

Review: The Importance of Being Printed

Reviewed Work(s): *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early-Modern Europe* by Elizabeth L. Eisenstein

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Source: *The Journal of Interdisciplinary History*, Autumn, 1980, Vol. 11, No. 2 (Autumn, 1980), pp. 265-286

Published by: The MIT Press

Stable URL: <http://www.jstor.com/stable/203783>

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The Importance of Being Printed

The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early-Modern Europe. By Elizabeth L. Eisenstein (New York, Cambridge University Press, 1979) 794 pp. I \$29.50 & II \$24.50 or \$49.50 the set

Anyone who wishes to know what an early printing-house was like should begin with the *Orthotypographia* of Jerome Hornschuch. The engraving by Moses Thym that precedes Hornschuch's text shows a printer's staff hard at work. In one small room a compositor sets type, a corrector reads copy, a warehouseman sorts paper, a printer and an inker work a handpress, and a workman lifts wet sheets to dry on a ceiling-level rack. In the background, a girl comes through the door, clutching a jug of beer, the pressman's traditional perquisite; in a corner, an author speaks excitedly to an unidentified companion. In the foreground, dominating the scene, stands the master-printer—a majestic, Prospero-like figure, who seems to be counting on his fingers.¹

The picture alone reveals some of the complexities and the fascination of early printing and, above all, its unprecedented employment under one roof of intellectuals and craftsmen, scholars and entrepreneurs. Hornschuch's text tells us even more. It was written by and for correctors, the new class of educated printing workers. It demanded that they master a range of skills no earlier job would have required. They had to grasp the mechanics of printing and the intellectual principles of consistent spelling, punctuation, and proofreading. It asked the author as

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0022-1953/80/020265-22 \$02.50/0

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1 Philip Gaskell and Patricia Bradford (eds. and trans.), *Hornschuch's Orthotypographia*, 1608 (Cambridge, 1972). I follow the excellent analysis in Percy Simpson, *Proof-Reading in the Sixteenth, Seventeenth and Eighteenth Centuries* (London, 1935), 126–130.

well as the printer to stretch himself. He was required to appreciate the possibilities printing offered for exact and attractive reproduction of his work, to learn to give his printers clean copy, to help them choose an appropriate type-face, and to leave them alone to get on with printing and proofreading his work. Publication as we know it, that drawn-out struggle among author, businessmen, and craftsmen, had come into being.

Early modern historians have long been interested in this strange little world of the printing-house. Eisenstein challenges them to do more. The burden of her book is that the printing-house was more than an important locus of cultural and social

Fig. 1 A Renaissance Printing House.



SOURCE: From Jerome Hornschuch, *Orthotypographia* (Leipzig, 1608), courtesy of the Joseph Regenstein Library, University of Chicago.

change; it was the crucible in which modern culture was formed. But since cultural historians have persistently ignored its pervasive influence, they have given a distorted account of the Renaissance, the Reformation, and the Scientific Revolution.

Eisenstein began to work this thesis out more than a decade ago. She developed it in a series of brilliant polemical articles, all of them distinguished by absolute independence from received ideas, an extraordinary range of interests, and a considerable breadth of knowledge. Now she has stated it in the powerful form of a two-volume study teeming with ideas and information. No historian of early modern Europe will be able to avoid a confrontation with the problems she has raised; for that alone we owe her a great debt.²

To be sure, Eisenstein is far too learned and too subtle a scholar to claim that printing by itself brought about the Renaissance, the Reformation, and the Scientific Revolution. Nor does she claim that it affected every area of culture in the same way. Indeed, one of the great strengths of her book is its insistence on the enormous variety and frequent contradictoriness of the developments linked with printing. Yet it is still clear that she sees printing as far more than one among many “factors in modern history.” It changed the directions of existing cultural movements as suddenly and completely as a prism bends and transforms a beam of light. If printing did not create the Renaissance, for example, it nonetheless made it undergo a sea change. Printing made an Italian movement of limited scope and goals into a European one. It preserved in unprecedented quantities and disseminated at an unprecedented speed the classical discoveries of humanists, thus preventing their classical revival from being as limited and transitory as those of the Carolingian period and the twelfth century. And it made enough sources of information about the past available to all readers so that men came for the first time to see the ancient world as something clearly different from their own. Without printing, the characteristic Renaissance sense of history and sensitivity to anachronism could never have widely established themselves.

2 Eisenstein, “Clio and Chronos,” *History and Theory*, Beiheft VI (1966), 36–64; *idem*, “The Advent of Printing and the Problem of the Renaissance,” *Past & Present*, 45 (1969), 19–89; *idem*, “L’Avènement de l’Imprimerie et la Réforme,” *Annales*, XXVI (1971), 1355–1382.

In the field of religion, printing had rather different effects. It spread Luther's message with amazing speed and so preserved it from the suppression that had been the fate of medieval heresies. But that, after all, has long been a commonplace of Reformation historiography. For Eisenstein, the role of printing in preparing the way for the Reformation holds more interest than its role in spreading it. She argues persuasively that the printing press did much to undermine the authority of the Church simply by making available to a wide public Biblical texts, with all of their apparent contradictions, as well as by spreading new forms of devotional literature and changing old ones.

For science, finally, printing served still other ends. By making available complete and newly accurate texts of the great ancient works, above all those of Ptolemy and Galen, it created a new foundation of theories, methods, and data on which practitioners of the classical sciences could build more systematically than would ever have been possible in the age of scribes. By making possible the accurate reproduction and systematic improvement of illustrations, it literally revolutionized the collection and checking of data about the natural world. The wide diffusion of classical and modern texts enabled scientists to educate themselves and to become aware of contradictions that had not bothered the less well-informed readers of medieval times. And it did more than any other force to create the disciplinary communities and standards that characterize modern science, with its emphasis on collaboration and competition.

The protagonist in each of these movements is the master-printer, a pioneer both as businessman and as intellectual. It was in his shop that artisans came together with intellectuals to create the greatest works of the new science; it was his opposition to authority, something almost inherent in the nature of his calling, that turned networks of printing-shops into the relays along which ran messages of change.

