



Elizabeth L. Eisenstein, *Divine Art, Infernal Machine: The Reception of Printing in the West from First Impressions to the Sense of an Ending*

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mills, and windmills, but an impetus toward growth through transregional and highly capitalized enterprises ultimately militated in favor of coal. With expansion on this scale, sustainability was no longer intrinsic to the fuel economy. The real crisis, however, was not ecological but social and institutional: economic liberalism in arms with state forestry caused even firewood to exit the moral economy and acquire a market price, to the detriment of the poor. Along these lines, Radkau suggests that we read early industrial labor history, too, in light of the substitution of iron for wood in the production of machine tools: therein lay the “loss of skills, versatility, and autonomy” (233).

Having alluded earlier in the book to what seem to be inherent contradictions between wood’s growth requirements and “defects,” on the one hand, and industrial processes, on the other hand, Radkau proceeds to document the industrialization of the timber sector and wood-based industries. Although wood has been structurally disaggregated through industrial methods, the inventions of plywood, fiberboard, and chipboard have allowed wood to return to the fore in both construction and furniture making. More intensive use of the forest worldwide has, in turn, sharpened debates about the forest in terms of biodiversity and climate change. In some surprising ways, a new Wood Age has arrived.

The history’s final chapter discusses Asian patterns of wood use and forest conservation through brief case studies of Japan, China, India, and Nepal. This material, while familiar to environmental historians, does bring in a comparative perspective, one that largely allows Radkau to champion his European story: the somewhat triumphalist lessons are that Europe’s state traditions, legal channels, and very nature—its climate, latitude, and soils that allow the forest to regenerate with little assistance—have together written a history of long-term forest conservation.

Yet this unabashed Eurocentrism barely masks a fundamental Germanocentrism: the overwhelming majority of Radkau’s analyses bear upon German-speaking Europe. Second to Germany is Great Britain in the author’s attention, and third in importance is the United States—North America appearing largely as a foil for European differences. Readers will learn almost nothing about the Mediterranean forests—where lessons about their health and continuity appear less triumphal than cautionary—and very little about France or even highly forested Scandinavia and Russia. Fortunately, Radkau tempers his German synecdoche with a sense of contingency and contradiction that makes *Wood: A History* a complex account that stands to nurture debate about the historical bases for sustainability.

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Divine Art, Infernal Machine: The Reception of Printing in the West from First Impressions to the Sense of an Ending. By *Elizabeth L. Eisenstein*. Material Texts.

Edited by *Roger Chartier* et al.

Philadelphia: University of Pennsylvania Press, 2011. Pp. xiv+368. \$45.00.

Elizabeth Eisenstein’s *Divine Art, Infernal Machine: The Reception of Printing in the West from First Impressions to the Sense of an Ending* offers a complex and intriguing survey of attitudes toward the initially novel, then dominant, then allegedly declining medium of print from the incunabula era to the modern age. Rich in examples, the book follows a chronological path in seven chapters through a cluster of key debates at the center of which lies the question of the beneficial or detrimental role of the printing press. Some of the controversies will, of course, be familiar from Eisenstein’s earlier work, in-

cluding those highlighted in the early chapters on “civil war in Christendom” and the “knowledge industry” of the Renaissance. A fourth chapter, on the eighteenth century, is followed by three on the nineteenth and twentieth centuries addressing the mechanization of print and the rise of mass journalism.

At one level, the book’s key moves remain oriented by the author’s massively influential work into the transformative effects of the appearance and fast-spreading uses of movable-type printing in Europe in the centuries following the technology’s introduction.¹ Recent scholarship has probed the ways in which Eisenstein might have overplayed her cards, pointing to the cultural specificity of the “printing revolution,” the relevance of which for, say, rural peasants² or within the Muslim world is hardly self-evident. Geoffrey Roper points to the appearance in 1979 of a major history of the Arabic book that, in contrast to Eisenstein’s study published in the same year, “allocated a mere 11 of its 280 text pages to the printed book.”³ Moreover, according to Adrian Johns’s powerful critique, even within the print-world of early modern Europe, the press may not have had the kinds of effects Eisenstein attributed to it with her emphasis on key “features” such as the standardization of texts and the rationalization of information, which provided the framework for an epistemological consensus essential for scientific progress and social modernization. Arguing that the norms of the first printing age were not suddenly greater accuracy and access but textual corruption and commercial piracy, Johns insists that any consensus about print’s credibility as a vehicle of reliable information emerged only very slowly, over the course of centuries.⁴

