

Daniel Defoe's 1705 Fantasy about Chinese Mapmakers on the Moon

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Daniel Defoe is best known for writing *Robinson Crusoe* (1722), a fictional account of a castaway marooned on an island. An earlier book by Defoe, *The Consolidator or, Memoirs of Sundry Transactions from the World in the Moon* (1705), tells an even more fantastic tale. The main character of *The Consolidator*, recounting a supposed recent visit to China, claims to have learned there that the Moon is inhabited by people, the Lunarians, to whom the Earth appears as their Moon. The Lunarians are just like Earth people, but their civilization is more advanced. They have traveled between the Moon and the Earth over a long period of time and have shared their technological marvels with the Chinese. The narrator says that he took the opportunity, while in China, to visit the Moon, journeying in a feather-covered rocket ship called the *Consolidator*. There he met a Lunarian philosopher, who showed him many fascinating things. These included special magnifying glasses that enable the Lunarian people to view the Earth and to perceive the iniquities and absurdities of human life and governments.

In fact, *The Consolidator* is a satire and not at all intended to be taken at face value. It belongs to a literary tradition using life on the Moon as a device for pointing out earthly flaws, a type of European literature that dates back at least to the 16th century (Baines, pp. 1-5). Defoe's characterizations of the Lunarian civilization mock national and European politics, the follies of the times, and prominent figures, whom the knowledgeable 18th-century reader would have relished identifying. Furthermore, Defoe has included himself in *The Consolidator*. The marvelous glasses symbolize the penetrating insights of the all-seeing author whose clever pen illumines the murky depths of human nature with merciless clarity (Morton, p. 262).

There is yet another level at which *The Consolidator* can be read. Defoe was a voracious gatherer of information; this he wove into his fictional narratives, making them real enough to mislead the unwary reader into swallowing the fiction with the fact. For example, he gives an air of plausibility to the marvelous technology described in *The Consolidator* by having it come from the Moon by way of China, a land known to have been the source for technology new to the West, such as gunpowder and silk manufacture. Historians researching topics as varied as war, religion, women, the occult, and gardens have sifted through Defoe's publications in order to extract the information they contain about these subjects. Defoe's writings are so prolific and rich in detail

that they offer ample scope for similar research on other topics --- such as early thematic map making and use. This occurred to me, when I read *The Consolidator* for another purpose, and I noted that thematic maps are a recurring motif.

A lengthy section of *The Consolidator* describes a Lunarian project to map the political deviousness of Earth's nations onto a single map using the magnifying glasses. These glasses have the power, the narrator says, to render such normally invisible phenomena visible, but making the map is still a difficult task. A debate among Lunarian scientists about the best map projection to employ leads to the conclusion that no single map suffices to show the complexity of constantly shifting government policies. Instead, the decision is taken to make a series of maps, each showing a different topic. Even more marvelous, the narrator adds, is the power of the special glasses to demonstrate scientifically that the human behavior thus mapped is, in fact, rational and justifiable.

There is little or no mention of *The Consolidator* in the literature on the history of cartography, although Defoe's cartographic connections have been recognized. Dennis Reinhartz comes close in his recent book, *The Cartographer and the Literati - Herman Moll and his Intellectual Circle*, which explores the relationships of the mapmaker, Herman Moll, with members of London's literary circles and mentions that Moll provided the maps for a number of Defoe's books (Reinhartz, 1997). Christopher Parkes relates the geographical organization of the text of Defoe's *A Tour thro' the Whole Island of Great Britain (1724-1726)* to the rise of thematic cartography (Parkes, 1995). Several other historians point out the geographic/cartographic nature of some of Defoe's other works, but none of them refers to *The Consolidator* (Fishman, 1973; Reed, 1995; Schellenberg, 1995).

