Knowledge and the Public Interest, 1575–1725. Vera Keller. New York: Cambridge University Press, 2015. x+350 pp. \$99.99.

In this intriguing and impressive book, Vera Keller presents a history of the *desiderata* (things desired) that appeared in early modern Europe. These wish lists responded to public interest by pursuing projects likely to advance the common good. Among the favourite desired things, recurring across two centuries, were perpetual lamps, flexible glass, diving bells, the philosopher's stone, the Alkahest (or universal solvent), and perpetual motion. During the same period, some of these were cited as impossibilities by other list makers, thereby contrasting the promises of charlatans with more considered inventories of things objectively needed by society or lacking in a branch of knowledge. At the start of the 1600s, *desiderata* mainly comprised lost inventions and natural processes: for example, Guido Pancirolli's *Two Books of Things Lost and Things Found* (1599-1602) encouraged the idea that lost ancient knowledge could be restored by the moderns (see his sixty-five lost things on 48-49) Later, *desiderata* set out the direction of future, increasingly specialized, research that would discover new knowledge.

The key feature of *desiderata* was their identification of needs that could only be satisfied by collaboration among many people over time. One irony is that some of these lists were proposed by *individuals* — in some cases by very young men, such as Gottfried Wilhelm Leibniz and the medical student, Johann Hermann Fürstenau (1688-1756), both about twenty years old when they offered elaborate wish lists; or by isolated ones, such as

Georg Hieronymus Welsch (1624-1677), the Augsburg physician who left Padua without a medical degree. Their lists, like the earlier ones, radically departed from the traditional notion of knowledge as an ordered field of coherent disciplines, often displayed in Ramist charts, to support inquiries informed by disconnected projects and obsessions (4, 18-19). Surprisingly, such lists were not regarded as useless doodling, even when produced by persons yet to make a mark on scholarship or science. Keller argues that early *desiderata* resonated with news-hungry diplomatic *relazioni*, and with discussions of the body politic and the means of promoting shared social interests – the concerns of the discourse on ‘reason of state’. In his *Della ragion di Stato* (1589), Giovanni Botero (1544-1617) affirmed that the growth of knowledge and inventions fostered wealth and happiness (35-42). The German émigré, Samuel Hartlib, provides a bridge from the Continental context to the English one, and Keller shows how disputes over private and public interest jostled with notions of scholarly disinterest in the early Royal Society of London (214-224; 235-245).

Francis Bacon appears as a crucial figure in this story. His list of fifty items, linked to ‘deficiencies’ noted in *De Augmentis* (1626), is titled ‘The New World of Sciences, or Desiderata’, thereby echoing the nexus between knowledge and empire that he pitched to King James I. Keller says that by envisaging the completion of a survey delineating ‘the perfect state of all knowledge’, Bacon implied that once these *desiderata* were achieved ‘research would end’ (21). However, within his list there are calls for methods of discovery, such as the *novum organum* itself (noted on 128),

inductive histories, and ‘learned experience’ meant to aid ongoing inquiries and likely to generate more *desiderata*. This is what happened as Bacon’s admirers not only aligned their work with his list, but sketched multiple goals, undermining the notion of a shared agenda stressed by earlier authors. Keller’s work invites questions about the changing relationships among various techniques of information and knowledge management. Bacon’s list inspired Leibniz’s plans for legal education and Fürstenau’s hopes for the new subject of ‘*oeconomica*’ (305). Yet within the empirical sciences, different kinds of list appeared, such as the ‘Directions’ for travellers on land and sea framed by the Royal Society, and numbered ‘Queries’ posing specific questions to limit and guide observations and experiments. Indeed, Bacon’s *Sylva sylvarum* (1627), with its 1000 items arranged in ten ‘centuries’, acted in this way. Do Bacon’s own suspiciously neat fifty *desiderata* (a half century) register the appeal of this format?

In a nice touch, Keller lists twelve ‘Desiderata for perfecting this book’ (336). I would add another *desideratum* – a bibliography. It is regrettable that a major publisher has seen fit to dispense with one, relying solely on citations in footnotes. In the end, this is a small disappointment because this book communicates both scholarship and intellectual excitement.

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