The Scientist as Activist: Biology and the Nature Protection Movement, 1900–1950

INTRODUCTION

The relation of the environmental movement with science, it has often been indicated, is highly complex. On the one hand, many environmentalists have shown a clear distrust of mechanistic science and modern technology, which have been blamed for being instrumental in the (over)exploitation of the earth. Yet, at the same time, the role of science and technology in the growth of public environmental awareness cannot be ignored, and several environmentalists have explicitly presented science as an ally in responding to ecological problems.¹ Scientific ecology often served to provide an agenda for political debate, and has regularly played a crucial role in law making.² In other cases, life scientists actually took up the role of activists to influence the decision-making process from the outside.³

To a certain degree, advocacy has always been part of the scientific enterprise as a whole.⁴ Yet, the relation between science and political action is almost by definition an intricate one. On the one hand it is widely believed (certainly by scientists) that political decisions should be informed by scientific knowledge, and hence, scientists should be involved to some extent in the decision-making process. On the other hand, the legitimacy of science may suffer from its connection with politics, as it is perceived as having lost the privilege of its neutral and objective position. As a result, the professional credibility of scientific

1. For an overview of this ambiguous relation (with further bibliography): Peter Bowler and Iwan Rhys Morus, *Making Modern Science: A Historical Survey* (Chicago and London: University of Chicago Press, 2005), 213–236.
2. Fred P. Bosselman and A. Dan Tarlock, 'The Influence of Ecological Science on American Law: An Introduction', *Chicago-Kent Law Review*, 69 (1994): 847–873; Stephen Bocking, *Nature's Experts: Science, Politics, and the Environment* (Rutgers University Press, 2004).
3. Mark V. Barrow, 'Naturalists as Conservationists: American Scientists, Social Responsibility, and Political Activism before the Bomb', in E. Allen Garland and Roy M. MacLeod (eds.), *Science, History and Social Activism: A Tribute to Everett Mendelsohn* (Dordrecht, Boston and London: Kluwer, 2001), 339.
4. For other examples in the life sciences, see (on medical expertise, genetic toxicology and human genetics): Lily M. Hoffman, *The Politics of Knowledge: Activist Movements in Medicine and Planning* (Albany: State University of New York Press, 1989); Scott Frickel, *Chemical Consequences: Environmental Mutagens, Scientist Activism and the Rise of Genetic Toxicology* (New Brunswick: Rutgers University Press, 2004); Melinda Gormley, 'Scientific Discrimination and the Activist Scientist: L.C. Dunn and the Professionalization of Genetics and Human Genetics in the United States', *Journal of the History of Biology* (2009): 33–72. In a somewhat more general sense Philip Pauly has indicated how American biologists in the early twentieth century took up the role of 'scientific sages' or even biological 'evangelists'. Philip Pauly, *Biologists and the Promise of American Life: From Meriwether Lewis to Alfred Kinsey* (Princeton: Princeton University Press, 2002), 195.

activists may be harmed by their political action. Scientific activists may also be reproached for being guilty of what is generally called the naturalistic fallacy: deducing an 'ought' from an 'is'.⁵

The tension between science and activism is the subject of this special section. We will study this tension by looking at how scientific ecologists and their intellectual precursors engaged in the protection of 'natural' landscapes. This will be discussed from three different angles, focusing respectively on the roles assumed by scientists in activist movements, the cultural environment from which this activism sprang, and the interplay between the scientists' work as advocates and the development of their discipline. We do not regard science and politics as a priori antithetical and stable fields of action, but we see these fields as formative agents in the shaping of the identity of the scientists involved. If activism in some cases can be seen as problematic for the ethos of science, in other cases it will emerge as an essential part of its social status. To what degree activism became integrated in the scientific persona of the ecologist will be one of the key questions the papers included here will try to tackle.⁶

To approach these various issues we concentrate on the first half of the twentieth century. Although environmental activism originated in nineteenth-century circles of philanthropists and nature-lovers, it has been studied most with respect to the period after World War II when it grew into a large-scale social phenomenon.⁷ Just like the environmental movement, scientific ecology was also in its infancy in the pre-1940 period.⁸ The growing interest in the relations that living organisms maintain with each other and the environment they live in (a common present-day definition of ecology) had not yet crystallised into a discipline internationally. To be sure, leading biologists took up the subject, but

