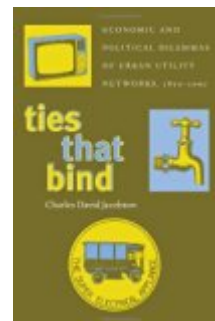


Charles David Jacobson. *Ties That Bind: Economic and Political Dilemmas of Urban Utility Networks, 1800-1990.* Pittsburgh: University of Pittsburgh Press, 2000. xi + 282 pp. \$35.00, cloth, ISBN 978-0-8229-4133-0.



Reviewed by Martin Melosi

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Charles Jacobson's training in applied history and social science from Carnegie Mellon University and his experience as a senior research associate with Morgan Angel and Associates, public policy consultants in Washington, D.C., shine through in *Ties That Bind*. In this book, he is particularly concerned with choices that are made about ownership, regulatory arrangements, and technology of municipal networked services. Over the last few years, there have been several historical accounts of urban infrastructure and city services of various kinds, but few that address so well the tension between public versus private ownership and control of municipal utility services. Focusing on waterworks, electric utilities and cable television, he has selected three seemingly different networked systems in the United States that share some common characteristics, but also demonstrate some unique qualities. They are all "fixed systems to which consumers are physically linked," and they "developed primarily as instruments for the one-way delivery of services." (p. 2) From an organizational and administrative standpoint, they all began as private enterprises. However, their technological makeup is

quite different, as different as pipes, wires, and coaxial cable, and they originated in quite different historical settings, ranging from the late nineteenth century for waterworks to the late twentieth for cable television. Over time, ownership patterns also diverged. Waterworks increasingly became public facilities, while electric utilities and cable television remained essentially private.

Jacobson's self-proclaimed aim in *Ties That Bind* is "to leave the reader with a richer understanding both of the character of the political and regulatory puzzles presented by these kinds of systems and of the strengths and weaknesses of different approaches to addressing the problems." (p. 2) Historians have hardly exhausted efforts to explain the public/private nexus and tension in the development of municipal services. Instead, they have tended to rely quite heavily on empirical approaches more than over-arching theory. That is the way of most historians, and the literature is richer because several scholars have shown how a variety of networked services evolved over time, in particular waterworks and electric utilities of the three he selected--and have

described how some services moved from private to public and back again or identified other permutations.

What is missing from much historical literature on infrastructure and city services is rigorous application of social science theory, economic theory in particular. While some have flirted with path dependency, systems theory and the like, Johnson delves more deeply into economic theory to undergird his arguments. That is not to say that he avoids more traditional historical approaches. He is clear to point out that scholarly traditions in the fields of the history of technology and urban history inspired his thinking about technology as a cultural, social and political phenomenon. He makes good on this claim by drawing on the work of Joel Tarr, Thomas Hughes, David Nye, and Mark Rose, to name a few.

Yet he also draws on what he calls "simple concepts derived from economic theory" to address questions concerning the degree to which goods and services furnished over waterworks, electric utilities, and cable television are "public" and why "issues of monopolistic and centralized economic and political power have arisen so stubbornly and consistently in association with the development of these systems." (p. 7) Central to his exploration of these issues is the application of transaction cost analysis as developed by economist R.H. Coase in the 1930s. Transaction costs, for example, the cost of determining pricing for a good or service or the costs of negotiating a separate contract, influence the size and effectiveness of private firms in a market economy, according to Coase. Businesses have choices to make between the transaction costs of using the price mechanism in different situations or relying on marginal costs of internal organization.

Jacobson is quick to point out that the history of networked services cannot entirely be explained in terms of economics in general or transaction costs in particular. However, by utilizing these intellectual tools, he has moved the histori-

cal discourse beyond more flabby analysis about the propensity of municipal governments to find any way possible to increase control over their own affairs. The idea of some sort of ascending "municipal socialism" or advanced "home rule" beginning in the mid- to late nineteenth century cannot be totally discounted. But Jacobson provides a richer understanding about why particular services (such as waterworks) might be more prone to public control and management than others (electric utilities and cable television). At the same time he eschews in large measure the contemporary claims of urban reformers, especially in the Progressive Era, who justified municipal takeovers of services on the grounds of poor performance by private service providers.

