INTRODUCTION TO JOHN EVELYN'S *FUMIFUGIUM*

JOHN BELLAMY FOSTER
University of Oregon

John Evelyn (1620-1706) is perhaps best known today as one of the greatest diarists of 17th-century England. He is also remembered, however, as one of the figures behind the formation of the Royal Society of London in 1662 and the greatest proponent of conservation in his age.

In his *Sylva, Or a Discourse of Forest-Trees and the Propagation of Timber in His Majesties Dominions* (1664), the first official publication of the Royal Society (a work that went through four editions in Evelyn's lifetime), he complained of the "prodigious havoc" wreaked on the English forests by the demands of shipping, glassworks, iron furnaces, and the like. He observed,

> This devaluation is now become so *Epidemical*, that unless some favourable *expedient* offer it self, and a way be seriously, and speedily resolv'd upon, for the future repair of this important *defect*, one of the most glorious, and considerable *Bulwarks* of this Nation, will, within a short time be totally wanting to it. (Evelyn, 1664, pp. 1-2)

Evelyn recommended that the Elizabethan Acts prohibiting the cutting of any tree "one foot square" or more within 22 miles of London be enforced and that seedlings be planted on the large estates.

Even more important, Evelyn (1661/1999) authored the great pamphlet, *Fumifugium: Or the Inconvenience of the Aer and Smoake of London Dissipated* presented to Charles II. Decrying the general pollution in London, Evelyn went on to consider the issue of air pollution which he attributed not to the culinary fires of the population but to

> Issues belonging only to *Brewers*, *Diers*, *Lime-burners*, *Salt*, and *Sope-boylers*, and some other private Trades . . . whilst these are belching it forth their sooty jaws, the City of London resembles the fact rather of Mount Ætna, the Court of Vulcan, Stromboli, or the Suburbs of Hell. . . . It is this [horrid smoake] which scatters and strews about those black and smutty Atomes upon all things where it comes. (p. 188)

According to Evelyn, the consequences of this were to be seen in the fact that "one half of them who perish in London, dye of *Phthisical* and *Pulmonic distempers*; that the inhabitants are never free from Coughs" (Evelyn, 1661/1999, p. 192). John Graunt's bills of mortality, to which Evelyn pointed, showed that beyond the deaths caused by the plague, the mortality rate in London was 1 in 32 as opposed to the 1 in 50 rate in the country.

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Evelyn's recommendations included reforesting large tracts outside of London so that wood would be readily available, and the dependence on coal would decline. He also advocated removing coal-burning industry (the brewers, dyers, soap and salt boilers, etc.) from the city. If this could not be accomplished, he suggested increasing the height of chimneys and the design of new chimney shapes in order to send the smoke higher. Finally, Evelyn (1661/1999) advocated planting within the city the "most fragrant and odiferous flowers" to give London the finest scent in all Europe (Evelyn, 1661; Merchant, 1980, p. 241).

The brilliance of Evelyn's 17th-century contribution to conservation raises important historical and theoretical questions. In Carolyn Merchant's important work *The Death of Nature* (1980), much of the motivation for modern ecological devastation is traced to the scientific revolution and specifically to the rise of Baconian science, with its mechanistic view of the world and its emphasis on the domination of nature (which also meant, within its patriarchal philosophy, the increased domination of women by men). Yet, John Evelyn, an important figure in the creation of the Royal Society and a Fellow of the Society, a close associate of Robert Boyle and Thomas Hobbes, and certainly one of the great Baconian improvers in his time, does not fit well within this picture. This suggests that the rise of Baconianism, which can generally be equated with the English scientific revolution, is a much more complex phenomenon, from an ecological perspective, than is often supposed. Merchant (1980) attempts to deal with the contradiction that this poses for her own analysis by characterizing Evelyn as the leading representative of a "new managerial approach to conservation" in his time, prefiguring the conservation movement of the United States in the mid-19th century (p. 238). But, the mere fact that Evelyn's approach was managerial in relation to nature and thus oriented to sustainable development—which is contrasted in Merchant's analysis to a more organicist or vitalistic approach—should not be seen as taking away from the importance of his contribution. The very fact that he raised the issue in such a fundamental way in the mid-17th century, prefiguring an ecological stance that was not to become a central political force until the mid- to late-19th century (if then), only serves to underscore the radical, far-reaching character of his analysis.

Indeed, all of this points to that fact that the Baconian tradition, with its emphasis on improvement, had both ecological and antiecological sides to it—strengths as well as weaknesses from an environmental perspective. Its strengths derived from its materialism; its weaknesses from the tendency to convert this materialism into mechanism (for which Boyle provided the model) or to reach back to teleological views through the development of natural theology (in the work of Boyle and John Ray).

Evelyn himself is best understood if one recognizes that he was one of the thinkers who contributed to the revival of ancient, Epicurean materialism—an important influence on the scientific revolution of the 17th century and on Enlightenment thought in general—by providing the first translation (in part) of Lucretius's great poem, *On the Nature of Things* (Lucretius, 1951; Welcher, 1972, pp. 19-23). Rather than approaching questions of nature teleologically, in his scientific works Evelyn went straight to the material conditions and sought materialist answers; hence, there exists *Sylva* and the *Fumifugium*. On the title page of *Fumifugium*, Evelyn quoted (in Latin) from Lucretius: "How easily the drowsy fume and scent of charcoal passes into the brain." Edmund Waller, poet and friend of Hobbes and Evelyn, wrote a poem to Evelyn that declared,

Lucretius with a stork-like fate
Born and translated in a State
Comes to proclaim in English verse
No Monarch rules the Universe. (quoted in Kargon, 1966, p. 92)

Like Karl Marx (Marx & Engels, 1975) many years later, Evelyn thus began his intellectual life as a fervent admirer of Epicures (via Lucretius). As a devout Anglican, Evelyn, like other scientific thinkers of his time (not least of all Issac Newton), was frequently in conflict— especially in the later years of his long life—over the contradictions between his practical, scientific materialism, and his ultimate belief in God (Bowle, 1981, pp. 3-4). Yet, there can be little doubt that his early pioneering contributions to conservation were associated with the inroads (however tortuous) that materialism had made into his thought and into the Baconian tradition in general. As the most notable analyst of deforestation and air pollution in the 17th century, Evelyn stands as a salutary reminder of the fact that the scientific revolution of the 17th century was associated not only with a new conception of the domination of nature but also with a new materialist understanding of nature—one in which human beings were not simply the center of God's universe and could not simply dominate nature at whim, but rather were compelled to develop a sustainable relation with the natural world.

The following passages from the *Fumifugium* include almost all of Part 1 of that work, which constitutes more than half of the entire pamphlet. This includes almost the whole of Evelyn's description of conditions in London, while excluding his prefaces and his various proposals for reform in Parts 2 and 3. Although Evelyn's work was greeted with enthusiasm by Charles II, no substantial reforms were in fact enacted, and the problem was to linger for centuries afterwards— even persisting in some ways up to the present day. What follows is the original text of Part 1 (slightly abridged) of the 1661 document, retaining the original spelling as reprinted in *The Smoake of London* (1969). (There are a few irregularities in the text as previously reprinted that have been preserved in the following.)

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