Eisenstein’s focus in *Divine Art, Infernal Machine* on “impressions” rather than realities—or, as she writes, quoting Michael Warner, on “the way we think about and perceive print” (quoted on ix)—reorients her analysis in significant ways, suggesting the degree to which Johns’s critique, as remarkably innovative and illuminating an analysis of the invention of “print culture” as it remains, stands nonetheless as something of a non sequitur with respect to Eisenstein’s premises. For her interest has always been more in mind-sets than in concrete facts: “The initial increase in output did strike contemporary observers as sufficiently remarkable to suggest supernatural intervention,” Eisenstein noted in *The Printing Press as an Agent of Change*.⁵ The charge of technological determinism so often leveled at Eisenstein risks, in a sense, ascribing to her the technological determinism of the early modern observers that she chronicles. Her new study posits that while qualities such as “uniformity” and “exactitude” did not objectively characterize the books coming off sixteenth- and seventeenth-century presses, they were quickly assumed by readers to be essential traits of printed texts. Eisenstein cites Defoe’s *History of the Devil* (1727), which traced the Faust myth to the amazement of fifteenth-century Parisians encountering,

¹ See Elizabeth L. Eisenstein, *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe*, 2 vols. (Cambridge, 1979); a condensed version was published as *The Printing Revolution in Early Modern Europe* (Cambridge, 1983).

² Natalie Zemon Davis, “Printing and the People,” in *Society and Culture in Early Modern France* (Stanford, CA, 1975), 189–226.

³ Geoffrey Roper, “The Printing Press and Change in the Arab World,” in *Agent of Change: Print Culture Studies after Elizabeth Eisenstein*, ed. Sabrina Alcorn Baron, Eric N. Lindquist, and Eleanor F. Shevlin (Amherst, MA, 2007), 251. The study referred to by Roper is Maḥmūd ‘Abbās Ḥammūda, *Tārīkh al-kitāb al-Islāmī* (Cairo, 1979).

⁴ See Adrian Johns, *The Nature of the Book: Printing and Knowledge in the Making* (Chicago, 2000).

⁵ Eisenstein, *The Printing Press as an Agent of Change*, 1:50.

for the first time, the printed books that Gutenberg's partner, Johann Fust, brought with him on a promotional tour: "They observed the exact agreement of every Book one with another. . . . [They] concluded that it must be the Devil, that it was done by Magic and Witchcraft" (2). It is the speed with which this surprise turned to expectation that, for Eisenstein, defined the "printing revolution," a phenomenon that was, by her account, largely a triumph of marketing. She highlights a range of fifteenth-century colophons and other paratexts, including a preface by the humanist Bonus Accursius playing up his 1475 edition of Ovid by praising the superiority of print over manuscripts, for "when the impression . . . is correct[,] . . . it runs through all the copies always in the same order" (11). For Eisenstein, these texts show that, within decades, observers influenced by the sales pitches of entrepreneurial printers did identify typography, despite its lingering formal and categorical similarities with manuscripts, as a distinct medium, the singularity of which lay in the features she underscored, foremost being the ability to standardize a text across multiple copies with a theretofore unheard-of degree of exactitude. The absence of such qualities was, to be sure, also noted—but this hardly changes the fact that contemporaries expected printed books to be defined by a regularity and trustworthiness. Their absence was viewed as a deficiency and ascribed to misuses of the press by incompetent and avaricious printers.

If, in the opening chapters, *Divine Art, Infernal Machine* returns to earlier views in light of recent critiques, views that sought to define a precise inflection point in history, the big shift comes with the adoption in the subsequent chapters of a *longue durée* perspective, which traces polarized perceptions of the press from the Renaissance to the modern era. It's an ambitious and often extremely insightful undertaking. The long-run view introduces, moreover, intriguing tensions, especially insofar as it places Eisenstein in a new role. Less the proponent of sudden change, she adopts a decidedly relativist standpoint, underscoring a tendency, throughout the centuries, to overstate the impacts of print, whether they are construed too positively (print as an expression of Divine Providence or Enlightenment) or too negatively (print as a source of decadence and epistemological chaos). Eisenstein describes in almost identical wording as "setting the best of the past against the worst of the present" an array of attitudes across the ages: that of the Renaissance curmudgeon who assailed the printed book and the "noisy, dirty, and smelly" workshop culture in which it was produced, in comparison with the dignified world of the monastic scriptorium (26); of the nineteenth-century aesthete who now upheld the beauty of the hand-pressed tome against the vulgarity of the mass-produced pot-boiler (196); and of the contemporary media critic who today bemoans the decline of in-depth print journalism and the rise of "sound-bite" television news (208).

