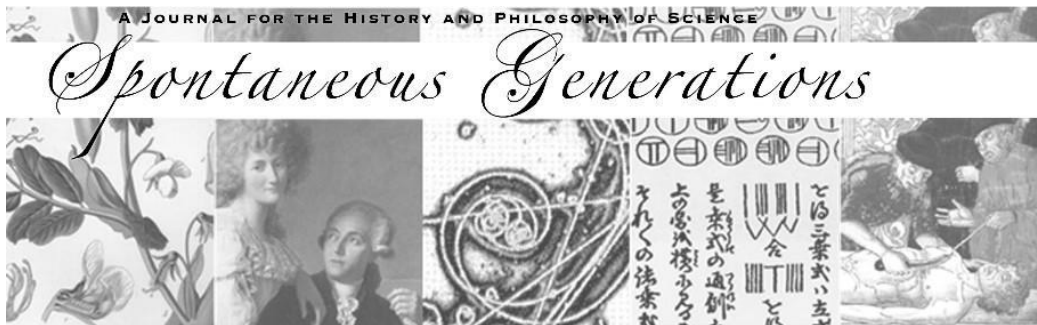




Review of *Environmental Expertise. Connecting Science, Policy, and Society* by Esther Turnhout, Willemijn Tuinstra, and Willem Halffmam. Cambridge: Cambridge University Press, 2019. 270 pp.

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Elodie Charrière

Environmental Expertise has been conceived as educational and teaching material aimed at preparing future environmental specialists to play a meaningful role in the management of contemporary environmental issues. The idea behind this book is to link concepts (i.e. frames, uncertainties) and concrete suggestions (i.e. protocols, checklists) in order to guide anyone – student, scientist, or consultant/practitioner – interested in working in the environmental field. To this end, Turnhout et al. have attached ten case studies to nine of their eleven chapters, covering topics as diverse and varied as climate change, European fisheries policy, Dutch flower industry, and fracking in the United Kingdom.

The authors take up an idea shared by others, namely, that scientists are not the only actors who can speak for the environment. To this category of actors should be added environmental organisations, governments, private companies, citizens' groups, and the media. In this way, they challenge the traditional science-policy-society interface model. Thus, the notion of expertise endorsed by Turnhout et al. can be described as diverse and pluralistic, and one that aims to better integrate so-called marginalised expertise.

By choosing the theme of the environment as a catalyst for expertise, not least because of its complexity and current importance, the authors seek to highlight the challenges facing expertise in our contemporary society. In doing so, they take stock of current practices by pointing out the difficulties encountered – such as framing environmental problems and the limitations of knowledge, particularly in terms of uncertainties and risks – but also the opportunities available through the recognition of the diversity and richness of knowledge and the emergence of new forms of knowledge creation as with citizen sciences.

Refuting the maxim “Trust me, I am a scientist” Turnhout et al. point out that reducing experts to the role of mere producers of scientific knowledge or sound science is a simplified interpretation of reality. While there has been a scientific consensus on climate change since the 1990s, the emergence of controversies in this area (i.e. Climategate (82-89)) has persisted, thus bringing into question the linear model of the relationship between science and society. Facts that have been validated by scientific studies are not enough and must be complemented by the consideration of norms and values specific to each society, thus reflecting existing cultural diversities. While recognising that controversies are inevitable and that some of them can lead to scientific breakthroughs, the authors advise experts to learn to decipher

them. By focusing on three fundamental issues – context, framing, and trust – which can be found in any controversy, experts would be able to better understand and even resolve them (78).

Given the dynamism of the science-policy-society interface, Turnhout et al. assign three roles to experts: the arbiter, the issue advocate, and the broker (224-234). To illustrate these roles and the mobility between them, they use the case of “Groupthink and Whistle Blowers in CO₂ Capture and Storage,” which shows originality in the narrative form chosen. This autobiographical case study recounts the experience of an expert who went beyond her role as arbiter and broker in order to adopt a more engaged and critical stance towards carbon capture storage experts (234-246). They provide a telling example to readers who may find themselves in a similar situation.

The authors ask how expertise in the environmental field can be transformed so it may provide legitimate, lasting knowledge to policymakers and society at large. Finding innovative solutions is fundamental, as with the co-production of actionable knowledge, i.e. “a knowledge that is situated in practice and catalyses concerted action” (231). Despite the inherent difficulties, they advocate the development of interdisciplinary approaches. This proposal is illustrated by the Loweswater Care Project (210-220) where a participatory approach was used in which local stakeholders, social scientists, and natural scientists worked together to develop a common understanding of the environmental problems affecting Loweswater Lake.

These new forms of knowledge creation are of growing interest in the field of environmental studies where lay expertise is widely recognised, especially in certain disciplines (i.e. natural history, biodiversity, conservation). On this point, Turnhout et al. may be criticized for lacking originality by choosing “Lay Expertise and Botanical Science” (200-209) as their case study, which focuses mainly on English, American, or Canadian botanical gardens. A less conventional area could have been chosen in order to highlight local native knowledge, such as the use of traditional pharmacopoeia or agricultural practices.

The authors support the integration of multiple and varied forms of knowledge in the management of environmental problems, while wishing to preserve the diversity of knowledge systems. The aim is not to promote a harmonised/homogenised version of expertise but to overcome the obstacles traditionally encountered in the environmental field, especially the difficult exchanges between natural and social sciences and the equally difficult recognition of local practices/customs as forms of knowledge in their own right. By recognising the cultural and contextual diversities around any environmental problem, this work has adopted an internationalist perspective which aims to promote new forms of interaction between science, policy, and society. Although its content can be disseminated without any geographical restrictions, it should be mentioned that the case studies chosen are mostly European (i.e. the Netherlands and the United Kingdom) while a minority are global (i.e. transboundary air pollution). Only the case of “Knowledge Integration in the Millennium Ecosystem Assessment” (165-175) briefly mentions initiatives from Peru and South Africa. In order to satisfy this internationalist perspective, Turnhout et. al. could have chosen case studies dedicated to other geographical areas. This observation also applies to the chapter on “Lay Expertise” where they describe several European examples in order to demonstrate the complexity and complementarity between lay and scientific expertise. Only one non-European example is briefly mentioned – the Chipko movement which originated in the eastern part of the Garhwal Himalayas district in India as a result of local opposition to deforestation and forest degradation (188-189).

Faced with the complexity of environmental problems and the increasing questioning of scientific expertise, it is necessary to reconsider the relationship

between science, policy, and society in order to enable science to regain its legitimacy in democratic societies. To reach this state, described by the authors as the democratisation of environmental knowledge, they recommend integrating different values (251-254): accountability, respect for diversity of values, contesting scientific expertise, and humility in expertise. By adhering to these, they argue, a more balanced distribution of power between the different knowledge-bearing actors will be achieved – something which is currently lacking in democratic societies.