5. We use the term 'naturalistic fallacy' broadly here as denoting any transfer from the descriptive to the normative field. For the late-modern moral context in which the (broadly defined) naturalistic fallacy became important see for example: Steven Shapin, *The Scientific Life: A Moral History of a Late Modern Vocation* (Chicago and London: Chicago University Press, 2008), 9–13.
6. On the 'scientific persona' see Lorraine Daston and H. Otto Sibum eds. *Scientific Personae*, a special issue of *Science in Context*, 16 (2003).
7. The literature on this topic is virtually endless. Helpful overviews include: John McCormick, *Reclaiming Paradise: The Global Environmental Movement* (London: Belhaven, 1989); Adam Rome, *The Bulldozer and the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (New York: Cambridge University Press, 2001); Michael Bess, *The Light-Green Society: Ecology and Technical Modernity in France, 1960–2000* (Chicago and London: University of Chicago Press, 2003); William T. Markham, *Environmental Organizations in Germany: Hardy Survivors in the Twentieth Century and Beyond* (London: Berghahn, 2008).
8. Historians have addressed the prehistory of both American and European ecology in some detail. Good overviews are amongst others: Pascal Acot (ed.) *The European Origins of Scientific Ecology* (Paris: Gordon and Breach, 1998, 2 vols); Peder Anker, *Imperial Ecology: Environmental Order in the British Empire, 1900–1945* (Cambridge, MA: Harvard University Press, 2001); Sharon Kingsland, *The Evolution of American Ecology, 1890–2000* (Baltimore: Johns Hopkins University Press, 2005).

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their enterprise was polymorphous. In French-speaking countries the project had some success under the name of 'éthologie', in Germany it was often called 'Biologie im engeren Sinne', whereas in the United Kingdom some preferred the term 'bionomy'. In addition, other scientists dealt with ecological themes as part of their work in natural history, limnology, marine biology, forestry or biogeography.⁹ The 'ecologists' discussed in the papers of this issue thus share common interests rather than a disciplinary identity. Furthermore, within this somewhat heterogeneous group there did not exist a clear-cut consensus on the role of science in environmental debates. Some professional life scientists engaged in the nature protection movement, but others had no connection with it at all (or even actively opposed it). Some groups of nature protectors and environmentalists developed a scientific discourse, while others explicitly excluded science from their writing. Where science and the nature protection movement actually met was, in other words, a topic of continuing discussion – a discussion in which scientists played a crucial role themselves.

The papers in this section all deal with particular cases within a localised national context. This enables us to follow the career path of scientists and to picture the concrete political issues at hand. At the same time, we are aware that the international context and its impact on scientific ecology is not taken into account. However, the rise of international organisations that nurtured a cross-border interest in environmental affairs such as the United Nations and the European Community (whose growth stimulated the accumulation of expertise on the topic) were mostly a matter of the second half of the twentieth century.¹⁰ International projects that aimed at coordinating ecological research across borders, with the International Biological Program as its clearest example, materialised even later.¹¹

Our focus is exclusively on European countries. This has been a deliberate choice. We are rather well-informed about the contributions of some major American naturalist activists such as John Muir and Aldo Leopold, but their European counterparts have remained understudied in comparison.¹² In Europe, the American national park movement of the 1870s was clearly a source of

9. On the matter of terminology: Raf De Bont, 'Organisms in their Milieu: Alfred Giard, his Pupils and Early Ethology, 1870–1930', *Isis*, 101 (2010): 7–8.

10. See for example Martin Holdgate, *The Green Web: A Union for World Conservation* (London: Earthscan, 1999); Janet R. Hunter and Zachary A. Smith, *Protecting our Environment: Lessons from the European Union* (New York: State University of New York Press, 2006).

11. On the International Biological Program: Joel B. Hagen, *An Entangled Bank: The Origins of Ecosystem Ecology* (New Brunswick: Rutgers University Press, 1992), 164–182.

12. Curt Maine, *Aldo Leopold: His Life and Work* (Madison: University of Wisconsin Press, 1988); Richard West Sellars, *Preserving Nature in the National Parks: A History* (Newhaven: Yale University Press, 1999); James A. Pritchard, *Preserving Yellowstone's Natural Conditions: Science and the Perception of Nature* (Lincoln: University of Nebraska Press, 1999); Donald Worster, *A Passion for Nature: The Life of John Muir* (Oxford: Oxford University Press, 2008); Mark V. Barrow, *Nature's Ghosts: Confronting Extinction*

inspiration, but scientific interest in the protection of landscapes developed later than in the United States and in a very different social and environmental context.¹³ Furthermore, within Europe, the dynamics of scientific activism differed greatly from country to country. These varying cultures in which activism and science were combined deserve a proper look.

One of the central questions that the tension between science and activism entails concerns the role scientists play in activist organisations. To what extent can and do they actually become leaders in social group action that involves people from outside their realm of expertise? In his article in this section, Henny van der Windt coins the term ‘movement scientists’ to refer to scientifically trained people who ‘give an identity to social movements by formulating central values and concepts, starting new practices and shaping new organisational structures’. In studying the case of the early twentieth-century Netherlands, Van der Windt indicates the importance of these movement scientists in elevating the status of the Dutch conservation movement, and in making the foundation and management of nature reserves a governmental issue. At the same time, he shows how an ethos of neutrality hindered a direct participation by scientific institutions in the movement, and even led to a certain intellectual restraint among the movement scientists themselves.