This paper will make up for this oversight by looking backward through Defoe's eyes at the cartography of his day. The narrator of *The Consolidator* says that he also tried out glasses of "Second Sight" while on the Moon but couldn't make much sense out of the future that he saw through them. This process should work better in reverse, because we already know quite a lot about the historical context from other sources. A necessary preparatory step is to understand the factors that shaped Defoe's ideas about maps.

Defoe's Background and Life

Defoe was born Daniel Foe in 1660, the first generation of his family born in London, because his father and uncle had left their father's farm in Northamptonshire to apprentice as tradesmen in the city. They were also Dissenters (Presbyterians), and the young Defoe would have witnessed persecution for religious beliefs (Backscheider, pp. 3-10). He attended (from 1674 to 1679) the renowned Academy for Dissenters run in Newington Green (in London) by Charles Morton (from 1662 to 1685). Morton had studied at Oxford University and entered the ministry but was forced by persecution to give up that calling (and later, in 1685, to leave England to become president of Harvard University). Morton's Academy for Dissenters broke with educational tradition by instilling freedom of inquiry and self-discipline, by teaching in English (subjects like history, geography, modern languages and physics), by advocating plain and direct written expression and,

especially, by teaching the study of science through experimentation. The experimental approach to science, originated by Francis Bacon (1521-1626), was being actively promoted by the Royal Society and its members (Backscheider, pp. 14-15; Vickers, pp. 1-51). The influence of Baconian science on Defoe is evident in his belief that the practical application of science --- the use of technology and manufacture to transform natural resources into useful goods for commerce --- results in harmonious social systems, not only operating within individual nations but also forming a world-encircling international network of trade (Vickers, pp. 52-98).

A clerical career was not Defoe's choice, and he became a wholesale merchant of wool hosiery in 1681, a trade that required him to travel and deal with suppliers all over England. In 1684 he married Mary Tuffley, the daughter of a prosperous cooper who brought him a dowry of £3,700. Defoe's Nonconformist views led him to join the Duke of Monmouth's abortive rebellion against James II in 1685, but he escaped without injury. Afterward Defoe became active in political pamphleteering, and he expanded his commercial interests by investing in ships, trading in goods like cloth, wine and spirits, and running a brickyard. At about this time he changed his surname from Foe to Defoe, the addition of the preface "de" presumably alluding to the family's supposed Norman origins. The birth of children added to his family responsibilities. As a result of unwise and unlucky investments, though, he went bankrupt in 1692 and was imprisoned for debt in Newgate prison. His wife backed him throughout his adversities, but the specter of failure haunted him for the rest of his life. Although he continued to speculate in various financial schemes, the great commercial success he hoped for eluded him (Backscheider, pp. 28-61).

He was more successful as a writer, but that, too, was a risky career. He ended up in the pillory in 1703 as a result of one controversial publication, *The Shortest-Way with Dissenters: Or, Proposals for the Establishment of the Church* (1702). Nevertheless, he persisted as a writer. His journal of current affairs, the *Review*, which he wrote singlehandedly from 1704 to 1713, was popular and served partly as a model for the *Spectator* and the *Tatler* (West, pp. 93, 167-8). Defoe's wide and varied interests, knowledge, opinions and imagination led him to write about many topics, but the promotion of trade was a continuing theme in his nonfiction works. Late in life he also wrote several important works of fiction --- *Robinson Crusoe* (1719) and *Moll Flanders* (1721) --- books regarded as early examples of the novel form.

Following his release from prison in 1703, Defoe also began working as a Secret Service agent for Robert Harley, Lord Oxford, who had arranged for his release from prison. Harley, who held several high political offices during their long association, used Defoe to gather political intelligence. While working for Harley, Defoe was based in northern England and in Scotland for long periods of time. Defoe clearly enjoyed subterfuge and prided himself on his ability to disguise his true purpose. Defoe, the spy, dealt in information that he gathered and skillfully assembled for Harley into an overall picture of political affiliation and popular opinion throughout the country (West, pp. 85, 96-103, 126-133).