These are only some of Eisenstein's main arguments. No summary can do justice to so rich a book. Every reader will have his favorite pages; my own, perhaps, are those in which she treats the divergence between popular and learned traditions in religious literature after the Reformation and those in which she speculates strikingly about the effects of manuals of "civility" on the relations between parents and children. Every reader will also profit

from the many epigrammatic obiter dicta that enrich the book. Eisenstein is often more perceptive than professional students of the fields she treats. She is absolutely right to point out that the Renaissance recovery of classical scientific works was not a retreat to blind worship of authority but the indispensable foundation for the Vesalian and Copernican revolutions—a point on which many historians of science still go wrong. More generally, she is right to hold that historians of ideas, especially in the English-speaking world, have paid far too little attention to the social, economic, and material realities that affected past intellectuals, and to point out in particular that the conditions of publication deserve a more prominent place among those realities than even the broadest-minded intellectual historians have accorded them.

For all of the excitement it inspires, however, Eisenstein's book also leaves the reader with a certain uneasiness. It is not surprising that in 700 pages of vigorous argument she has sometimes missed her aim, or that at times she seems to be tilting at windmills rather than real opponents. What is more surprising, and causes more concern, is that many of her errors and exaggerations seem to stem directly from the goals at which she aims and the methods she has chosen.

Eisenstein has decided to do her research not in primary but in secondary sources. She herself describes the book as “based on monographic literature not archival research” (xvi). What she does not explain is why she has abstained so rigorously from studying the thousands of published primary sources on the effects of printing that are available in any major scholarly library. Anthologies of early prefaces and other documents can help to initiate a reader into the field. The colophons of incunabula give us a chance to watch dozens of editors and printers at work, and thousands of such texts are accurately reproduced in the modern catalogs of early printed books. The letters of many of the most influential editors can be read in well-annotated modern editions. And, of course, the early printed books that fill the shelves of the Folger Library, where Eisenstein did much of her reading, are their own best witnesses.³

3 The best place to begin is Hans Widmann, Horst Kliemann, and Bernhard Wendt (eds.), *Der deutsche Buchhandel in Urkunden und Quellen* (Hamburg, 1965), 2v., which provides samples of almost every relevant sort of document. For prefaces, see, e.g., Beriah Botfield (ed.), *Prefaces to the First Editions of the Greek and Roman Classics and of the Sacred*

One need not do “archival research” to master these materials; but though Eisenstein has consulted some of them, they have not left much of a precipitate in her book. What a pity, one feels, that she has filled her pages with ungainly chunks of quotation from modern textbooks and articles, with other scholars’ summaries and descriptions. Such passages block the lively flow of her prose. It seems a shame that she did not replace them with direct readings of the sources and with well-chosen plates (she uses no illustrations at all). What a pity, for example, that she did not enrich her discussion of the spread of Luther’s writings with a quotation from Johann Froben’s splendid letter to the reformer:

The Leipzig book dealer Blasius Salomon gave me a selection of your writings at the last Frankfurt Fair. Since they received much applause from scholars I reprinted them at once. We have sent 600 copies to France and Spain. They were bought up in Paris, and were read and praised by the scholars at the Sorbonne, so our friends have reported to us . . . Calvo too, the Pavian book dealer, a well-educated man and a friend of the Muses, took a considerable number of your writings to Italy in order to retail them in every city. In doing so he is concerned not to make money but to serve the new devotion as best he can. He promised that he would send epigrams applauding you by all the scholars in Italy . . . Moreover we have sent your works to Brabant and England.⁴

Here we see a printer taking on just the sort of innovative role as both entrepreneur and intellectual that Eisenstein’s thesis calls for.

Scriptures (Cambridge, 1861); Eugene F. Rice, Jr. (ed.), *The Prefatory Epistles of Jacques Lefèvre d’Etaples and Related Texts* (New York, 1972); Giovanni Orlandi (ed.), *Aldo Manuzio Editore: dediche, prefazioni, note ai testi* (Milan, 1975), 2v. (the rich introduction by Carlo Dionisotti is by far the best study in existence of Aldo). The richest single source for colophons is the *Catalogue of Books Printed in the XVth Century Now in the British Museum* (London, 1963–1971; rev. ed.), 12v. The serious student will also consult older works, above all Ludwig Hain, *Repertorium Bibliographicum* (Stuttgart, 1826–1838), 2 v.; the supplements by D. Reichling (1905–1914) and W. A. Copinger (1895–1902). He will go when possible to the greatest of all such lists, the *Gesamtkatalog der Wiegendrucke*, which is now being continued after a hiatus of many years and is up to the letter F. For editors’ letters see, for example, P. S. Allen, H. M. Allen, and H. W. Garrod (eds.), *Opus Epistolarum Des. Erasmi Roterodami* (Oxford, 1906–1958), 12v.; A. Hartmann (ed.), *Die Amerbachkorrespondenz* (Basel, 1942–1974), 8v. Naturally, many sixteenth-, seventeenth-, and eighteenth-century editions remain indispensable—for example, Pieter Burman (ed.), *Sylloge Epistolarum a viris illustribus scriptarum* (Leiden, 1727), 5v.

