfully brings "the Eye, the Thought, the Fancy, and the Memory" into "Mathematical Order, and obedient to Mechanick Operation", the Cogitator is the sole support needed to make discoveries not only in physics and economics – as it could be expected,

⁶³ Russo, "The Space Age" 27; Borck et al., "Headnote", xxxviii, n. 33.

⁶⁴ Nicolson, *Voyages to the Moon*, 184.

⁶⁵ Prince, *Shortest Way with Defoe*, 57. I agree with Prince on this particular point, but I disagree with his broader reading of Defoe as a closet deist.

⁶⁶ Seidel, "The Man Who Came to Dinner", 211.

being disciplines more obviously related to quantities – but, surprisingly, in philosophy and theology too. Indeed, the suggestion made here is that these four disciplines can be subsumed under the single heading of mathematical sciences, with the implication that theology is not the domain of the divine but of the mathematician. Mathematics, Defoe speculates, could well apply to “all humane Affairs; as of *War, Peace, Justice, Injuries, Passion, Love, Marriage, Trade, Policy, and Religion*” (41).

Defoe’s *The Consolidator* uses fiction as the medium to simulate a world in which demonstrative knowledge is common, and this process of fiction-driven abstraction is reified in yet another lunar invention called “Elevator”, which was designed to converse with the spirits. This engine is “wholly applied to the Head, and Works by Injection; the chief Influence being on what we call *Fancy*, or Imagination” (47). The implication, as Daniel Johnson puts it, is that “the reader is on the elevator, joining Defoe in his flight of fancy to the moon” while, at the same time, “talking to Defoe” on how he is writing his book.⁶⁷ Since it “aids imagination’s access to ... fictional characters and the real authors behind them”, the elevator, Johnson infers, “can be none other than the printed word”.⁶⁸ In other words, *The Consolidator* as a book is the passageway to a utopia of perfect knowability where the readers can pretend that they are the lunar inhabitants – that is, that they are able to use the lunar glasses to make-believe they can understand every phenomenon with the certainty of demonstration. But this passageway is also disguised as factual thanks to its paratextual apparatus. On the title page the “Author of *The True-Born English Man*” presents himself as its translator from the lunar language, and in doing so Defoe exploits what John Bender calls the “conventions of transparency, completeness, and representational reliability”.⁶⁹ These conventions do not necessarily pertain to novels in a strict sense (as Bender seemed to suggest) but are at work in all texts that convey fictional content by presenting it as fact, such as *The Consolidator*, and readers are left in an uneasy position where it is unclear whether they are just pretending that they believe in the fictional world of the moon, or if the world of the moon is actually their empirical world, and the contents of Defoe’s fiction are a slightly distorted mirror of their reality.

This is where it is helpful to recall that, as we discussed at the beginning of this essay, *The Consolidator* is characterised by a complex interplay of topicality and literariness.⁷⁰ In this respect, the two strands of *The Consolidator*, satire and utopia, are reconciled: while Defoe is critical against the use of demonstrative knowledge beyond natural philosophy, his fiction provides readers with an

⁶⁷ Johnson, “Apparitional Eighteenth-Century Novel”, 258.

⁶⁸ Ibid., 258–259.

⁶⁹ Bender, *Imagining the Penitentiary*, 72.

⁷⁰ Wilson, “Dark Side of Utopia”, 193.

alternative space to experiment with this possibility, i.e., to imagine how their world would be if demonstrative knowledge were as widespread as in the fictional lunar world he created. Or, as Paula Backscheider best put it, as readers “gave themselves over to the life of the imagination, they read differently. Not only did they accept more, but they tested the fiction by the credibility of the characters’ responses to events rather than by the probability of the events themselves”.⁷¹ Paradoxically, *The Consolidator* invites readers to pretend to believe in Defoe’s fictional inventions so that they can become more epistemologically sensitive to the shifts in knowledge-making standards that were taking place in the real world due to new advances in science.