As a good historian, Jacobson discusses the political and institutional contexts in which the development of the three systems took place with attention to the character of the goods demanded, the problems arising over arranging for the provisions of service, and the role of economic issues, especially transaction costs. The three central chapters each treat one of the networked services under consideration, including an historical overview of their development and several case studies on cities as diverse as San Francisco, Seattle, Pittsburgh, and Boston. Especially for waterworks and electric utilities, Jacobson limits the chronological period essentially to the origins of the services, late nineteenth and early twentieth centuries for waterworks, and the 1880s to the 1920s for electric utilities. Cable television is dealt with from its origins in the late twentieth century, but short of the twenty-first. If I found a significant weakness with *Ties That Bind* it is the chronological limits. Jacobson makes his points about the varied nature of the services at their origins, but he is less convincing drawing conclusions about the long-term comparisons because of the truncated chronologies. For example, while waterworks become an essentially public enterprise in the United States by the early twentieth century, what accounts for the serious discussion of priva-

tizing water services today? Likewise, Jacobson suggests that one reason for cable television remaining private was its lack of competition. What does he make of the recent challenge to cable's supremacy by satellite dish technology?

Despite this limitation, Jacobson's larger observations are essential study for future scholarship in this field. He does an effective job, for example, in explaining how municipal governments and waterworks firms failed to devise effective long-term arrangements for contracting and franchising service because private firms could not or would not invest in new facilities or expand old ones. Municipal systems, moreover, did not face the same kind of contracting difficulties. I particularly liked his additional observations about the contrast between American and European waterworks. Unwilling to enact or enforce stringent building regulations in a society driven by private property interests, American cities invested in waterworks and fire departments to deal with fires that broke out in poorly constructed buildings and in poorly planned cities. In Europe, by contrast, strict building regulations seemed to mitigate against the need to invest so heavily in fire protection.

With respect to electric utilities, there was a key difference in market discipline between waterworks and provisions for electricity. As Jacobson stated, "To a far greater extent than in waterworks...the presence of inter-product competition and other forms of market discipline meant that proprietors of electric utility firms found it to be in their own interests to furnish good quality service and to pursue aggressive marketing and investment policies." (p. 77) Thus municipal provisions for electrical power were much less likely to occur than for waterworks. In addition, fewer complaints over service and tolerance for pricing of electrical power further weakened the justification for public control of this utility. These are not a revolutionary insights, but the use of transac-

tion cost analysis helps to deepen our understanding of why this was so.

That cable television also avoided public takeover should come as no surprise. This was not a vital service that city officials coveted, nor were there transaction costs like those that made waterworks susceptible to public control. Yet Jacobson makes some very good observations about the distinct nature of this service. Cable television was a commodity similar in some sense to water and electricity, but as part of a larger communication network it was unique and certainly drew a greater federal regulatory role than the other services discussed. Cable television also delivered a variety of services, news, sports, entertainment, and was a technology more malleable because of it. The discussion of cable television was most valuable because of the contrast it provided to waterworks and electric utilities. It was not treated in enough depth, however, to deal in any comprehensive way with larger communications issues.

To criticize Jacobson for not providing more depth, more detail, a broader range of issues, a more thorough chronological treatment of his subject, and so forth in this modest 282-page book would be to miss the value of its insights. He makes no claims that disputes over government versus private ownership of utilities have disappeared or that problems inherent in understanding the tension between public versus private delivery of services can be neatly, or even rationally, understood at all times. What he does provide is a very thoughtful angle of attack for rethinking a series of central questions with respect to municipal service delivery. This book is certain to influence scholarship for many years. Its perspectives should not be ignored.

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