4 Widmann et al., *Der deutsche Buchhandel*, I, 345.

A rather limited amount of reading—certainly less than a year’s work, and she worked for ten—would have enabled her to turn up many passages as revealing as this one and to excise many unnecessary dead patches from every chapter. As the book stands, Eisenstein’s few excursions into the documents tantalize the reader without satisfying him. Again and again, the book comes alive as an early intellectual is quoted or an early book or print is discussed; but all too soon we are back in a world of textbook-style generalities.⁵

In some ways, too, the general plan of Eisenstein’s structure is as troubling as its foundations are disappointing. She has not told a story but carried on a series of arguments about the importance of printing in a great many fields over two centuries. As a result, she has tended to pull from her sources those facts and statements that seemed to meet her immediate polemical needs, both positive and negative. Sometimes the statements that she quotes are torn so far from their original context that they take on a meaning that their author could not have intended, or are denounced for failing to meet standards that their author could not possibly have reached. Eisenstein criticizes textbooks as if they had been meant to meet the same rigorous standards as monographs. She dissects incidental remarks as if they had been meant to describe complex events and situations in a complete and final way. And she tends, especially in her chapter on the Renaissance, to criticize modern historians in the light of her own interests and knowledge rather than in that of their intellectual contexts. Thus, she does not try to understand *why* Jacob Burckhardt saw the Renaissance as a piercing of a veil that had long hung between men and the natural world; instead, she suggests that his views should be “reformulated” to take into account the role of printing and the continuities between medieval and Renaissance culture that historians have discovered since Burckhardt’s time (226). Surely it would be more sensible to try to understand Burckhardt’s methods and standards than to criticize him for not living up to ours. These tactics infuse into parts of Eisenstein’s book an unpleasant, and certainly unintentional, tone of hectoring.

5 For example, Eisenstein’s excellent discussion of Andrew Maunsell, though suggestive, breaks off all too soon (106-107).

Yet these attacks on other scholars, however unnecessary, cause less unease than the ways in which Eisenstein sometimes deploys the evidence that they have given her. Facts as well as obiter dicta tend to be pulled out of shape by the force with which she sets upon them. At one point, for example, she argues that the systematic historical study of the ancient world could not come into being until printing had made it possible to have “adequate equipment” for “systematically reconstructing a past civilization” (187). In support of this claim she quotes some lines from a well-known essay by Momigliano, describing the great antiquarians of the sixteenth century. What she does not quote is his description, in the same passage, of the work of earlier antiquarians—in particular, that of Flavio Biondo, whose systematic survey of Roman civilization, *Roma Triumphans*, was completed in the 1450s, well before the existence of printing could have had any impact on the author. “It required at least a century of printing,” says Eisenstein, “however before a ‘systematic collection’ of relics . . . could occur” (187). But what of Biondo’s amazingly complete and accurate description of the material relics of ancient Rome, *Roma Instaurata*? That was completed in the 1440s. And it is fully described in another work that Eisenstein knows—Weiss, *The Renaissance Discovery of Classical Antiquity*. I do not think that anyone who has read the works on which Eisenstein relies would agree that her account of them is entirely judicious. And the case of the antiquarians is, unfortunately, not exceptional. It is hard to see how anything but the desire to prove a point could have led Eisenstein to repeat the old canard that the humanists knew almost nothing about the Middle Ages (190–191). The great humanist histories—Leonardo Bruni, *History of the Florentine People* and Biondo, *Decades*—were precisely histories of medieval Italy, based on wide reading in medieval chronicles and an impressive amount of digging in the archives. These facts are clearly presented in the standard works of Ullman, Baron, and Hay.⁶

6 Arnaldo Momigliano, “Ancient History and the Antiquarian,” *Studies in Historiography* (London, 1966), 5–6; Roberto Weiss, *The Renaissance Discovery of Classical Antiquity* (Oxford, 1969), 68–70; B. L. Ullman, “Leonardo Bruni and Humanistic Historiography,” *Studies in the Italian Renaissance* (Rome, 1955), 321–344; Hans Baron, “Das Erwachen des historischen Denkens im Humanismus des Quattrocento,” *Historische Zeitschrift*, CXLVII (1932–33), 5–20; Denys Hay, “Flavio Biondo and the Middle Ages,” *Proceedings of the British Academy*, XLV (1959), 97–128.

These problems of method and approach affect more than isolated points of detail. No craftsman is better than his tools, and at times the defects of Eisenstein's equipment have injured the very substance and structure of her book. Both her lively survey of the change from script to print and her suggestive speculations about its intellectual consequences suffer seriously from her one-sided presentation of the evidence.

Eisenstein wishes to emphasize how radical the break was between the age of scribes and that of printers. To do so she minimizes the extent to which any text could circulate in stable form before mechanical means of reproduction became available. She suggests that almost no reader in any age of manuscripts could have access to a large number of texts. She both argues and implies that the scribal book trade was a casual and ill-organized affair; she clearly holds that no single scribe could produce any large number of books. She relies heavily on De la Mare's pioneering demonstration that Vespasiano da Bisticci, the most famous Florentine manuscript dealer, operated on a far smaller scale than traditional accounts suggest. And she tends to downplay evidence that lay literacy was increasing rapidly even before printing was invented.⁷

I cannot feel that Eisenstein has done justice to the available evidence. She talks a great deal about Vespasiano's backwardness, but not at all about that well-organized and productive scribe Diebold Lauber, who was innovative enough to issue written broadsides listing and advertising his wares. She says very little about the effects of the new educational institutions that popped up like mushrooms in many parts of Europe during the period 1350 to 1500, which must have had a sizeable impact on the level of literacy among members of the lay elite: for example, the ten German universities, all with law faculties, that were founded between 1365 and 1472. And though she criticizes Kristeller for suggesting that a work preserved in three copies "attained a certain diffusion" (211), she says nothing at all about the well-known studies by Soudek and Schucan, both inspired by Kristeller. These two scholars have proved that some of Bruni's translations from

7 Albinia De la Mare, "Vespasiano da Bisticci, Historian and Bookseller," unpub. Ph.D. diss. (University of London, 1965). This rich work, which Eisenstein uses in a highly selective way, provides much further evidence both for and against her thesis.

the Greek were literally best sellers before printing. Of one of the works studied, more than 200 manuscript copies survive; of the other, more than 300. Many more must have perished. The extant copies belonged to an extraordinary cross-section of the literate, one that included merchants as well as clerics, teachers as well as lawyers and notaries. Such cases make a rather formidable exception to the norms Eisenstein describes.⁸