It is in this sense that the treatment of science in *The Consolidator* is both topical and allegorical: it is topical in that it presents issues related to contemporary natural and experimental philosophy, especially the later developments stemmed from Newtonianism; and it is allegorical in that Defoe can turn his satiric perspective not “to praise of that which he values and to assault on that he does not”, but the very opposite: to avoid committing to a fixed position.⁷² The result, to paraphrase Geoffrey Sill, is that in *The Consolidator* Defoe showed himself as “a philosophical realist”, though not just in the sense of a person who “gave credit only to the verifiable products of sense experience or to revelation embodied in Scripture”.⁷³ Rather, he was a philosophical realist who believed as much in the empirical impressions of the senses as in the power of fiction to create abstractions, and, most importantly, in his ability as a writer to use the power of fiction to allow readers to reflect on how scientific advancements of their day had been changing the way they knew the world.

Bibliography

Alkon, Paul. “The Invisible Man Returns: New Defoe Editions.” *Eighteenth-Century Fiction* 14, no. 2 (2002): 199–213.

Backscheider, Paula R. “Personality and Biblical Allusion in Defoe’s Letters.” *South Atlantic Review* 47, no. 1 (1982): 1–20.

Backscheider, Paula R. and Hope D. Cotton. “Spiro Peterson (1922–1992) and Defoe Studies.” *Eighteenth-Century Fiction* 8, no. 1 (1995): 89–94.

Backscheider, Paula R. *Daniel Defoe: His Life*. Baltimore, MD: Johns Hopkins University Press, 1992.

⁷¹ Backscheider, *Daniel Defoe: His Life*, 415.

⁷² Borck et al., “Headnote”, xxxi.

⁷³ Sill, “*The Political History of the Devil*”, 117.

- Baine, Rodney M. "Daniel Defoe's Imaginary Voyages to the Moon." *PMLA* 81, no. 5 (1966): 377–380.
- Baine, Rodney M. "Defoe and the Angels." *Texas Studies in Literature and Language* 9, no. 3 (1967): 345–369.
- Baines, Paul. "'Able Mechanick': The Life and Adventures of Peter Wilkins and the Eighteenth-Century Fantastic Voyage." In *Anticipations: Essays on Early Science Fiction and its Precursors*, edited by David Seed, 1–25. Liverpool: Liverpool University Press, 1995.
- Bender, John. *Imagining the Penitentiary: Fiction and the Architecture of Mind in Eighteenth-Century England*. Chicago: Chicago University Press, 1987.
- Boyle, Robert. *The Works of Robert Boyle*, 14 vols. Edited by Michael Hunter and Edward B. Davis. London: Pickering and Chatto, 2000.
- Borck, Jim Springer et al. "Headnote to *The Consolidator*." In Daniel Defoe, *The Consolidator*, edited by Jim Springer Borck et al., xv–xxxviii. New York: AMS Press, 2001.
- Bullard, Rebecca. *The Politics of Disclosure, 1674–1725: Secret History Narratives*. London: Pickering & Chatto, 2009.
- Capoferro, Riccardo. *Empirical Wonder: Historicizing the Fantastic, 1660–1760*. Bern: Peter Lang, 2010.
- Cheyne, George. *Philosophical Principles of Natural Religion*. London: Printed for George Strahan, 1705.
- Clark, Paul Odell. "Lapponia, Lapland, and Laputa." *Modern Language Quarterly* 19, no. 4 (1958): 343–351.
- Cohen, I. Bernard. "The First English Version of Newton's *Hypotheses Non Fingo*." *Isis* 53, no. 3 (1962): 379–388.
- Cook, Karen S. "Drawn for the Mind's Eye: Map Metaphors in Early Modern English Literature." *The Cartographic Journal* 55, no. 2 (2018): 170–177.
- Cook, Richard I. "'Mr. Examiner' and 'Mr. Review': The Tory Apologetics of Swift and Defoe." *Huntington Library Quarterly* 29, no. 2 (1966): 127–146.
- Dear, Peter. *Discipline and Experience: The Mathematical Way in the Scientific Revolution*. Chicago: Chicago University Press, 1995.
- Defoe, Daniel. *A Tour Thro' the Whole Island of Great Britain*, 3 vols. London, 1724–1726.