Defoe died in 1731 while hiding out from a creditor. His wife survived him by only a year and a half. After her death his library was sold, and the books listed in the sale catalogue reflect his wide-ranging interests. They include about 60 books about the new science and about 150 books

concerning travel, geography and maps (Heidenreich, pp. xix-xxi; Vickers, pp. 177-179).

Defoe and Thematic Mapping As author of an atlas and of books that included maps, it is not surprising that Defoe had contact with map makers. Map publishing was an expanding field of activity in London in the late 17th and early 18th centuries. Defoe knew Herman Moll, originally from Bremen in Germany, who had established himself as a successful map maker in London. Moll provided the maps for several of Defoe's books. Most of Moll's maps, considered to be excellent in their day, show just what you would expect, locations of places and routes of travel. As Robert Hooke (1635-1703), Curator of Experiments at the Royal Society and City Surveyor of London after the Great Fire of 1666, once said, " New tracts, new Lands, new Seas are daily found out, and fresh descriptions of unknown Countreys still from both brought in; so that we are forced to alter our maps, and make anew the Geography of both again" (Reinhartz, p. 75). Accurate information to improve maps about distant places was harder to come by, and it has been shown that erroneous information in Moll's depiction of South America inspired one of Defoe's wilder commercial schemes (Fishman, p. 232).

A growing interest in the geographical distribution of natural and cultural phenomena contributed to the early development of thematic maps in England. As defined by Arthur H. Robinson in his book about early thematic mapping, "In contrast to the general map, the thematic map concentrates on showing the geographical occurrence and variation of a single phenomenon, or at most a very few" (p. 16). For example, Moll engraved two maps of the winds in 1699 to illustrate William Dampier's "Discourse of Trade-Winds" --- both derived from maps compiled a decade earlier by Edmond Halley (1656-1742) and published in the Philosophical Transactions of the Royal Society (Reinhartz, pp. 78-79; Robinson, pp. 69-71). Defoe was acquainted with Halley and would also have seen his maps of compass variation, the first one of the Atlantic Ocean having appeared in 1701 following a data-collecting voyage to the South Atlantic (Robinson, pp. 84-85). These maps show information collected by scientific observation, making visible information about forces of nature that are invisible but that are measurable by scientific instruments. Furthermore, the information is collected as individual observations, and it is only the map author who puts them together into the map and makes the spatial pattern of variation visible. These early examples are all physical phenomena from the natural world, because the scientific study of and collection of data about social phenomena lagged behind, although it, too, would eventually generate thematic maps (of topics like population, ethnicity, and crime) (Robinson, p. 109).

Thematic Mapping in The Consolidator

This is the historical setting for the remarkable vision of thematic mapping, as it might be, that Defoe shares with readers of *The Consolidator*. The narrator first asks the Lunarian Philosopher to show him a map of the Moon:

...I desir'd him to show me some Plan or Draft of this new World of his; upon which, he brought me out a pair of very beautiful Globes, and there I had an immediate Geographical Description of the Place.

Next the Lunarian Philosopher tells the narrator about a marvelous device for viewing the Earth:

...[Y]ou see nothing to what some of our Great Eyes see in some Parts of this World, nor do you see anything compar'd to what you may see with the help of some new invented Glasses, of which I may in time let you see the Experiment... I understood here was a strange sort of Glass that did not so much bring to the Eye, as I know not what wonderful Operation carried out the Eye to the Object...

First we were inform'd, by the help of these Glasses, strange things, which pass in our World for Non-Entities, is to be seen, and very Perceptible, for Example:

State Polity, in all its Meanders, Shifts, Turns, Tricks, and Contraries, are so exactly Delineated and Describ'd, That they are in hopes in time to draw a pair of globes out, to bring all those things to a certainty.

