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**Daniel Macfarlane. *Negotiating a River: Canada, the US and the Creation of the St. Lawrence Seaway*. 356pp. Vancouver: UBC Press, 2014. \$34.95 (paperback). ISBN: 978-0774-8264-33**

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Daniel Macfarlane. *Negotiating a River: Canada, the US and the Creation of the St. Lawrence Seaway*. 356pp. Vancouver: UBC Press, 2014. \$34.95 (paperback). ISBN: 978-0774-8264-33

*Negotiating a River* covers the long negotiations between the United States and Canada over the building of a joint waterway into the Great Lakes, and a related power project, with particular attention to the final years of negotiations; the design and building of the system; the operation of the completed Seaway; and environmental issues associated with the construction. All of these are framed within a critique of the engineering and scientific assumptions which underlay the project. It is a complex but well-executed mixture of diplomatic and political history along with technological and environmental history.

The first section of the book is devoted to the negotiations between the two countries that lasted almost half a century. Macfarlane does a fine job of condensing material that forms a major portion of earlier works on the Seaway. On the other hand, the author devotes considerably more space than these works to the years between 1945 and 1954. His thesis in so doing is that the Canadian government lost patience with the Americans and decided to go it alone. Various writers have debated whether the Canadian government really intended to build an all-Canadian system, or it was just bluffing in order to pressure the United States to join the project. Macfarlane develops a convincing argument to prove the former, though he then has to explain why Canada did not begin work, but

instead waited almost two years until the American government decided to participate. This hesitation left portions of the Canadian public which wanted a seaway frustrated, as the government had engaged in an extensive campaign to prepare the populace for a Canadian one. Indeed, as Macfarlane points out, the image of an improved water route to the interior reinforced the nationalistic concept of an east-to-west corridor which would hold Canada safe from the allure of the United States.

The next section of the book deals with construction of the Seaway. This has been covered by numerous authors. This was, however, a massive engineering project, and no account completely duplicates any other. From acquiring the land on both sides of the border necessary to create a sufficient depth of water, to planning for new communities, to engineering decisions, and the setting of tolls (an American necessity), the project was complex and involved numerous difficult, often contentious, decisions. The author does an excellent job of highlighting all of these in his narrative.

This section ends with a short discussion of the operations of the Seaway since its opening and an analysis of the negative effects of the construction. Sadly, the belief of communities stretching across the Great Lakes that a seaway would bring increased prosperity proved not to be true, as the canals were built only to handle existing shipping. Even the belief of American planners that tolls would pay off the huge cost of the project proved illusionary.

The author then returns to a theme that he initially raised in his

introduction. Ultimately he frames the whole story of the Seaway in this theme, which he terms 'High Modernism.' This is a theory that states engage in social and ecological engineering by taking a simplistic approach that favours the use of "technocratic scientific expertise, excluding local and vernacular knowledge, to order both nature and society." (p. 17) In the case of the Seaway, the author sees this as using the scientific and technological resources of the two nations not only to dominate nature and reorganize portions of society but also to prove the superiority of the western democracies over the Soviet Union.

In concluding his chapter on construction, Macfarlane comments that "[n]evertheless, one can interpret the St. Lawrence project as a socially and ecologically imperialist undertaking that followed the dictates of industry, big business and modern capitalism." (p. 178) In order to do this most efficiently, governments forced citizens to move to centralized locations, close to efficient transportation routes, designed with new concepts of how a town should be organized. The theme is continued in the next chapter as the author criticizes the hubris involved in determining the 'natural' level of water in the St. Lawrence and Lake Ontario and maintaining it at a constant level, while allowing power generation (a task which proved very difficult). He attributes this to the engineers' training and beliefs, which emphasized the

cooperation of "industrial capital and the state to maximize the development of natural resources in the name of economic and social progress." (p. 183)

Essentially Macfarlane is saying that government mobilized science and technology to mold nature and society in the interests of a concept of national economic progress. Collateral damage, such as people displaced, increased pollution, shoreline damage, invasive species, damage to marine life, was judged not sufficient to warrant serious concern. He recognizes that economic spinoffs from the operations of the Seaway have been beneficial to both countries and especially to Canada, as has the power generation. However, the overall failure of the waterway, combined with the ecological and social damage done, leads him to conclude that "in hindsight the project should be considered a mistake." (p. 207)

Undoubtedly the author's analysis of the 'imperialist' reasons behind the project, and the negative consequences of it, invite controversy. On one aspect, Macfarlane's suggestion that the whole range of environmental damage was extensive, this reviewer finds the author's evidence less than convincing, while agreeing that the introduction of invasive species was a major negative result of construction. Overall, however, this work is a well-researched and generally well-argued examination of one of the greatest engineering projects of the twentieth century.

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