alongside photographs of actual elements of Cracow monuments, historic paintings and original regional costumes re-created by crechemakers. In this way, readers can examine and appreciate the skills of the creche-makers.

Krakovian Szopka contains six photographs of creches against dark backgrounds. These images emphasize the aesthetic value of the artifacts. Rich colours and lights create an impression that the presented artifacts are part of a fairy tale. Creche-makers combine candlelight and the imitation of stained-glass windows to transform the object into a legendary castle. A Wawel Dragon, Lajkonik and the Wizard *Twardowski* are the most popular figures also appearing in folk stories. Still, it may be difficult for someone who has never visited Cracow and does not know Polish history to understand the symbolism of the creches presented in Krakovian Szopka, and the catalogue would benefit from better explanatory and descriptive text. The publication was clearly intended for the Polish-American public.

Krakows Julkrubbor, even without English translation, is the most interesting of the three publications. Through photographs, it explains the three principal aspects of a creche and illustrates the historical context in which creches were made. The first category of photographs shows the influence of Cracow architecture on the construction of creches, with details of artifacts presented opposite images of the actual Cracow buildings. Here, the quality of the photographs is good enough to demonstrate the smallest elements re-created by the artists. The catalogue also acknowledges the influence of other artifacts on creches: a medieval altar from St Mary's Church, a painting from the nineteenth century, an interior of an antique restaurant and puppets from a prominent cabaret are reproduced in the finest detail by creche-makers.

The legendary aspect of these creches is also examined. The catalogue analyzes one of the most often used figures, *Lajkonik*. *Lajkonik* is a metaphor, from a centuries-old legend of Tartar warriors, who invaded the city in 1287. The myth is replayed every year in a folk festival on the streets of Cracow. Civic and legendary images used in Cracow creches thus form a background for the story of the birth of Christ. The Holy Family is always presented in the centre of a creche and emphasized by light. Other religious figures such as apostles, angels and saints are often featured.

A Cracow creche possesses all the qualities of a great folk artifact: uniqueness and authenticity, aesthetic power and moral symbols presented in a broad cultural context. It would be very interesting to see an English translation of a scholarly publication on this subject. Until this happens, *Krakovian Szopka, Cracovie ville belle et merveilleuse* and *Krakows Julkrubbor* are the best introductions to the subject.

NOTES

 Henry Glassie, The Spirit of Folk Art: The Girard Collection at the Museum of International Folk Art (New York: Harry N. Abramms Museum of New Mexico, 1989), and Gerald Pocius, "Material Culture Research: Authentic Things, Authentic Values," *Material History Review* 45 (Spring 1997): 5–15.

Maureen Ogle, All the Modern Conveniences: American Household Plumbing, 1840–1890

ANNMARIE ADAMS

Ogle, Maureen. All the Modern Conveniences: American Household Plumbing, 1840–1890, Baltimore and London: The Johns Hopkins University Press, 1996.

If you want to know how old toilets work, this is the book. Maureen Ogle's *All the Modern*

Conveniences: American Household Plumbing, 1840–1890 traces the evolution of our hardestworking domestic fixture, as well as sinks, showers, and sewers, through its first half century in the United States. Using patent records, trade catalogues, municipal documents, architectural plans and pattern books,

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periodical literature, and even personal recollections about plumbing, Ogle's book is the first to explain how these various technologies really worked and how the "culture" of plumbing changed in the United States during the course of the last century.

The book's major assertion is that the development of plumbing in the nineteenth century occurred in two distinct phases. Ogle characterizes the 1840s, 1850s, and 1860s as a time when Americans concocted a wide range of solutions to the challenge of "in-house running water and water fixtures." Largely unconnected to municipal water supplies and unregulated by government codes, midcentury plumbing in the United States was an extremely private affair.

About 1870, however, a completely new attitude toward plumbing developed. Whereas during the period 1840–70 plumbing had been seen as a way to improve houses, it became something to fear during the 1870s and 1880s. Consequently, the fixtures produced during this second phase, according to the author, should be understood as a completely different class of objects, driven more by the principles of the new field of sanitary science than by a basic urge for domestic reform.

Ogle's mere attention to the period 1840–70 makes a solid contribution to the field of American plumbing history. The innovative and rather ad hoc plumbing arrangements of the mid-nineteenth century are extremely difficult to study, given that they were often "invented" by individuals to solve particular problems. Most other scholars — the topic has attracted only a handful of historians — have focused on the turn of the century and especially the Progressive Era in the United States, by which time the mass production of fixtures was in full swing. Ogle's masterful interpretation of mid-nineteenth-century plumbing as a window on American individualism, and especially her commentary on the social and material implications of the term, "convenience," fills a large gap in the existing literature.

The final two chapters of *All the Modern Conveniences* deal with the later period. Like historian of medicine Nancy Tomes (whom she doesn't cite), architectural historian Gwendolyn Wright, museum curator Ellen Lupton, and other scholars, Ogle sees the bathroom after 1870 in the context of science and the rise of professionalism.¹ And like them, she suggests that the house became a vital component of a much more complex and highly regulated system. Municipal ordinances, plumbing codes, and standardized fixtures meant that the American bathroom of 1890 was much more predictable than what it had replaced. It was also by this time a standard feature of the middle-class home.

