

efforts to create a radical Christian politics elsewhere in the nation. Several brief references to W. D. P. Bliss ignore the Society of Christian Socialists and *The Dawn*, both of which had influence across the nation after 1889. There is no reference to George D. Herron, the radical social prophet at Iowa College (Grinnell) who launched an influential "Kingdom movement" in the mid-1890s and helped found the Socialist Party of America in 1901. Denton neither sets Reed's ideas in the context of these networks, nor does he seem to have explored whether Reed had connections with them. Without a broader base of evidence, the assertion that Reed was the "foremost Christian Socialist in the American West from 1884 to 1899" (vii) remains unsubstantiated.

Nevertheless, this is a welcome study of a man too long neglected. It illustrates the ideological probing and political uncertainty of radical social Christianity in the late nineteenth century and gives that radicalism a concrete regional focus.

All the Modern Conveniences: American Household Plumbing, 1840-1890, by Maureen Ogle. Baltimore: Johns Hopkins University Press, 1996. xxi, 191 pp. Illustrations, notes, note on sources, index. \$39.95 cloth.

REVIEWED BY H. J. EISENMAN, UNIVERSITY OF MISSOURI-ROLLA

Is household plumbing a worthy subject of inquiry for historians, especially historians of technology? With her book, *All the Modern Conveniences*, Maureen Ogle answers with a strong "yes." A product of Iowa State University's Program in History of Technology and Science, Ogle has transformed her Ph.D. dissertation into a well-crafted treatise that is part of the respected and growing Johns Hopkins Studies in the History of Technology series. She focuses on the cultural and social factors that affected Americans' embrace of household plumbing from 1840 to 1890, eschewing a history of only the hardware for a more interesting and valuable perspective—the role of the country's beliefs and values in shaping technological change. Relying on a wide range of primary and secondary sources, including sanitation reports (among them the municipal records of Keokuk, Iowa), patent records, scientific journals, and consumer catalogues, Ogle argues persuasively that mid-nineteenth-century Americans used indoor plumbing chiefly to make their households modern and convenient. Concerns about community sanitation played a very small role in the use of this technology until late in the

century, when scientific sanitary reform efforts entered the American scene and shaped household plumbing in the twentieth century.

Ogle begins her investigation of "conveniences" in the American home by linking the use of indoor plumbing to the country's interest in domestic reform. Many Americans, she argues, believed that modern homes produced better individuals and families and marked national progress; hence, the installation of running water and plumbing fixtures was due more to convenience, modernity, and labor saving for women than to sanitation measures. Ogle continues her study by discussing the various water supply and waste disposal systems of the convenient home. These reflected Americans' dislike of centralized systems and their interest in maximum individuality; the result was a diverse selection and use of various styles and tank systems and the use of cesspools. Even though the British practice of integrated municipal water supply and sewage systems was known in the United States, Americans preferred decentralized installations. Here, Ogle argues that the American commitment to individualism dictated a technological system that may have been at odds with scientific sanitation.

In a separate chapter, Ogle describes various mid-century plumbing fixtures to give readers a sense of the methods and objects used. Using her apt illustrations and reading her descriptions of various "sanitary" household systems, a reader gains both awareness of and alarm for indoor American plumbing before 1870. Next, Ogle introduces the more scientific attitudes and actions that moved this technology from an individualistic to a professional basis. Growing awareness of the causes of disease gave "sanitaries" greater influence on household practices. Individualism and isolated systems gave way to integrated municipal water supply and waste disposal facilities. Americans began using vent pipes, traps, ceramic fixtures, and high-flow water discharge systems along with plumbing codes. Ogle ties these developments into the larger context of an emerging American urban culture that introduced professionalism and standardization into the personal and professional lives of many citizens.

In her last topical chapter, Ogle outlines the transformation of household plumbing into the system in place by century's end, amazingly like the one in widespread use today—"white fixtures, tiled bathrooms, plumbing codes, and . . . the sense that every American home should have a bathroom" (152). Scientific sanitation dominated the design and use of these modern conveniences late in the nineteenth century and replaced earlier practices in a very short

time. As America became more urban and more science-minded, so did its indoor plumbing technology.

With her keen historical insights, Ogle has given historians of technology and urban historians a valuable resource. Clearly, her work reflects the maturing of technological history as it goes far beyond a hardware history of technology. Additional statistical data on deaths due to unscientific sanitation along with short-term and long-term costs of a high-flow water sanitation system would have enhanced her analysis. But by linking this rather mundane subject matter to the larger context of American cultural and social history, Ogle has given us a worthy case study emphasizing many factors that shaped American technological development.

Holding the Line: The Telephone in Old Order Mennonite and Amish Life, by Diane Zimmerman Umble. Baltimore: Johns Hopkins University Press, 1996. xix, 192 pp. Illustrations, graphs, tables, notes, appendix, bibliography, index. \$35.00 cloth.

REVIEWED BY ROY ALDEN ATWOOD, UNIVERSITY OF IDAHO

The power of technology to improve the human condition and to save society from its ills has been a cardinal creed of progressivism. Nowhere has this creed been more clearly embodied than in the electric mediator of the human voice, the telephone. From the Bell Company's earliest national advertisement campaigns to the testimonials of those toeing the party line of the first rural telephone cooperatives, the phone was almost universally touted as an unalloyed instrument of social and economic redemption. Over the years, the telephone has been hailed as a technological messiah, complete with religious rhetoric and evangelical zeal, by almost all except, most notably, the Amish and Mennonite communities.

The uneasy intersection of the culture of the telephone with traditional Amish perspectives and practices is the story recounted in *Holding the Line*. Diane Zimmerman Umble provides an engaging examination of the role and meaning of the telephone among the Old Order Amish and Mennonites in Lancaster County, Pennsylvania, from the turn of the century to the present day. She offers a sensitive analysis of how the coming of the telephone constituted both a promise of social and economic benefit and a direct threat to the religious community's traditions of work, worship, and fellowship.

Umble uses historical and ethnographic methods to study how Pennsylvania's Amish and Mennonite families and churches grap-

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