Not but what it made some Puzzle, even among these Clear-sighted Nations, to determine what Figure the Plans and Drafts of this undiscover'd World of Mysteries ought to be describ'd in; some were of Opinion it ought to be an Irregular Centagon, a Figure with an Hundred Cones or angles; since the Unaccountables of this State-Science, are hid in a Million undiscover'd Corners; ...never to be found out, but by this wonderful D---l---scope...

Some were of the Opinion, this Plan ought to be Circular, and in a Globular Form, since it was on all sides alike, full of dark spots, untrod Mazes, waking Mischiefs, and sleeping Mysteries; and being delineated like the Globes display'd, would discover all the Lines of Wickedness to the Eye at one view...

Others would have it Hyrogliphical as by a Hand in Hand, the Form representing the affinity between State Policy here, and State Policy in the Infernal Regions... At last it was determin'd, that neither of these schemes were capable of the vast Description; and that, therefore, the Drafts must be made single, tho' not ividing the governments yets dividing the Arts of Governing to proper distinct schemes, viz. 1. A particular Plan of Publick Faith; and here we had the Experiment immediately made; The Representation is qualified for the Meridian of any Country, as well in our World as theirs; and turning it to'ards our own world, there I saw plainly an Exchequer shut up, and 20,000 Mourning Families selling their Coaches, Horses, Whores, Equipages, &c. for Bread, the Government standing by laughing, and looking on: Hard by I saw the chamber of a great City shut up, and Forty thousand Orphans turn'd adrift in the World... So looking still upon that vast Map, by the help of these Magnifying-Glasses, I saw Huge Fleets hir'd for Transport-Service, but never paid; vast Taxes anticipated that were never collected... 2. Here we saw the State of the War among Nations; here was the French giving Sham-Shanks for Victories they never got, and some body else adressing and congratulating the sublime Glory of running away: Here was Te Deum for sham-victories by land; and there was thanksgiving for Ditto by Sea: Here we might see two Armies fight, both run away, and both come and thank God for nothing: Here we saw a Plan of a late War like that in Ireland... 3. The map of State Policy contains abundance of civil transactions, no where to be discover'd but in this wonderful Country, and by this prodigious

Invention... By the help of these Glasses strange insights are made, in to the vast mysterious dark World of State Policy; but that which is yet more strange, and requires vast Volumes to descend to the Particulars of, and huge diagrams, Spheres, charts, and a thousand nice things to display is, That in this vast Intelligent discovery it is not only made plain, that those things are so, but all the vast construction is made Rational, reconciled to Practice, and brought down to Demonstration. ... Tis easy to be prov'd honest and faithful to Victual the French Fleet out of English Stores, and let our Navy want them; a long Sight, or a large Lunar Perspective, will make all these things not only plain in fact, but Rational and Justifiable to all the World (Defoe, *The Consolidator*, pp. 69-83).

A close reading of these passages provides several insights into Defoe's understanding of cartography. First of all, he uses the term, "pair of globes", to mean a double-hemisphere world map (and not, as one might assume, a pair of terrestrial and celestial three-dimensional globes). The evidence is that he says they enable the entire world to be seen all at once. Only a double-hemisphere world map would permit an instantaneous total view, because three-dimensional globes would have to be turned around. Defoe clearly expresses his appreciation of the power of a map to give the viewer a quick all-encompassing impression.

Defoe's awareness of the use of optical devices to extend human vision, both through telescopes and microscopes, is also evident here. He would have seen drawings of the Moon made with telescopes, as well as the depictions of miniature creatures and objects viewed through microscopes published by Robert Hooke. When studying science at Morton's Academy, Defoe would have used both types of optical devices himself. He conveys the physical sensation of actually looking through a telescope or a microscope when he describes how the marvelous glasses seem to make your eye go out to the object.