Nor does Eisenstein say much about the evidence that a private scholar could assemble quite a large and varied library of manuscripts. Niccoli and Salutati had some 800 manuscripts each, which they catalogued carefully and made available freely to other scholars. And even a much poorer man like Poggio, while still a secretary in the Papal Curia, could assemble an astonishingly diverse collection of Latin and Greek texts of every kind. When such men could simply buy manuscripts, they did so. More often they borrowed texts and paid a scribe to copy them. This process had its difficulties—Poggio referred to the scribes who worked for him as “the excrement of the universe”—and collectors were not uncommonly forced to make their own transcripts. Yet the results were libraries far more diverse and rich than one would expect from Eisenstein’s account.⁹

Facts like these suggest that the Renaissance might not have been another transitory revival even if printing had not been invented. They suggest that the experience of collectors and readers changed rather less sharply than one might expect with the advent of printed books. And they suggest that earlier scholars may well have been right to hold that it was new forms of

8 For the text of Lauber’s broadside, see Widmann et al., *Der deutsche Buchhandel*, I, 15–16. For a discussion of the document, see Widmann, *Geschichte des Buchhandels vom Altertum bis zur Gegenwart* (Wiesbaden, 1975), I, 37; Eisenstein mentions Lauber once in passing (13, n. 28). On universities, see Karl Heinz Burmeister, *Das Studium der Rechte im Zeitalter des Humanismus im deutschen Rechtsbereich* (Wiesbaden, 1974), 40–51. On Bruni’s translations, see Josef Soudek, “Leonardo Bruni and his Public: A Statistical and Interpretative Study of his Annotated Latin Version of the (Pseudo-) Aristotelian Economics,” *Studies in Medieval and Renaissance History*, V (1968), 49–136; Luzi Schucan, *Das Nachleben von Basilius Magnus ‘ad adolescentes.’ Ein Beitrag zur Geschichte des christlichen Humanismus* (Geneva, 1973).

9 B. L. Ullman, *The Humanism of Coluccio Salutati* (Padua, 1963), chs. 9–11; *idem* and Philip A. Stadter, *The Public Library of Renaissance Florence: Niccolò Niccoli, Cosimo de’ Medici and the Library of San Marco* (Padua, 1972), ch. 2. Ernst Walser, *Poggios Florentinus: Leben und Werke* (Leipzig, 1914), 104–110. For further information on the contents of libraries before the invention of printing, see Pearl Kibre, “The Intellectual Interests Reflected in Libraries of the Fourteenth and Fifteenth Centuries,” *Journal of the History of Ideas*, VII (1946), 257–297.

education and changes in the nature of governments, rather than the invention of printing, which created the new lay reading public of the Renaissance. At all events, one must regret that Eisenstein's decision to write in so polemical a vein led her to neglect them.

Eisenstein's picture of the printing-house is as bright as that of the scribe's study is dim. These "new centers of erudition," ruled by laymen, became Europe's most active centers of cultural change. We should think in terms of "many print shops located in numerous towns, each serving as an intellectual cross-roads, as a miniature 'international house'—as a meeting place, message center, and sanctuary all in one . . ." (448). In these new circumstances, "the printer's workshop attracted the most learned and disputatious scholars of the day." "Learned laymen . . . were less likely to gather on the church steps than in urban workshops where town and gown met to exchange gossip and news, peer over editors' shoulders, check copy and read proof" (309). Indeed, "Most inhabitants of the sixteenth-century Republic of Letters spent more time in printers' workshops than in 'secluded studies'" (154).

This description certainly fits a few of the great Renaissance print-shops at certain periods: those of Aldo Manuzio in the time of his Academy, Froben in the 1520s, and Christopher Plantin in the 1560s. But I fear that it has little to do with the printing shops that most citizens of the Republic of Letters knew best. Some shops, to be sure, like that of Anton Koberger in Nuremberg, were orderly and well-disciplined operations where the workers arrived and departed at fixed times, while work followed a remarkably regular schedule. But most plants, as McKenzie and others have shown, were typical pre-industrial places of work. Filled with the noise of machinery and the curses of workers when the presses were in operation, noisy with quarrels and dirty, the printing-house was not the sort of place that a gentleman wanted to frequent.¹⁰ And we must not let our prejudices prevent

10 On Koberger, see J. C. Zeltner, *C. D. Correctorum in typographiis eruditorum centuria* (Nuremberg, 1716), 15–16. This work remains the richest collection of information on the activities of correctors in the first two centuries of printing; like many other products of eighteenth-century erudition, it is unjustly ignored by modern scholars, whose own works are rarely as rewarding. D. F. McKenzie, "Printers of the Mind: Some Notes on Bibliographical Theories and Printing-House Practices," *Studies in Bibliography*, XXII (1969), 1–75; Philip Gaskell, *A New Introduction to Bibliography* (Oxford, 1972), 48–49.

us from seeing that most early modern intellectuals saw themselves as gentlemen. They constantly complained that, as Professor Martinus Crusius of Tübingen put it, “the printers’ journeymen hate to set Greek but want plenty of tips; [they’re] an ill-behaved, ignorant rabble.”¹¹ Even scholars whose close friends and relations were printers sometimes indignantly denied that they themselves had ever worked for pay in a printing-shop.¹²

The presence of workmen was not all that made many print-shops unattractive. There was also the absence of scholars. Naturally there were shops, especially the famous ones, where master, correctors, or both were learned and original intellectuals. Paolo Manuzio, for example, bargained with his authors in the perfect Ciceronian Latin that befitted the scholar whose commentaries on Cicero were standard works until the nineteenth century. When Commelin printed a school text of the Greek poet Theognis “to keep his workmen busy,” he could add interesting text-critical and exegetical notes of his own. Such masters naturally attracted the interest of scholars. But I fear that Eisenstein has extended this model of a printing-shop rather too far. Estienne tells us—admittedly, in a polemical context—that most of his colleagues were ignoramuses who printed whatever works academic commentaries offered them, scrimped by refusing to buy good base texts to print from, and hired hacks to write Greek and Latin prefaces under their names, which most of them could not even read. As to the correctors, even Hornschuch admitted that if they were really learned men, “most of them would be off like a shot from this sweat-shop, to earn their living by their intelligence and learning, not by their hands.”¹³

Ample evidence suggests that most Renaissance print-shops

11 Widmann et al., *Der deutsche Buchhandel*, II, 28: “Die Truckergesellen setzen ungern Graeca: hetten aber gern vil Trinckgaelts. Ein loses ungelehrts Gesindlin.” Cf. also Angelo Poliziano, *Epistolarum libri XII* (Amsterdam, 1642), 410: “. . . semidocti illi qui librorum excusoribus operam navant” (“those ignoramuses who work for printers”).

