Book Review/Compte rendu

Nathan Young and Ralph Matthews, *The Aquaculture Controversy in Canada: Activism, Policy, and Contested Science*. Vancouver: University of British Columbia Press, 2010, 312 pp. $34.95 paper (978-0-7748-1811-7), $85.00 hardcover (978-0-7748-1810-0)

Does cultivating freshwater and saltwater fish populations under controlled conditions instead of harvesting wild fish make practices of aquaculture or aquafarming part of the solution to the decline of global wild fisheries? Or does the farming of fish, shrimp, oysters, or algacultures foster overfishing and pose unacceptable risks to ecological integrity and human health?

In their engaging book, *The Aquaculture Controversy in Canada: Activism, Policy, and Contested Science*, Nathan Young and Ralph Matthews analyze a classical clash between proponents of a novel technique and the critical stance that points to its unintended (mainly negative) side effects. As the authors argue, the controversy over aquaculture has been one of the "most bitter and stubborn face-offs" in debates on industrial development in Canada. The sociological goal of this book is to unfold the major axes of the controversy in Canada over the last three decades in order to take "a broader view of how and why the conflict is perpetuated as a political and cultural phenomenon, rather than as a question for the natural sciences alone." The book is divided into three parts: Part 1 focuses on the Canadian aquaculture industry in global context, part 2 focuses on debates between sometimes opposing sets of claims making and knowledge authorities, and the final part analyses the local governance challenges of such a multilayered controversy.

Although this is a book on a Canadian controversy, aquafarming is a global issue, since the characteristic features of the Canadian aquaculture industry are a product of the multiple political and cultural influences of the global economy. The authors discuss how Canada's aquaculture industry, and its marketing strategies are strongly shaped by global forces, especially through competition between Norway and Chile, two countries that pursue completely different strategies for selling aquaculture products. Norway, the largest producer of farmed salmon (the most lucrative sector in aquaculture), has been able to increase profits through an efficient research and development program, whereas Chile relies

on low labour costs for its market position. Although Canada aimed to build its market niche based on high quality ("minimally processed") and freshness, it has faced unique challenges on the local or regional scale, especially due to the increasing legal and moral weight behind the Canadian Aboriginal rights movements. Although Canadian shorelines are probably better suited for aquamarine than its competitors' farming facilities, local resistance has hindered growth.

Part 2 focuses on local resistance groups' claims-making strategies, on how they are linked to particular forms of knowledge presentation in public, and on how they are received and communicated among experts and between experts and so-called lay publics. Young and Matthews show that the controversy can be framed as part of a broad change in the public understanding of science during the last three decades, which gives activist groups possibilities that traditionally did not belong to the sphere of science and "quasi-scientific" authority. The authors then unfold different scientific disagreements over aquaculture in Canada to show that the rise of activism around the farming of aquatic organisms cannot be explained primarily in terms of opposing scientific facts; at least as important is successful moral entrepreneurship by problem claims-makers such as environmental pressure groups and campaigning scientists. The authors are also able to show that the perceived uncertainty that emerged from "more and more science" has been used by critics to undermine the industry's claims-making strategies. However, in chapter four, perhaps the most heartfelt and — in my view — the best chapter of the book, Young and Matthews reveal that deep disagreements have risen despite the opposing parties' common goal of "protecting the integrity of science from the turbulence caused by the controversy." From a sociology of science perspective this is a very interesting result, since both sides of the controversy already represent a level of reflection in their argumentation that they do not even question anymore the science *per se* but instead argue on whom to trust based on previous experiences and attributed views on public trust. This, obviously, poses much more serious challenges to government policies and governance issues to enable the Canadian aquaculture industry to expand than the traditional investment in more science.

Overall, Young's and Matthews' *Aquaculture Controversy in Canada* deserves special attention for at least two reasons: *Firstly*, because it is a book vigorously written to unfold the many layers of the aquaculture debate with Canada as a major player as well as — one is tempted to overstate — a "victim" of the global industry. *Secondly*, the book is an excellent example of good sociology. At the outset, the controversies over aquaculture appear to be a labyrinth. A sociological analysis

then needs to not only bring some order into the labyrinth, but also to tell the reader more than he or she would have learned from studying newspapers or sources on the Internet. Using insights from environmental sociology and the sociology of science and technology Young and Matthews are able to show the reader why the controversy has been so fierce. The authors do so by looking at claims and counterclaims about specific issues in the aquaculture controversy and critically reflecting on the broader questions of global economic, geographical, political and cultural connections of the controversy itself. This is more than most books can ever accomplish.

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