

The book will find its way to the classroom and I hope some of these comments will serve for a more robust introduction and conclusion in the second edition.

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**Javiera Barandiarán, *Science and Environment in Chile: The Politics of Expert Advice in a Neoliberal Democracy* (Cambridge, MA, and London: MIT Press), pp. xvi + 261, \$32.00; £25.00, pb.**

Jonathan R. Barton

Pontificia Universidad Católica de Chile

The role of science in a post-truth world is a global dilemma, as fake news and popular myths are circulated freely on social media, through recognised media outlets and by leading politicians. Consequently, research into science, those involved in it, its funding and its contribution to public and private interests is paramount. As Javiera Barandiarán points out in Chapter 2 of her important contribution to the debate, the relationship between science and the state is effectively a social contract, and it is imbued with cultural and political significance.

*Science and Environment in Chile* reveals the complexity of claims to truth that are multiple and the role of science in decision-making being increasingly relevant and contested. The book focuses on these two issues in relation to environmental regulation during the 2000s in Chile and dedicates chapters to four emblematic cases. These cases are widely known due to conflicts surrounding the ways in which state agencies, private firms and associations, consultants, scientists and NGOs competed over how these industrial projects and their impacts should be understood, measured and mitigated. In each case, the author exposes one particular dimension of the science for more detailed illustration: production capacities and environmental quality in salmon aquaculture in the Los Lagos region; impact methodologies and causality in relation to the Celulosa Arauco y Constitución (known as CELCO) pulp mill effluent on the Carlos Anwandter Nature Sanctuary; glaciology and the Pascua Lama gold mine; and baseline data and impact assessment in the HydroAysén dams project. These conflicts defined the environmental agenda during the 2000s and tested the authority and the capacity of the Chilean state, while revealing the negotiated and political nature of claims to sustainable development.

The consolidation of science and technology studies (STS) opens up the debate on how science is understood by society; however, this field is still underdeveloped in Chile despite a growing corpus of literature on political ecology and environmental management. This book is a major contribution to STS in Chile and should encourage others to delve deeper into the social construction of the science–state

social contract and unpack many issues that remain relatively separate and unexplored: research funding; scientific consultancy; state agency capacities; diversity in knowledge production; and science-based power relations, legitimacy and neutrality.

In many ways, the writing style of the author reveals the tradition that underlies the text and its context. It is not a conventional academic monograph that pretends objectivity and situates itself in the pursuit of a particular truth. Instead, the use of first person in many places, the incorporation of anecdotes and the combination of scientific sources, interview material and print and other media lead to a highly personal engagement with the issues. One can trace this tradition back to Aldo Leopold (1949) and Rachel Carson (1962), and Rafael Elizalde (1958) in Chile, and it remains a powerful stylistic technique in environmental literature. The narrative is deliberately post-positivist in that it does not set up a hypothesis to refute, but rather questions the nature of power relations and claims to truth and neutrality. This may trouble readers who are searching for an absolute version of 'expert advice', but the aim is not to establish which scientific research and advice is more correct or true than others. If anything, it reveals the post-normal nature of contemporary knowledges and questions the general tendency towards reductionism and quantification in environmental assessment. The author illustrates this point through the substantive difference between baseline studies and impact assessments in the HydroAysén case.

One of the common threads that run through the book is what we understand by the roles and autonomy of different actors in the process of environmental evaluation. However, the theoretical options for clarifying this analysis are revealed only partially through authors such as Sheila Jasanoff and Yaron Ezrahi. The author prefers not to commit to a clear separation of functions, or to argue that this separation may in itself be futile. There is a suggestion that peer-reviewed research may distinguish a scientist from a consultant; however, Chilean universities and environmental consultancy are typified by the lack of clear boundaries. Furthermore, one assumes that state officials have science training in order to assess the environmental impact assessment (EIA) reports, and therefore may be defined as scientists as much as public technocrats. The interviewees reveal their mutual prejudices in this regard. It is a murky space, hence the importance of STS in providing tools for effective deconstruction. If anything, these categories are conventions and reveal little about activities and power relations. Another common thread is precisely the importance of boundary spaces and the complexity that emerges in these spaces where roles and power relations are reconfigured. For this reason, the detail on people and organisations is vital.

The politics of neutrality in environmental assessment is another common thread in the book, one which most of the interviewees involved recognise but struggle to reconcile. While there is methodological rigour in protecting identities and the roles of specific individuals, perhaps the most revealing elements of the case studies are when they are individualised and connected to named research groups, as in the CELCO conflict. The national relevance of the Centro Nacional del Medio Ambiente (National Centre for the Environment, CENMA) and the regional relevance of the Centro de Investigación en Ecosistemas de la Patagonia (Centre for Research on Patagonian Ecosystems, CIEP) in the HydroAysén case also provide important

insights. Since responsibilities are inferred, the relative ethics, merits and motivations of these individuals and their research groups will surely be material for future debate.

The responsibility of the state in defining the balance between environment and development under neoliberal democracy is the principal conclusion, highlighting the tendency towards what the author terms an 'umpire state' which reduces the role of the state to a subsidiary one of applying technical criteria. This umpire state is contrasted with James C. Scott's 'empire state' of strong centralised control and clarity in collective nation-state goals and public interest. The cases reveal the weaknesses of the former, and the inability to resolve this situation by adding more technical criteria. The book presents very clearly that the state is an umpire, rather than a promoter of public interests.

*Science and Environment in Chile* provides a warning of how neoliberalism erodes conceptualisations of the public, the collective and the distributive state, in favour of the private, the individual and the subsidiary state. It also exposes the high risks of environmental regulation *a la chilena*. The book makes interesting reading for all those who wonder about the compatibility of neoliberalism and sustainability, and the central roles of the state and science in resolving development contradictions.

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**Elizabeth Ramírez Soto and Catalina Donoso Pinto  
(eds.), *Nomadías: El cine de Marilú Mallet, Valeria  
Sarmiento y Angelina Vázquez***

**(Santiago, Chile: Metales Pesados, 2016), pp. 329, pb.**

Paul Merchant

University of Bristol

This collection of essays on the work of three female Chilean filmmakers, Marilú Mallet, Valeria Sarmiento and Angelina Vázquez, provides a thorough and stimulating set of analyses of a body of work that has been unfairly neglected by scholarship on Chilean cinema. Elizabeth Ramírez Soto and Catalina Donoso Pinto make a convincing case for viewing Mallet, Sarmiento and Vázquez not just as emblematic filmmakers of Chilean cinema's period of exile (during the dictatorship of Augusto Pinochet, from 1973 to 1990), but as groundbreaking artists whose experiments with the forms of documentary, melodrama and political cinema are relevant for contemporary feminist movements. The editors acknowledge their debt to the work of Zuzana M. Pick, who provides a prologue to the volume and whose interview with Vázquez from 1981 is provided in Spanish translation here.

There is no doubt that the essays collected here open up fresh methodological and theoretical avenues for analysis. The collection's title refers to Rosi