

# Technology and Culture

Editorial Office • The University of Oklahoma  
Cate Center 4 • 332 Cate Center Dr., Rm. 484  
Norman, OK 73019 • USA  
405.325.2311 • techculture@ou.edu

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Baywood Publishing  
Publicity Department  
26 Austin Ave.  
P.O. Box 337  
Amityville NY 11701

To the Baywood publicity department:

Herewith tearsheets of reviews of Baywood publications that appeared in the January 2010 issue of *T&C*.  
Thanks once again for providing review copies of these books.

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**The Language of Work: Technical Communication at Lukens Steel,  
1810 to 1925.**

By Carol Siri Johnson. Amityville, N.Y.: Baywood, 2009.  
Pp. viii+200. \$49.95.

How should the history of technical communication relate to the history of science and technology? The former has yielded only a smattering of published work since the 1960s, with the first book-length treatment, Elizabeth Tebeaux's study of technical writing during the English Renaissance, not appearing until 1997. Now, Carol Siri Johnson makes a significant contribution to the literature in this case study of Lukens Steel, a storied southeastern Pennsylvania family enterprise. A professor in the humanities department at the New Jersey Institute of Technology, Johnson understands records of incoming and outgoing materials and memoranda of maintenance and modification of equipment as a form of literature and a technology. From this detritus of the quotidian industrial routine she reads a teeming secret life, one that she claims can lend new insight into industrial civilization, particularly the role of workers in increasingly collective forms of innovation.

As befits her training in studio art and English, Johnson combines the study of material culture with discourse analysis. Drawing mainly from the large store of Lukens correspondence at the Hagley Museum and Library, she is chiefly concerned with the shift from spoken, tacit knowledge exchanged between small groups of people to the growth of writing as a means of storing, analyzing, and communicating technical knowledge within "discourse communities." From this perspective, industrialization was contingent on the expansion of literacy and the rise of a network of groups inside and outside factory walls that shared and solved technical problems.

Although there are tantalizing prospects for interdisciplinary analysis here, Johnson's theoretical framework fits awkwardly with the reality she records on the shop floor. Few would dispute the claim that literacy and technological progress go hand in hand, but she adopts this position a priori and speaks largely in general terms. Nearly half of this slim volume consists of photos of diagrams and text, hardly any of which Johnson directly addresses for their semiotic or technological significance. Presumably she believes that the material's historical import can be better demonstrated through a sample compilation of its growth in volume over time. For the reader anticipating a sustained exegesis of technical communication, this is disappointing. One also suspects that such missives played a smaller role in the daily lives of shop-floor workers than Johnson implies, given the evidence marshalled. Most written communication appears instead to have been exchanged among "experts"—managers and specialists—especially for empirical quality control before the chemistry of steelmaking was well understood. A leading maker of plate in the late nineteenth and early twentieth centuries, Lukens was pressured by railways and the federal government to produce a uniform product in a period when boiler explosions were common. But Johnson never addresses the problems of how a discourse community governed by dialogical conventions operated in a pre-scientific technological environment where facts remained in dispute, nor how technical communication contributed to the evolution of scientific steelmaking at Lukens.

The most interesting aspect of this study is that it seems to suggest, contra its thesis, that Lukens thrived in the *absence* of “rational” forms of communication and management. In the 1870s, company patriarch Charles Huston organized the business into works and office divisions administered respectively by his two sons, a system that became increasingly inefficient as the firm expanded and the brothers grew alienated from one another. For all his skill in metallurgy, plant manager Charles Lukens Huston did not know exactly how many employees he had, admitting as late as 1925 that “[w]e have no formal methods of dealing with the workers.” Yet for years the company prospered as a leading supplier of plate to railroads and shipyards, suffering its first major setback only in the brief post-World War I recession. This in itself is fascinating, a coda to existing literature on the indeterminate benefits of scientific management on industrial productivity.

Interdisciplinarity never truly flourishes in *The Language of Work*. Nevertheless, Johnson succeeds in identifying industrial technical communication as fruitful terrain for analysis, raising interesting questions and illuminating the pitfalls and potentialities of blending the methods of the social sciences and literary arts in studies of science and technology.

MATTHEW N. EISLER

Dr. Eisler is assistant professor of history at the University of Western Ontario.