The impression we get is thus one of circularity rather than change: the same arguments, about the good or bad effects of increased information and commercialization, keep returning. This is a crucial perspective, especially as we find ourselves in the midst of another "media revolution" that tempts us to overstate its earth-shattering effects and the absolute clarity of the oppositions (between print and digital) on which it rests. However, the *longue durée* framework raises—no doubt appropriately—more questions than it answers: is the "change" associated with the printing press, especially in the progressive account expressed by Condorcet in the eighth stage of his *Sketch of a Historical Tableau of Human Progress* (1795), then just a *trompe-l'oeil* effect of our presentism, leading us to see as enlightened abundance (or nightmarish glut) what will soon be easily identifiable as crude ignorance (or virtuous naïveté)?

It's hard to believe this is Eisenstein's view. She opens with a preface highly conscious of our age's justifiable suspicions of the old triumphalist narratives on which the

first stories of print's transformative importance had been built. Here, she struggles with the quandary of avoiding such pitfalls while resisting an alternative conclusion that the printing press was never more than an agent of exploitation and mass deception. Eisenstein remains committed to her belief in the progressive role that print has played. In *Divine Art, Infernal Machine*, she takes the opportunity to articulate a nuanced and sometimes ambiguous view of this change—one that won't satisfy her critics yet remains a powerful and important interpretation of print's influence as the preeminent mechanism not simply of increased knowledge but of a self-awareness built on a sense of the limits of this knowledge and of a respect toward what we don't know.

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The Culture of Correction in Renaissance Europe. By *Anthony Grafton*. The Panizzi Lectures, 2009.

London: British Library, 2011. Pp. xii+244. £30.00.

Scholarship, Commerce, Religion: The Learned Book in the Age of Confessions, 1560–1630. By *Ian Maclean*.

Cambridge, MA: Harvard University Press, 2012. Pp. xvi+380. \$49.95.

These breathtakingly erudite studies of early modern print culture both derive from lecture series, but their respective remits and approaches contrast so significantly as to make them a complementary pair. Anthony Grafton covers over two hundred years in surveying a small caste of erudite professionals: the printers' correctors, who besides correcting proofs often produced paratexts and acted as translators, revisers, and copy editors. Ian Maclean addresses a broad range of publishing practices across Europe over several decades as he considers the effects of commercial practices on the scholarly book trade in the context of the religious and economic upheavals of the late Renaissance. Indispensable for book historians of the period, these volumes are also methodologically valuable for specialists in other periods or approaches.

Comprising three very substantial chapters, Grafton's engagingly written work both reflects and enriches key long-term trends in book history: the consideration of books as collaboratively shaped products and the tracing of their producers' respective roles. Grafton draws on a wide range of sources—not only manuscripts and printed books (images as well as text) but also archival materials ranging from correspondence to commercial records to corrected proofs. Exposition alternates between case studies and broad-brush overviews (the latter liberally interspersed with mini-examples drawn from diverse regions and periods), which complement each other to produce a persuasive picture of the correctors' highly specialized calling. Inevitably, the picture is diverse: varying local conditions are noted, even as broad tendencies are drawn out. Correctors, it emerges, were engaged in diverse editorial tasks, "at the front as well as the rear end of the printing process" (13). While some of their skills were long-established in book production, others were responses to technological or political changes. Hence the commercial value of a publisher's ability to claim, rightly or wrongly, that a text improved on previous versions was bound up, in the case of the most illustrious printers, with a philological concern for accuracy—not that their interventions were always welcomed by authors, for whom occasional howlers weighed much more heavily than globally high standards of rigor and vigilance. Grafton shows clearly that correctors occupied a limi-