12 Allen et al., *Opus Epistolarum Erasmi*, IX, 398 (Ep. 2581); Isaac Casaubon, *De rebus sacris et ecclesiasticis exercitationes XVI* (Geneva, 1655), 38b–39a; also cited by Zeltner, *Correctorum centuria*, 108–109.

13 See the interesting series of letters to Marcantonio Natta in *Epistolarum Pauli Manutii libri XII* (Leipzig, 1603), III, 155–172. Jerome Commelin (ed.), *Theognidis, Phocylidis, Pythagorae, Solonis et aliorum poemata gnomica* (Utrecht, 1659), ep. ded., sig. A 2^r: “. . . ne operae, dum majora paramus, cessarent.” Henri Estienne, *Epistola de statu suae typographiae*, in *idem* (ed. F. G. Roloffius), *Pseudo-Cicero* (Halle, 1737), ccclxii–ccclxiv. Gaskell and Bradford, *Hornschuch’s Orthotypographia*, 27.

were much less sophisticated places than Eisenstein would have us believe. Her account conveys little of the variety, fragility, and tiny scale of the majority of printing shops. One thinks of the English printers of the sixteenth century, almost all of whom were small-scale operators of no great skill. One thinks, too, of the starving *petits imprimeurs* of the faubourgs Saint Jacques and Saint Marcel, described so well by Parent, clinging together to survive in companies that grew and disintegrated with amazing speed, like primitive organisms seen through a microscope.¹⁴

The intellectual level of many printing shops was as low as their finances were unsound. Consider Estienne's gloomy story about a corrector he had met:

I met one of these fellows who was doing the job of a corrector with such savagery that he ruined every passage where he found the word *procos* (suitors) by putting *porcos* (pigs) in its place . . . "I know," he said, "that *porcos* is the name of a real animal; but I don't think that *procos* refers to animals or anything else in Latin."¹⁵

Anyone experienced in working with early books knows that many of them were, if not untouched by human hands, at least uninspected by human brains in the course of printing. Take the strange case of Paul the Silentary's epigram from the Greek Anthology. Since this poem was written in extremely short verses, Aldo printed it in two columns to save space, with the verses in the following order:

1	2
3	4
5	6.

When the Giunti reprinted Aldo's edition of the Anthology, however, they did not bother to read the epigram and reprinted it with column 2 following rather than flanking column 1. The poem thus became incoherent. The proudest editors and printers in Europe—Badius, Gelenius, Estienne, and Wechel—one after

¹⁴ Ronald B. McKerrow, *An Introduction to Bibliography for Literary Students* (Oxford, 1960; orig. pub. 1928), 281; James Binns, "STC Latin Books: Evidence for Printing-House Practice," *The Library*, XXXII (1977), 1-27. Annie Parent, *Les métiers du livre à Paris au XVI^e siècle (1535-1560)* (Geneva, 1974), 133-135.

¹⁵ Henri Estienne, *Artis Typographicae querimonia*, in *idem, Pseudo-Cicero*, cclxxvi-cclxxvii.

another proceeded to reprint the poem in the same unintelligible form, thus providing striking proof that not one of them employed a corrector who knew Greek. Worse printers made even worse blunders. No wonder, then, that some texts deteriorated so far in the course of several editions as to become unintelligible.¹⁶

After all, printers were businessmen. They had to make money. When, as often happened, this need or the practical difficulties it imposed interfered with scholars' plans, the scholars tended to fly off the handle. Often they were blind to the printer's point of view. Martin Luther, enraged at the bad state of some proofs he had been sent, refused to send any more copy "until I'm convinced that these *Schmutzfinken* and *Geldmacher* are less interested in their own profit than in the books' utility for readers." True, he later changed his mind and sent the proofs. But he never ceased to berate the printers who not only reprinted his works without permission but also made such a bad job of them "that at many points I didn't recognize my own work."¹⁷ Similarly, Nicolaas Heinsius saw the Elzeviers' insistence on printing his works in their favorite small format as the result not of commercial necessity but of an incomprehensible stinginess: "Our printers have been irremediably infected by that wretched custom. They think their books are worthless unless they can be carried around handily by someone who is out for a walk."¹⁸ Given these clashing values and interests, it is not surprising that so many scholars felt that the association with commerce had ruined what could have been the liberal art of printing.¹⁹

I would not deny that Eisenstein's brilliant picture conveys something of the feel of a great house like Plantin's. It is certainly

16 A. A. Renouard, *Annales de l'Imprimerie des Alde, ou Histoire des trois Manuce et de leurs éditions* (Paris, 1834; 3d ed.), 43. Aldo, too, sometimes made use of incompetent correctors, as well-informed contemporaries complained. See Allen et al., *Opus Epistolarum Erasmi*, XI, 288–289 (Ep. 3100); Daniel Wyttenbach, *Opuscula* (Leiden, 1821), I, 360–361. On the deterioration of some other classical texts, see the evidence collected by Estienne, *Epistola de statu suae typographiae*, cccxxxviii–cccli.

17 Widmann et al., *Der deutsche Buchhandel*, II, 16, 327.

18 Hans Bots (ed.), *Correspondance de Jacques Dupuy et de Nicolas Heinsius (1646–1656)* (The Hague, 1971), 78. On Heinsius's relations with the Elzeviers, see the exemplary study by F. F. Blok, *Nicolaas Heinsius in dienst van Christina van Zweden* (Delft, 1949), 92–99.