Obviously, scientists were not the only potential spokespersons of the nature protection movement. It is therefore a crucial question how ecologists positioned themselves in relation to the other actors in the environmental debate, and to what extent their arguments, concepts and practices differed from these other participants. Other obvious contributors to the early nature protection movement were, to use the terminology of Charles Percy Snow, ‘literary intellectuals’. In their article in this section, Raf De Bont and Rajesh Heynickx explore the circles of literary intellectuals who engaged in the defence of unspoiled nature in Belgium, and compare their discourses with those of life scientists. For this type of comparison, Belgium offers a good case study, since, unlike other countries, it witnessed the rise of largely separate nature conservation organisations for the two groups. De Bont and Heynickx show how both groups, despite their organisational and intellectual differences, shared several crucial topoi and deployed similar rhetorical strategies when ascribing value to nature. In this way, they indicate that, at least in Belgium, scientist activists actively borrowed from (and contributed to) the cultural critique that was prevalent in the wider society.

from the Age of Jefferson to the Age of Ecology (Chicago and London: The University of Chicago Press: 2009).

13. Tellingly the first European national parks were only set up in the twentieth century. Sweden set apart nine areas as national parks in 1909, followed by Switzerland (the Engadine valley in 1918) and Spain (Covadonga, 1918). The more densely populated parts of Europe only followed later – if at all. See Karen Jones and John Wills, *The Invention of the Park: Recreational Landscapes from the Garden of Eden to Disney's Magic Kingdom* (Cambridge: Polity Press, 2005), 78.

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The tension between activism and science is, of course, not only a matter of roles and rhetoric, but also one of disciplines and institutions. The ways in which the tension is resolved, after all, strongly influences how a discipline institutionalises and which subject matters it considers appropriate. In his article devoted to the United Kingdom of the 1940s, Stephen Bocking shows that an association with nature conservation proved crucial in the discipline-building of post-war British ecology. He sketches the particular context in which ecologists could professionalise not despite, but precisely *because* they acted as advocates. It was a context of a corporatist culture, of planning enthusiasm, and of a sudden environmental transformation of the British countryside. Because of this framework, British ecologists would focus their discipline on the study of domestic rural areas, rather than colonial nature as they had previously done. The engagement of scientists in a particular kind of activism thus concerned not only the use of certain knowledge, but also the formation of research programmes and the formulation of the very questions that were being asked.

Taken together these papers highlight how the interaction between scientific ecology and nature protection was ambiguous and geographically diverse. The engagement of ecologists and proto-ecologists in the nature protection movement varied greatly in place and time, and so did the organisational form their advocacy took. Whereas in early twentieth-century Belgium life scientists gathered in small, informal (but professionally homogeneous) ad hoc action groups, the Netherlands witnessed the rise of socially mixed, well-organised large-scale organisations in which ecologists had to negotiate their place. Rather early (and unlike their Belgian colleagues) Dutch ecologists were also hired by the national government as managers of the natural world. In this role they would be outperformed, however, by their British counterparts who rose to prominence in the 1940s. The latter did not get to their leading managerial position through large action groups, but rather via elitist committees fostered by corporatist political customs. These national differences left traces in the rhetorical strategies and self-presentation of the respective scientists, the relative prominence of advocacy in their writing, and their relations with non-scientist activists.

Despite the differences indicated, there are also some striking similarities between the three countries researched here. In the three cases, (proto)ecologists encapsulated advocacy in their role as expert – thus concealing the tension between neutrality and activism. Many of them felt they were particularly well-placed to campaign for the protection of remarkable nature, because, in the words of the Dutch entomologist Johannes Oudemans, they were ‘able to judge’ what was remarkable.¹⁴ Expertise thus came with a moral duty. The scientific persona of the ecologist involved speaking out for nature, because nature was the valuable object of the ecologist’s expertise. This does not mean that the arguments ecologists used for protecting species, landscapes and habitats were always scientifically inspired. Such arguments were important, but they coalesced

14. The context of the quote is discussed in van der Windt’s paper in this issue.

with aesthetical, ethical and historical ones. As such, early and mid-twentieth century ecologists explicitly denied that their science was cold and utilitarian, and they actively connected their work to values of national identity, aesthetical harmony and humanist ethics.

Of course, the essays in this section map only part of the European landscape, and it is to be expected that other geographical and chronological cases will show other configurations. We hope these essays will stimulate further research on this theme, and that they provide an incentive to think about issues that go beyond the stories of particular ecologists engaged in the protection of particular natural sites. Ecology might be a field in which the tensions between claims of neutrality and social commitment are particularly evident, but these tensions are certainly not limited to this discipline alone. For this reason, the study of scientific ecologists engaged in nature protection provides us with an interesting inroad to better understand the often ambiguous relations between contemporary social movements and the wider scientific community.

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