- Defoe, Daniel. *The Cambridge Edition of the Correspondence of Daniel Defoe*, edited by Nicholas Seager. Cambridge: Cambridge University Press, 2022.
- Defoe, Daniel. *The Consolidator*, edited by Jim Springer Borck et al. New York: AMS Press, 2001.
- Defoe, Daniel. *The Storm*, edited by Richard Hamblyn. London: Penguin, 2005.
- Downie, J. A. "Defoe's *Shortest Way with the Dissenters*: Irony, Intention and Reader-Response." *Prose Studies: History, Theory, Criticism* 9, no. 2 (1986): 120–139.
- Downie, J. A. "What if Delarivier Manley did not Write *The Secret History of Queen Zarah*?" *The Library* 5 no. 3 (2004): 247–264.
- Eddy, W. A. *Gulliver's Travels: A Critical Study* (Princeton, NJ: Princeton University Press, 1923).
- Fara, Patricia. *Newton: The Making of Genius*. London: Picador, 2002.
- Feingold, Mordechai. *The Newtonian Moment. Isaac Newton and the Making of Modern Culture*. New York: The New York Public Library, 2004.
- Furbank, P. N. and Owens, W. R. *A Critical Bibliography of Daniel Defoe*. London: Pickering and Chatto, 1998.
- Gascoigne, John. "From Bentley to the Victorians: The Rise and Fall of British Newtonian Natural Theology." *Science in Context* 2, no. 2 (1988): 219–256.
- Grove, Henry. *The Spectator* 635 (20 December 1714).
- Holmes, Geoffrey S. *Politics, Religion and Society in England, 1679–1742*. London and Ronceverte: The Hambledon Press, 1986.
- Jacob, Margaret C. *Newtonians and the English Revolution 1689–1720*. Ithaca: Cornell University Press, 1976.
- Johnson, Daniel. "Apparitional Eighteenth-Century Novel." *Eighteenth-Century Fiction* 28, no. 2 (2015): 239–261.
- Juengel, Scott. "The Early Novel and Catastrophe." *Novel: A Forum on Fiction* 42, no. 1 (2009): 443–450.
- Kennedy, Joyce D. "The Case for Defoe's Authorship of the 'Consolidator' Pamphlets." *Huntington Library Quarterly* 39, no. 1 (1975): 77–89.
- Keynes, Milo. *The Iconography of Sir Isaac Newton to 1800*. Suffolk: Boydell, 2005.

- Landreth, Sara. "Defoe on Spiritual Communication, Action at a Distance, and the Mind in Motion." In *Mind, Body, Motion, Matter: Eighteenth-Century British and French Literary Perspectives*, edited by Mary Helen McMurrin, and Alison Conway, 139–169. Toronto: University of Toronto Press, 2016.
- Markley, Robert. "'I have now done with my island, and all manner of discourse about it': Crusoe's *Farther Adventures* and the Unwritten History of the Novel." In *A Companion to Eighteenth-Century English Novel and Culture*, edited by Paula R. Backscheider, and Catherine Ingrassia, 25–47. Malden, MA: Blackwell, 2005.
- Marshall, Ashley. "Fabricating Defoes: From Anonymous Hack to Master of Fictions." *Eighteenth-Century Life* 36, no. 2 (2012): 1–35.
- McKinlay, Alan. "Foucault, Plague, Defoe." *Culture and Organization* 15, no. 2 (2009): 167–184.
- McVeagh, John. "Defoe: Satirist and Moralist." In *The Cambridge Companion to Daniel Defoe*, edited by John Richetti, 200–215. Cambridge: Cambridge University Press, 2008.
- Min, Eun Kyung. *China and the Writing of English Literary Modernity, 1690–1770*. Cambridge: Cambridge University Press, 2020.
- Moore, John Robert. *A Checklist of the Writings of Daniel Defoe*. Hamden, CT: Archon Books, 1971.
- Mullan, John. "Swift, Defoe, and Narrative Forms." In *The Cambridge Companion to English Literature, 1650–1740*, edited by Steven N. Zwicker, 250–275. Cambridge: Cambridge University Press, 1998.
- Nicolson, Marjorie H. and Nora M. Mohler. "Swift's 'Flying Island' in the *Voyage to Laputa*." *Annals of Science* 2, no. 4 (1937): 405–430.
- Nicolson, Marjorie H. *Voyages to the Moon*. New York: The Macmillan Company, 1948.
- Novak, Maximillian E. "The Defoe Canon: Attribution and De-Attribution." *Huntington Library Quarterly* 59, no. 1 (1997): 83–104.
- Novak, Maximillian E. *Daniel Defoe, Master of Fictions. His Life and Ideas*. Oxford: Oxford University Press, 2001.
- Prince, Michael B. *The Shortest Way with Defoe*. Charlottesville, VA: University of Virginia Press, 2020.
- Pritchard, Penny. *Before Crusoe: Defoe, Voice, and the Ministry*. London: Routledge, 2018.