The maps he describes are not static maps of different subjects (Publick Faith, the State of War, and State Policy); they are living maps that change as they are viewed. I find his descriptions of these maps to be strongly reminiscent of the experience of looking through a microscope at a drop of pond water and observing a teeming miniature world. Elsewhere, writing in the preface to a later work, his narrative of *A Tour thro' the Whole Island of Great Britain* (1724-1726) as quoted by Schellenberg (p. 296), Defoe talks about the constantly changing landscape:

No Description of Great Britain can be made what we call a finished Account, as no Cloaths can be made to fit a growing child; no Picture carry the Likeness of a living Face; the Size of one, and the countenance of the other always altering with Time... Even while the Sheets are in the Press, new Beauties appear in several Places, and almost to every Part we are oblig'd to add Appendixes, and Supplemental Accounts of fine Houses, new Undertakings, buildings, etc.

Schellenberg goes on to point out that the geographical pattern of trade movement along roads and canals that Defoe describes in *A Tour thro' the Whole Island of Great Britain* is a kinetic one (p. 300). The movement of trade resembles the circulation of blood through the vessels within the human body that was then being studied in medical science and that would inspire Christopher Packe's "New Philosophico-Chorographical Chart of East Kent" in 1743 (Robinson, p. 53).

Another interesting feature of *The Consolidator* is the debate whether all of the information about the Earth can be shown on one map. The merits of different projections are discussed. The decision is reached that the information is too complex to be shown on a single map. The result is separate maps for Publick Faith, the State of War and State Policy. Defoe understands that limiting the variety of information shown on a single map can simplify both compilation and the perceptual challenge of thematic map reading. Other works by Defoe indicate that he conceived of other topics as thematic maps. The circulation pattern of trade described in Defoe's *A Tour thro' the Whole Island of Great Britain* has already been mentioned. Defoe's historical description of the origins and spread of writing in *An Essay Upon Literature; or, an Enquiry into the Antiquity and Origin of Letters* (1726) conjures up the geographical distribution of languages and alphabets (Reed, p. 31). Not long thereafter, in 1741, Gottfried Hensel would publish (in Germany) a book about the languages of the world illustrated with just such maps (Robinson, pp. 54-55).

Finally, there is the role of the cartographer (symbolized in *The Consolidator* by the marvelous glasses). Terming this device the "D---l---scope" and saying that it could penetrate to the "Infernal Regions", Defoe invites the reader to fill in the blanks. It could perhaps, I speculate, be read as *Deviloscope* or *Defoeloscope*, or both, taking into account the facial resemblance suggested by his prominent hooked nose and sharp chin. However identified, it is through the cartographers' expert powers of observation and ability to process data rationally and logically that the true pattern of the information displayed on the map can be seen. Writing two decades later about the experience of systematically gathering information for *A Tour thro' the Whole Island of Great Britain* (as quoted by Vickers, p. 58), Defoe says that he has become:

For his own country ... a walking map; he has travelled thro' the whole island, and thro' most parts of it several times over; he has made some of the most criticall remarks of severall parts of it, so that he could not be charg'd, when he went abroad, to have known much of other countryes and nothing of his own as is the just scandal of most English travellers; and yet this man forsooth is no schollar.

The last comment that he is "no schollar" indicates Defoe's adherence to the principles of Baconian science. His knowledge been gained from thorough and systematic direct observation of the country of England. He has created a thematic word map of England using the methods of the new science. Even if he never actually drew a map himself, Defoe was a man who saw with the eyes of a cartographer.

Defoe as the Prophet of Modern Cartography

Defoe's imaginings about Lunarian maps of the Earth are prophetic, because they are rooted in the early stirrings of modern science and technology that led subsequently to the development of thematic cartography, aerial photography, remote sensing, GIS and animated cartography. Defoe was inspired by the scientists of the Royal Society who were using scientific instruments to extend human vision and enable the study of things invisible to the naked eye. He knew several

mapmakers whose thematic maps did portray invisible natural phenomena. Such strands of realism, skillfully woven in to add plausibility to Defoe's fanciful narrative, offer us new insights into the origins of modern cartography. It has taken three centuries for science and technology to turn his prophetic vision of what cartography could be into reality.

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