19 See the evidence collected by Zeltner, *Correctorum centuria*, 18–20; Orlandi, *Aldo Manuzio Editore*, I, 170. Luther quoted in Widmann et al., *Der deutsche Buchhandel*, II, 327–328.

true that bookshops—which, however, were not always printing-shops as well, especially in the seventeenth century—and the great Frankfurt bookfair were gathering places for intellectuals. It is also true that many of the most original products of early modern scholarship and science—Abraham Ortelius, *Theatrum Orbis Terrarum* (Antwerp, 1570) and Andreas Vesalius, *De Humani Corporis Fabrica* (Basel, 1543)—were the result of unusually close collaboration between innovative scholars and responsive printers. But I do think that she paints a pastel-colored picture of the printing house and of the connections that it fostered between town and gown. I wonder if, even in those presses that became the meeting-places of learned men, it was not the attraction of the master-printer’s scholarship, rather than the nature of his activity, that drew others to him. In that sense, was the attraction of Plantin’s printing-house so very different from that of Cujas’ study? We ought to remember that when Lipsius and Plantin held their most serious conversations about religion, they left the work-place and went for a long walk in the country.²⁰

The exaggerations in Eisenstein’s account of the shift from script to print inevitably affect her account of the shift’s ramifications for intellectuals. She holds that the writer in an age of scribes had a fundamentally different relation to his public than the writer of a printed book. The scribal author could not hope that his work would be distributed in anything like a stable form, or even under his name. He could not bring out his private idiosyncrasies for public inspection as Montaigne could in his printed *Essays*. Nor could he hope to win lasting fame from works that were so unlikely to be preserved. “The conditions of scribal culture,” as Eisenstein remarks in another context, “thus held narcissism in check” (233). Indeed, it is probably wrong even to speak of “publication before printing,” as scholars sometimes do.

Here, too, I fear, there is a measure of exaggeration. Surely an author like Petrarch deserves more part in the development of the modern notion of authorship than Eisenstein accords him. He

20 Certainly some great printers took enormous pride in the excellent work that their craftsmen did and made no bones about working right alongside their men in the shop; Paolo Manuzio added a legend to each of the three volumes of his 1554 edition of Demosthenes, stating that he himself had served as corrector (Zeltner, *Correctorum centuria*, 334). But I would still hold that Eisenstein overstates her case. On Lipsius and Plantin, see B. Rekers, *Benito Arias Montano (1527–1598)* (London, 1972), 102, 156–157—a stimulating book, but one to be used with caution. See Basil Hall, “A Sixteenth-Century Miscellany,” *Journal of Ecclesiastical History*, XXVI (1975), 318–320.

took the greatest care to edit and polish his works before he allowed them to be seen. He cut up and rearranged his letters, not so much to portray himself in a better light as to give what he felt would be a clearer picture of his spiritual development. He even concluded one of the collections of his letters with a formal “Letter to Posterity,” in which he speaks to the future reader very much as man to man. True, he feared that some of his works might not survive to find readers, and Eisenstein helps us to grasp the pathos of that fear. Yet he clearly did not find in scribal culture the fearful constraint on self-expression that Eisenstein describes.²¹

In fact, I am not entirely convinced that the process of publication itself changed so radically as Eisenstein holds, especially from the author’s point of view. Kristeller showed long ago that publication followed the same course for a fifteenth-century author whether the book in question was to be copied or printed. The author either made or had made a fair copy of his work, called the *archetypum*. This he gave either to a scribe to copy or to a printer to print. The book was said to be “published” (*editus*) “on the day on which the author first allowed the completed *archetypum* to be reproduced by others.” In either case, the author’s part of the activity of publication remained scribal in character.²²

21 Aldo S. Bernardo, “Letter-Splitting in Petrarch’s *Familiars*,” *Speculum*, XXXIII (1958), 236–241. For the Latin text of “Letter to Posterity” see Petrarch (ed. Giovanni Ponte), *Opere* (Milan, 1968), 886–900; English translation in David Thompson (ed.), *Petrarch: A Humanist Among Princes* (New York, 1971), 1–13. Petrarch expresses the suspicion that future readers will “have heard the bare titles” of his works: Petrarch, *Opere*, 886; Thompson (ed.), *Petrarch*, 1. In fact the *Epistula posteritati* remained incomplete and was therefore not included among Petrarch, *Seniles*. But the majority of Petrarch’s works did circulate in a very carefully finished form; see Hans Baron, *From Petrarch to Leonardo Bruni* (Chicago, 1968), 7–101. In braving the difficulties of publishing his works—and in believing that they would win him eternal fame—Petrarch was, of course, following a path that the Roman authors he knew best had laid out. See esp. Horace, *Odes* III.30 and *Epistles*, I.20; Ovid, *Tristia*, IV.10. He thus had more reason than Eisenstein suggests to believe that his works would survive pretty much intact. In general, Eisenstein’s account fits the histories of technical texts—lexica, grammars, commentaries, and handbooks—and vernacular literary texts far better than it does that of classical or late medieval literary texts, in Greek and Latin, which were valued for the exact form of their wording.

22 Paul Kristeller, “De traditione operum Marsilii Ficini,” *Supplementum Ficinianum* (Florence, 1937), I, clxviii–clxxxii, esp. clxix–clxx, clxxiii. Kristeller’s analysis has now been supplemented and slightly revised in its details by Silvia Rizzo, *Il lessico filologico degli umanisti* (Rome, 1973), 303–323; but his general arguments remain valid. Rizzo’s work is essential reading for anyone who hopes to understand the relations among intellectuals,

If we combine these facts with the findings of students of sixteenth-century printing—with the fact that few authors actually wrote in printing-houses, and the fact that few even came to the printing house to correct proofs—we may see a less radical shift in the life-experience of writers than Eisenstein suggests. If we take into account the vast amount of time that any early modern writer spent in copying—in taking notes, copying unpublished or rare books, and writing his own works—we may be even more inclined to feel that the pace of change has been exaggerated. Scholars remained scribes for a long time. Some of us still are.²³

In the end, however, it is less the process of publication than its intellectual consequences which Eisenstein seeks to illuminate. Her book must be tested as a piece of intellectual history. In this regard, too, it not only brings rewards but inspires misgivings.