- Regunathan, Swetha. "'An Incongruous Monster': Idolatrous Aesthetics in Crusoe's China." *Digital Defoe: Studies in Defoe & His Contemporaries* 5, no. 1 (2013): 45–64.
- Ross, John. *Swift and Defoe: A Study in Relationship* (Folcroft: Folcroft Press, 1940).
- Russo, Arturo. "The Space Age and the Origin of Space Research". In *The Century of Space Science*, edited by J.A. Bleeker, Johannes Geiss, M. Huber, 25–58. Dordrecht: Kluwer, 2001.
- Schonhorn, Manuel. "Defoe and the Limits of Jacobite Rhetoric." *ELH* 64, no. 4 (1997): 871–884.
- Seidel, Michael. "Crisis Rhetoric and Satiric Power." *New Literary History* 20, no. 1 (1988): 165–186.
- Seidel, Michael. "The Man Who Came to Dinner: Ian Watt and the Theory of Formal Realism." *Eighteenth-Century Fiction* 12, no. 2–3 (2000): 193–212.
- Shaw, Narelle L. "Ancients and Moderns in Defoe's *Consolidator*." *Studies in English Literature, 1500-1900* 28, no. 3 (1988): 391–400.
- Shimada, Takau. "A Possible Source for *The Consolidator*." *Notes and Queries* 31, no. 1 (1986): 45.
- Sill, Geoffrey M. "Introduction." In *Daniel Defoe, Satire, Fantasy and Writings on the Supernatural by Daniel Defoe. Volume 3, The Consolidator (1705); Memoirs of Count Tariff, &c. (1713); The quarrel of the School-Boys at Athens (1717)*, edited by Geoffrey M. Sill, 1–31. London: Routledge, 2016.
- Sill, Geoffrey. "*The Political History of the Devil* by Daniel Defoe (review)." *The Scriblerian and the Kit-Cats* 37–38, no. 1–2 (2005): 117–119.
- Snyder, Henry L. "Daniel Defoe, the Duchess of Marlborough, and the 'Advice to the Electors of Great Britain.'" *Huntington Library Quarterly* 29, no.1 (1965): 53–62.
- Sonsteng Horsley, Lee. "'Of all Fictions the Most Simple': Swift's Shared Imagery." *The Yearbook of English Studies* 5, no. 1 (1975): 98–108.
- Starr, George A. "Defoe and China." *Eighteenth-Century Studies* 43, no. 4 (2010): 435–454.
- Stewart, Larry. *The Rise of Public Science: Rhetoric, Technology, and Natural Philosophy in Newtonian Britain, 1660-1750*. Cambridge: Cambridge University Press, 1992.
- Tavor Bannet, Eve. "'Secret history': or, Talebearing Inside and Outside the Secretorie." *Huntington Library Quarterly* 68, no. 1–2 (2005): 375– 96.
- Thomson, Ann. *Bodies of Thought: Science, Religion, and the Soul in the Early Enlightenment*. Oxford: Oxford University Press, 2008.

Vickers, Ilse. *Defoe and the New Sciences*. Cambridge: Cambridge University Press, 1996.

Waller, Richard. "The Life of Dr. Robert Hooke." In *The Posthumous Works of Robert Hooke*, edited by Richard Waller, i–xxviii. London: printed by Sam. Smith and Benj. Walford, 1705.

Wilson, Francis. "The Dark Side of Utopia: Misanthropy and the Chinese Prelude to Defoe's Lunar Journey." *Comparative Critical Studies* 4, no. 2 (2007): 193–207.