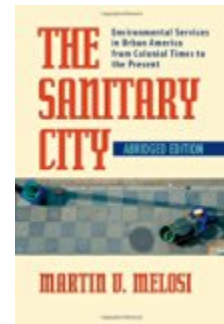


Martin V. Melosi. *The Sanitary City: Environmental Services in Urban America from Colonial Times to the Present*. Pittsburgh: University of Pittsburgh Press, 2008. 400 pp. \$27.95 (paper), ISBN 978-0-8229-5983-0.

Reviewed by Jamie Benidickson (University of Ottawa Faculty of Law)

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## Increasing Urban Environmental Understanding in the Classroom

Garbage, industrial effluent, and human waste are not the conventional focus of academic inquiry, yet Martin Melosi is among the limited number of scholars who has tackled this subject matter to great advantage. Published originally in 2000, *The Sanitary City* represents the prize-winning culmination of decades of meticulous research into the history of water supply, wastewater treatment, and solid waste management across the United States. The work under review here is the abridged version, a publication intended to provide a “more classroom friendly version of this book” (p. xii). On the assumption that a fair number of those contemplating use of the shorter version in the teaching context will have some familiarity with the original, this review will emphasize the classroom potential of the abridgement.

The operation of civic functions whose history is fully described in *The Sanitary City* reflects our collective understanding of the impact of the natural environment on its human inhabitants, and simultaneously constitutes one of the primary forms of human impact on that environment. As Melosi explains, “Sanitary services ... are linked inextricably to prevailing public health and ecological theories and practices” (p. 1).

The book is organized within the intellectual framework of three broad periods of environmental understanding—the age of miasmas, the bacteriological era, and a period characterized by new ecology. Within these broad contexts, urban water, wastewater, and solid waste

services evolved in response to prevailing scientific assumptions under the guidance and direction of municipal authorities, advised, counseled, or directed by an array of professionals and community organizations. Public health officials, engineers, municipal finance specialists, lawyers, and others all contributed, as did public interest groups eventually, to the development and implementation of new technological responses to the underlying environmental challenges of urbanization.

Urban and environmental history curricula are the most obvious classroom settings for use of the shorter version of *The Sanitary City*. But this book can also contribute to foundational courses in a range of professional disciplines where thoughtful instructors recognize the significance to future practitioners in public health, engineering, law, planning, and environmental management, among other fields, of a well-grounded understanding of the origins and evolution of the infrastructure on which we depend. That context includes reference to the influences that shape environmental decision-making.

Such broader themes as the changing scope of authority of local government, changing federal-state relationships in the fields of health and environment, the underlying importance of public finance, the integration of science and technology into public policy, privatization, and the challenges of interdisciplinary communications and organization, are well represented in the volume. They are not always readily accessible through the index, how-

ever.

The index is silent, for example, on the subjects of local government and municipal government whose evolution in relation to water and waste is very effectively presented throughout the book. Nor is there obvious guidance to the subjects of finance and funding for environmental infrastructure, which, again, are ongoing themes in the text. Rates, rate-setting, and metering are also absent from the main index, but “use fees” and “water systems: metering in” will point you in the right direction. Despite these limitations in the index—and it is no easy task to capture the range of possible interests with which readers might approach such a wide-ranging study—the underlying point is that the subjects are informatively covered in the text if you are prepared to look for them. Moreover, comprehensive referencing and a valuable bibliographic essay greatly enrich the usefulness of *The Sanitary City* from the perspective of follow-up research and essay writing.

For teaching purposes, the retention of extensive statistical information in the abridged version is also valuable. While there are few tables as such, the narrative very effectively presents data on changing levels of urbanization, on the extension of water supply and the scope of coverage of sewage and waste treatment services, on the prevalence of waterborne disease, on the volume of waste flows, and the national experience with recycling.

Any number of comments and observations scattered throughout the book would provide launching points for stimulating and wide-ranging classroom discussions. We learn, for example, that while roughly 35 percent of paper was recycled at the end of World War II, the rate declined steadily to a little under 18 percent by 1969 (pp. 165, 207). Why? How? So what? The same potential for dialogue lies in the knowledge that “The automatic dishwasher ... increased per capita consumption of water by as much as thirty-eight gallons per day” (p. 181).

For instructors seeking to use urban case studies, three—New York, Los Angeles, and Chicago—are available in the book itself. A more enterprising approach could be to compare local developments anywhere in the United States with the experience of these three metropolitan centers.

A history of urban environmental services, particularly a study as comprehensive and enlightening as *The Sanitary City*, represents an invitation to consider future directions. Melosi reflected: “The emphasis on project design as opposed to long-range planning often meant that future generations could not choose to abandon these systems and begin again, but must maintain or expand them—even if inadequate—or face extraordinary costs. It was not so much that flawed technologies were chosen initially, but that systems were designed to be permanent, to resist change in order to justify their worth to the contemporary community. In essence the systems lacked flexibility, that is, they were not capable of substantial alteration due to changes in technology, fiscal conditions or urban growth patterns” (p. 262). Embedded alongside Melosi’s model of path dependency whereby initial decisions about infrastructure profoundly influence subsequent developments is the revelation of transformation, brought about by the introduction of challenging new ideas and understandings.

So what happens next? Following miasmas, the bacteriological revolution, and the era of new ecology, the fourth age of urban environmental infrastructure is now getting underway. Global climate change is already affecting community decision-making as cities around the world move either to mitigate the consequences by reducing greenhouse gas (GHG) emissions, or to implement adaptation measures in anticipation of unavoidable changes.

The GHG emissions associated with desalination were influential in London, England’s, recent rejection of that option, while Sydney, Australia, has been exploring wastewater recycling in response to water shortages linked to climate change in the region. Some European communities, Gothenburg, Sweden, for example, are actively engaged in recovering energy from waste and sewage to reduce methane emissions while powering municipal transport services and heating public housing. Comparable initiatives are under consideration in a few North American communities.

*The Sanitary City* makes no attempt to forecast future directions. But its insights into the revolutionary historic transformations of urban environmental services and infrastructure are not without importance to an appreciation of the challenges that lie ahead.

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