Ogle's book is a work of social and cultural history, especially the history of technology, rather than material history. It is the twentieth book, in fact, in Johns Hopkins' New Series in the History of Technology. In this regard, material culture scholars may be disappointed. Apart from Ogle's impressive explanations of how the various plumbing technologies worked - she clearly subscribes to the notion that form follows function - the author appears to have little interest in the fixtures themselves. At one point. Ogle even articulates her mistrust of artifacts as historical evidence, stating that "the obvious explanations...do not fit the facts." And classic references in the material history of American plumbing, such as May Stone's 1979 article, are not cited.² Although she makes extensive use of primary sources in the history of domestic architecture, most notably the popular pattern books by Samuel Sloan and George E. Woodward, secondary sources in the history of domestic space are surprisingly absent.

Furthermore, although there are more than thirty illustrations in *All the Modern Conveniences*, there are no direct references to these in the text nor is there a list of the images included. They act, rather, simply as background illustrations to a different sort of story.

The weakest aspect of All the Modern Conveniences is the author's insistence throughout the book that plumbing was a mark of American "civilization." Ogle associates developments in plumbing with national character and stability, presuming, like many publications in the multi-disciplinary field of American Studies, that such demands (and progress) occurred only in the United States. Readers from other civilizations may find especially irksome the numerous references to American "perfection" and the "machine-loving people," without any explanation as to why the author believes Americans to have such attributes. She goes so far as to claim that American plumbing is the most elaborate in the world, adding that "plumbing is almost as much a part of our national identity as our inbred belief in the superiority of the American way of life." And the author's numerous suggestions that the nineteenth century is the

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first period of plumbing, of course, neglects the substantial innovations in drainage and plumbing made by Roman engineers, medieval monks, and other civilizers.

All the Modern Conveniences concludes with a fascinating rumination on methods and assumptions in the history of technology, including commentary on the relevance of material culture studies. This section may have been better placed in the book's introduction, but still, it provides a penetrating glimpse of the ways in which the author has formulated her questions and worked through the difficulties of studying an aspect of our lives often purposely hidden.

NOTES

- Nancy Tomes, "The Private Side of Public Health: Sanitary Science, Domestic Hygiene, and the Germ Theory, 1870–1900," Bulletin of the History of Medicine 64, no. 4 (Winter 1990): 509–39.
- 2. May N. Stone, "The Plumbing Paradox: American Attitudes toward Late Nineteenth-Century Domestic Sanitary Arrangements," *Winterthur Portfolio* 14 (Autumn 1979): 284–309.

Arno Borst, The Ordering of Time : From the Ancient Computus to the Modern Computer

Gerhard Dohrn-Van Rossum, History of the Hour : Clocks and the Modern Temporal Orders

JEAN-FRANÇOIS GAUVIN

Borst, Arno. *The Ordering of Time : From the Ancient Computus to the Modern Computer.* Traduit de l'allemand par Andrew Winnard. Chicago : University of Chicago Press, 1993. x, 168 p., 25 ill. Reliure caisse, 39,95 \$, reliure papier, 17,95 \$, ISBN 0-226-06659-2.

Dohrn-Van Rossum, Gerhard. *History of the Hour : Clocks and the Modern Temporal Orders.* Traduit de l'allemand par Thomas Dunlap. Chicago : University of Chicago Press, 1996. xi, 455 p., 70 ill. Reliure caisse, 29,95 \$US, 23,95 £, ISBN 0-226-15510-2.

L'humanité de cette fin de siècle est plus que jamais à la merci d'une entité ubiquiste qui, depuis plus de 2000 ans, puise sa source de pouvoir à même le génie ironique de sa proie : le Temps. La vie des gens modernes est réglée au quart de tour par une dimension temporelle que l'être humain a lui-même définie. Quotidiennement, combien de fois demandezvous ou vous faites-vous demander : « Quelle heure est-il? » Combien de phrases toutes faites, telles *perdre* son temps, *donner* son temps, *tuer* le temps et *laissez les bons temps rouler* ont été incorporées aux langues et dialectes des différentes nations du monde? Cette entité plusieurs fois séculaire, créée et maintenue par les gens, nous aurait-elle aujourd'hui entièrement assujettis? C'est l'histoire fascinante de cette création du concept de temps que tentent de retracer à travers les âges les deux ouvrages ici présentés.

Ces derniers, d'ailleurs, s'avèrent être de bons compagnons. Bien appuyé par une analyse concise et circonspecte échelonnée sur plus de deux millénaires, Borst se consacre, dans The Ordering of Time, aux utilisations et aux transformations d'un des plus importants précurseurs de la conception moderne du temps : le comput. Quant à Dohrn-Van Rossum, son History of the Hour relate l'émergence des horloges mécaniques et publiques, l'apprivoisement du concept des « heures aux durées identiques » et les transformations sociales, économiques et culturelles importantes qu'ont entraînées ces innovations. De toute évidence, les auteurs ont eu la volonté de faire davantage qu'un simple historique des concepts temporels en fonction dé leurs instruments scientifiques respectifs. Cependant,

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