

Book Review

Gareau, Brian J., 2013. *From precaution to profit: contemporary challenges to environmental protection in the Montreal Protocol*. New Haven: Yale University Press. ISBN: 9780300175264; US\$55.

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The "Montreal Protocol on Substances that Deplete the Ozone Layer" is widely considered one of the most successful international environmental agreements. All of the world's countries have ratified the Montreal Protocol, agreeing to legally binding commitments to reduce and ultimately phase out ozone-depleting substances. As one of few environmental treaties with wide membership and 'hard' commitments, the Montreal Protocol is considered a potential model for dealing with other global environmental issues. *From precaution to profit* warns that the Montreal Protocol may instead demonstrate the dangers of international governance in an age of neoliberalism, providing a "cautionary tale about what can go wrong with even the most successful of environmental agreements" (p.18). Gareau lays out this tale in an engaging fashion, describing the inner-workings of a UN treaty in an accessible fashion and providing an excellent study of the deployment of science/knowledge within an environmental treaty.

The book's focus is the controversy within the Montreal Protocol around the phase-out of Methyl Bromide (MeBr). MeBr is a toxic and ozone-depleting substance used primarily as a pre-plant fumigant in strawberry and tomato production, killing "everything it touches - insects, bacteria, fungi, mold, everything" (p.17). Gareau compares the Montreal Protocol's early success in the late 1980s and early 1990s in establishing comprehensive phase-outs of chlorofluorocarbons (CFCs) with the protracted and difficult negotiations from 2003-2008 on MeBr. The United States in particular has fought against phasing out MeBr, defending not only its California strawberry growers but also its particular knowledge base of science generated by the private sector.

Gareau's framework for analysis is the sociological theory of social capital, although this is directly addressed primarily in just one chapter on the Montreal Protocol as a 'social institution' (Ch. 4). The book seems less engaged with social capital than with other theories: the "neoliberal turn" in governance; the impact of conditions of production on global environmental governance; and the governmentality of groups and individuals engaging in the Montreal Protocol process.

Gareau explains the trajectory of modern global environmental governance. He tracks the shift from the international political atmosphere in the early 1970s that encouraged precaution and had faith in global science, to today's global political stage, defined by neoliberal interest in profits and private-sector science (Ch. 2). Against this back-drop, Gareau compares the Montreal Protocol's experiences with CFC and MeBr, including the state of scientific knowledge, the economic and political interests in play, and the motivations of industry representatives (Ch. 3). A major change was in the basis for exemptions to phase-outs. For CFCs, country Parties could apply for "essential use" exemptions, such as specific uses for asthma treatments, space shuttles, and laboratory uses. For MeBr, Parties could apply for "critical use" exemptions on the grounds that not using MeBr would result in significant market disruption and that no technically and economically feasible alternatives were available to the user. This shift in policy led to changes in the functioning of the Montreal Protocol: exaggerating tensions among nation states over economic competition (Ch. 5); pressuring scientists to interpret findings in line with their nation-state delegations (Ch. 6); and non-governmental organizations (NGOs) only attracting notice and gaining influence when they adopt a neoliberal rhetoric, dropping arguments based on global socio-ecological concerns that aren't legible within the neoliberal context of the Protocol (Chapter 7).

From reading the book, it seems that the shift from CFC exemptions based on global welfare claims, to MeBr exemptions based on individual economic impacts, was a fulcrum in the Montreal Protocol's shift from precaution to profit. Indeed, the Montreal Protocol's MeBr critical use exemptions are a blatant case of neoliberal logic, providing an ideal case study of the impacts of neoliberal governance on the development of global environmental governance mechanisms. It is also a strong warning against using the Montreal Protocol as a model for other governance regimes. The MeBr's critical use exemptions are *such* a perfect case study, I wonder to what degree these findings apply to agreements that are more muddled, with policies that follow

neoliberal logics less blatantly. Wisely, Gareau does not offer his case as a typical example of neoliberal governance, but rather as a potential "harbinger of future problems in global environmental governance", if the Montreal Protocol really is taken as a model for addressing environmental problems (p.61).

An interesting aspect of the Montreal Protocol not addressed in the book is that it is regularly held up as a model for its *legal structure*, not just for its end results. The Protocol came out of the 1985 Vienna Convention for the Protection of the Ozone Layer – a "framework convention" that did not place legally binding responsibilities on Parties but instead provided the context for negotiating what would become legally binding Protocols. Together, the Vienna Convention and the Montreal Protocol are commonly referenced as an early example of the success of the framework / protocol approach for global environmental problems, particularly for issues still moving from scientific uncertainty to certainty (Bodansky 1999; Hendricks 1998; McGraw 2002). Gareau provides an alternative to the predominant narrative of the Montreal Protocol, particularly in the timing and sources of scientific knowledge and the role of corporate actors. I would love to see Gareau take this alternative narrative and his findings from the MeBr negotiations and directly address the argument that the Vienna Convention/Montreal Protocol approach to a framework/protocol is ideal for developing global environmental governance.

This book would be an excellent monograph for graduate seminars on global governance, climate politics, and science/policy; it lays out a complicated UN agreement in an engaging fashion and traces the co-production of science and politics clearly. Graduate students studying processes of governance may find Gareau's use of data from his attendance at Montreal Protocol meetings from 2003-2007 a useful model of research design, with interviews conducted during those meetings, and historical and archival research.

Perhaps the audience with the most to gain from this book are those actively involved in the Montreal Protocol, the climate change regime, and other global environmental governance institutions. Indeed, Gareau focuses on the links between science, technology, and political and economic interests because "state delegates and policymakers seldom grasp its full importance" (p.62). His suggestions for ways forward for the Montreal Protocol involve reconfiguring ozone governance to allow the entire scientific community (and not just industry) and global civil society to have more influence. As Gareau puts it, this will necessitate "liberated insider support" (p.266). Hopefully this book inspires and guides some insiders, as well as providing a fascinating case study for scholars.

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