Eisenstein tries to show that it was printing, not internal developments in Italian culture, that did the most to create the Renaissance sense of history. To prove this point she must refute a number of influential modern interpretations. She must argue, for example, that Panofsky was wrong to suggest that the Renaissance came to see the ancient world “from a fixed distance” and thus to gain a “total and rationalized view” of it. In Eisenstein’s words, “That a ‘total rationalized’ view of any past civilization could be developed before the output of uniform reference guides and gazeteers seems implausible to me” (186). She admits that such “scribal scholars” as Lorenzo Valla had “a growing sensitivity to anachronism.” But they lacked a “fixed spatial-temporal reference frame” (187). They had little sense of the chronological order in which ancient texts had been composed or of the great disagreements that had sometimes separated their authors. And to reproach early scholars for making historical or

scribes, and printers during the fifteenth century. See also the excellent case study by Helene Harth, “Niccolò Niccoli als literarischer Zensor. Untersuchungen zur Textgeschichte von Poggios ‘De Avaritia,’” *Rinascimento*, VII (1967), 29–53.

23. On authors’ participation in proof-correction, which took every form from standing over the printers while they worked to complete neglect, see the evidence collected by Simpson, *Proof-Reading*; Widmann, “‘Die Lektüre unendlicher Korrekturen,’” *Archiv für Geschichte des Buchwesens*, V (1963–64), 777–826; Binns, “STC Latin Books.” See also Gaskell, *A New Introduction to Bibliography*, 111. For evidence of the “scribal” efforts of scholars long after the invention of printing, see, for example, *Bibliotheca Universitatis Leidensis, Codices Manuscripti, II: Codices Scaligerani (praeter Orientales)* (Leiden, 1910); *ibid.*, IV: *Codices Perizoniani* (Leiden, 1946).

philological errors, as Sez nec and others have done, is to forget the inevitably narrow limits of what they could know.²⁴

Here, too, I fear, Eisenstein's eagerness to prove her thesis has led her to play down a large amount of contrary evidence. Why Renaissance men developed a new historical sense I cannot say. But I do know that they began to do so earlier and had far more success at the enterprise than Eisenstein believes.

One finds a new interest in historical and philological questions among Italian intellectuals from the very beginning of the fourteenth century. Take the case of Giovanni of Verona and the two Plinys. Both the *Natural History* of the elder Pliny and the letters of his nephew, Pliny the Younger, which vividly described the uncle's life and death, were widely read in the Middle Ages. Vincent of Beauvais, for example, quoted hugely from both works. Yet both he and other medieval readers attributed both works to the same man, even though the letters made clear that this view was impossible. For some reason, Giovanni read the two Plinys in a new way. He realized that the elder Pliny could not have written a letter about his own death. And he found this discovery so exciting that he wrote a little treatise about it, which began "It is known that there were two Plinys." The treatise, in turn, found some diffusion in Renaissance manuscripts of the *Natural History*—a fact that suggests that Giovanni's interests and viewpoint were shared by others.²⁵

Discoveries of this kind multiplied throughout the fourteenth century. Petrarch, in particular, made his life into a joyous expedition across the *mare magnum* of classical literature. Modern scholars, especially Nolhac and Billanovich, have taught us to follow the stages of his journey in the margins of his many books. And they have proved that he amassed a systematic enough knowledge of the ancient world to solve many technical problems in a way that can still be accepted. He emended corrupt passages in Livy with impressive dexterity. And he did a better job than a whole team of twentieth-century classicists at identifying some

24 For the fullest statement of his views, see Erwin Panofsky, *Renaissance and Renascences in Western Art* (New York, 1969). Jean Sez nec (trans. Barbara F. Sessions), *The Survival of the Pagan Gods* (New York, 1953).

25 Elmer Truesdell Merrill, "On the Eight-Book Tradition of Pliny's *Letters* in Verona," *Classical Philology*, V (1910), 175-188. Giovanni de Matociis, *Brevis adnotatio de duobus Pliniis Veronensibus*, *ibid.*, 186: "Plinii duo fuisse noscuntur, eodem nomine et praenomine appellati . . ."

of the sources from which the ancient scholar Servius drew his enormous commentary on Virgil.²⁶

Later generations were even more sophisticated and knowledgeable. Salutati and Valla discovered and exposed clear chronological errors in the ancient accounts of Roman history. Bruni wrote a perceptive and well-documented life of Aristotle that set the philosopher's life into a general chronological system (that of the Greek Olympiads) and carefully distinguished his ideas from those of his teacher Plato. Polenton compiled a comprehensive and critical history of Latin literature. He assimilated many of the discoveries of earlier scholars; his section on the Plinys, for example, begins: "Lest anyone be deceived by their identical names, I think I should begin by pointing out that there were two Plinys, uncle and nephew." And he added new ones of his own. He showed that Cicero could not have praised Virgil's sixth Eclogue even if ancient scholars claimed that he had: "Chronology shows that Cicero, who died before the battle of Philippi, could not possibly have praised what Virgil wrote after it." Biondo and Cyriac of Ancona assembled with painstaking care the material relics of the ancient world.²⁷ Biondo also rightly argued that the ancient Romans must have spoken Latin, not Italian—thus showing a considerable ability to imagine a civilization different from his own.²⁸ By the end of the fifteenth century such scholars as

26 Pierre de Nolhac, *Pétrarque et l'humanisme* (Paris, 1907; 2d ed.), 2v.; Giuseppe Billanovich, "Petrarch and the Textual Tradition of Livy," *Journal of the Warburg and Courtauld Institutes*, XIV (1951), 137–208; *idem*, *Un nuovo esempio delle scoperte e delle letture del Petrarca. L' "Eusebio-Girolamo-PseudoProspero"* (Krefeld, 1954). I cite only two of Billanovich's most important works. The serious student will find many more studies by him and his students in the journal *Italia Medioevale e Umanistica*. For a particularly revealing case study, see Lucia A. Ciapponi, "Il 'De Architectura' di Vitruvio nel primo Umanesimo," *Italia Medioevale e Umanistica*, III (1960), 59–99. On Petrarch and Servius, see Eduard Fraenkel, *Kleine Beiträge zur klassischen Philologie* (Rome, 1964), II, 372–373.

