Patronage Politics in the Rise of an Imperial Human Ecology

By Lloyd Ackert

Peder Anker, *Imperial Ecology: Environmental Order in the British Empire, 1895–1945.* Cambridge, Mass.: Harvard University Press, 2001. Pp. 346. US$59.95 HB.

In *Imperial Ecology*, Peder Anker presents a case for the emerging science of ecology as a key framework for the organisation of knowledge in almost all disciplines throughout the first half of the twentieth century. As the book's title might suggest, the far-reaching influence and fashionability of ecology is explained by what he identifies as a "correlation between nature's and society's economy", and "an ecological understanding of imperial economy" (p. 1).

Basing his case on a study of several ecologists in Britain and South Africa who were central to the development of human ecology, Anker focuses on the conceptual evolution of ecology, adopting a primarily social and political perspective. Anker portrays the ecological method as growing from botanical research on grasses and sand dunes at the turn of the twentieth century, eventually gaining a privileged position in debates on the organisation of knowledge and in the framing of environmental and social issues. Central to this rise was the way that ecologists located "patrons in the economic administration of the environmental and social order in the British Empire" (p. 2).

Anker begins his analysis with Arthur Tansley's reading of Eugenius Warming's 1895 work and ends with the formation of the United Nations in 1945. Within this chronological frame, Anker reconstructs the organisation and interactions of two patronage systems in the British Empire: the smaller one in South Africa centred around the political icon Jan Christian Smuts (Chapter 2), and the larger a set of British Colonial agencies located in England and represented by Tansley (Chapters 1 and

3). Distinguishing this North/South axis from the East/West axis (perhaps referring to the Oxford and Chicago schools of ecology), Anker describes a dramatic internecine contest for the control of the Empire's material and human resources (Chapter 4). He develops a rich discussion of the platforms from which the debates that made up this contest were launched and of the role played by technologies (aerial surveying), social issues (human rights, racism), and scientific concepts in those debates. These struggles concluded with development of two separate approaches to human ecology (Chapters 5 and 6).

Anker's claim that "botanists found their most important sources of inspiration for the expansion of ecology" in psychology (p. 3) is unconvincing. Attributing the formation of Tansley's mechanistic view of biology and ecology (and his ecosystem concept) to his assimilation of the idea of energy equilibrium from Freudian clinical psychology seems somewhat speculative, to say the least. It is unlikely that a botanist trained during the last quarter of the nineteenth century could have avoided encountering the energetics that was an integral part of plant, animal, and human physiology of that period. Ideas of the conservation of energy abounded at the turn of the century and migrated widely throughout society (see for instance Anson Rabinbach's *The Human Motor*, Berkeley, 1990). It is probable that upon Tansley's turning to Freud's psychology, the language of energetics he found there both reinforced his botanical training and allowed him to synthesise these concepts in his new systems approach to ecology. However, this criticism does not seriously weaken Anker's broader argument. It is clear from his story that psychology did in part inspire Tansley and Smuts to adopt holistic *Weltanschauungen*. A deeper discussion of Tansley's early botanical research would have assisted the reader in understanding the gradual shifts in Tansley's work from a natural history-oriented botany to an energetics-based ecology, and it would have supported Anker's broader theme, helping to explain the expansion of ecology from botany to zoology and forestry, then to human studies.

Anker accomplishes an especially sensitive reading of the evolution of Smuts's 'holism' (a term that Smuts coined). Smuts derived this idea in part as a result of his earlier study of 'a grand harmony of nature', in which he examined the evolution of Goethe's and Walt Whitman's personality, and a reading of Albert Einstein's theory of relativity (p. 70). Anker makes an insightful analysis of Smuts's general concept of holism, in which "[e]very organism from the lowest microorganism to the highest mind represented a whole, and all these entities were connected into greater wholes, which in turn constituted the greatest whole" (p. 71). Because life was organised along a continuum from inorganic matter to

the highest ideals of the spiritual world Smuts was able to "differentiate between high and low beings on the great chain of being" (p. 71). Because this allowed Smuts to segment nature freely into a hierarchy of wholes (i.e. individual organisms, species, or races), Anker relates, the apparent contradiction between Smuts' vigorous defense of human rights and his violent "oppression of black South Africans, labour unions, and political revolutionaries" (p. 41) is partly resolved.

Anker has presented an intriguing argument for the rise of ecology within the imperial regime of the British Empire. Although he neglects similar debates occurring in other realms (the Soviet Union for one), he has admirably engaged a complex and previously untold history.

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Biology Goes to Washington

By Pnina Abir-Am

Toby A. Appel, *Shaping Biology: The National Science Foundation and American Biological Research, 1945–1975.* Baltimore: Johns Hopkins University Press, 2000. Pp. xii + 393. US$42.50 HB.

This long-awaited book fills a major gap in the history of science policy for biology, while telling the fascinating story of the National Science Foundation's (NSF) funding strategies during the third quarter of this century. In that period, known retrospectively as the 'golden age' of governmental funding for basic science, new policy initiatives stemming from the dramatic role of science in the Second World War intersected with revolutionary developments, such as the rise