27 Ullman, *The Humanism of Coluccio Salutati*, 98–99; H. J. Erasmus, *The Origins of Rome in Historiography from Petrarch to Perizonius* (Assen, 1962), 28–29 (though excellent as an analysis of Valla's argument, this work somewhat overstates Valla's superiority to his contemporaries); Bruni, *Aristotilis vita*, in Ingemar Düring, *Aristotle in the Ancient Biographical Tradition* (Göteborg, 1957), 168–178; Sicco Polenton (ed. B. L. Ullman), *Scriptorium illustrium Latinae linguae libri XVIII* (Rome, 1928), 227, 82. In addition to Weiss, *The Renaissance Discovery of Classical Antiquity*, see Riccardo Fubini, "Biondo, Flavio," *Dizionario biografico degli Italiani* (Rome, 1968), X, 536–559; Bernard Ashmole, "Cyriac of Ancona," *Proceedings of the British Academy*, XLV (1959), 25–41; for a contrasting case, see Charles Mitchell, "Felice Feliciano Antiquarius," *ibid.*, XLVII (1961), 197–221.

28 John Rowe, "The Renaissance Foundations of Anthropology," *American Anthropologist*, LXVII (1965), 1–20, reprinted in Regna Darnell (ed.), *Readings in the History of Anthropology* (New York, 1974), 72.

Angelo Poliziano had arrived at an extraordinarily sophisticated historical understanding of both Latin and Greek culture and had formulated most of the technical methods which modern scholars still use in editing and explicating ancient sources.²⁹

Eisenstein is right to say, as others have before her, that printing dramatically affected the nature of scholarship—that it broadened the range of available sources, made it much easier to learn Greek, and made cross-checking and collation of texts far more practicable.³⁰ But she certainly exaggerates the historical ignorance and ineptness of those whom she demeaningly calls “scribal scholars.” By trying to prevent scholars from modernizing the Renaissance unduly, Eisenstein has made the Renaissance less modern than it really was.

Eisenstein’s account of the Reformation seems to me altogether more rewarding. She is right to point out that the relationship between printing and the Reformation did not begin with the publication of Luther’s first broadside. Printing did offer new careers and a newly widespread power to the reforming literati of Erasmus’s generation. It did offer new opportunities to peddlers of indulgences. I suspect that she is also on the right track when she suggests that printing by its very nature worked against clerical authority.

Yet here, too, exaggeration and unimaginative research sometimes harm her arguments. One would not suspect from her account that there was a rather successful Catholic translation of the Bible into German—much less that it appeared in print before Luther’s complete Bible and went through some 100 editions, seventeen of them during the sixteenth century.³¹ And her account of Simon’s contributions to biblical exegesis is less history than travesty. More engagement with the sources, then, could have enriched this already fascinating chapter and made possible a more subtle approach to the problems it raises.³²

29 See now Grafton, “On the Scholarship of Politian and Its Context,” *Journal of the Warburg and Courtauld Institutes*, XL (1977), 150–188, with extensive references to older studies.

30 As Eisenstein says, this point had been made before, above all by P. S. Allen, *Erasmus: Lectures and Wayfaring Sketches* (Oxford, 1934), 30–40.

31 Widmann, *Geschichte des Buchhandels*, I, 69.

32 Cf. Eisenstein, 321, with Richard Simon, *Histoire critique du Vieux Testament (Suivant la Copie, imprimée à Paris, 1680)*, I, 16–23, 49–50. Whatever Simon was doing—and that is a complex question—he was not “casting in the role of an archivist the prophet who was once believed to have received the Ten Commandments from God on Sinai . . .”

About the Scientific Revolution, finally, Eisenstein makes some of her best points. Her whole second volume is allotted to science. It makes fresher reading than the earlier chapters, perhaps because it is based on more recent research. It rests on a compelling, though incomplete, account of the historiography of science. Many of its arguments carry conviction. In particular, it does seem that the revival and transformation of such descriptive sciences as anatomy, botany, and zoology clearly stemmed, although in different ways, from the new possibilities offered by printing for the checking and correction of data. And her suggestion that the connection between Protestantism and science may have resulted from the relative lack of censorship in Protestant Europe seems plausible.

But even Eisenstein's volume on science suffers from a tendency to exaggeration. She overestimates the instability of manuscript texts and the difficulties involved in gaining access to them. She underestimates the effectiveness of the communications networks that bound intellectuals together across Europe long before 1450—above all, the networks that linked monastic houses and universities. She plays down evidence that does not fit her thesis—for example, Regiomontanus's mastery, derived entirely from manuscript sources, of precisely those problems in astronomy that most exercised Copernicus.³³

These remarks have been intended only to begin a debate that will probably be long and lively. But they do suggest that Eisenstein's enterprise suffers from two flaws at its heart: inadequate foundation in research and exaggerated claims of explanatory power. Even the most suggestive pages of the book contain too much that is misleading.

Eisenstein considered it more "urgent" to amalgamate her ideas in this form than to do further reading, but I confess that I am not certain why she felt this way. Her views have received extended expression in some of the most influential historical journals in the Western world. Since she began to work in this field, moreover, intellectual historians have begun to show far

33 See, e.g., M. L. W. Laistner, *Thought and Letters in Western Europe, a.d. 500 to 900* (London, 1957; 2d ed.), 229; L. D. Reynolds and N. G. Wilson, *Scribes and Scholars: A Guide to the Transmission of Greek and Latin Literature* (Oxford, 1974; 2d ed.), 82-105. Eisenstein's account quite rightly stresses Regiomontanus's pioneering activity as a publisher (584-588); she lays much less stress on the great originality of his work as an astronomer.

more interest in the phenomenon and the effects of printing. The best recent American survey of Renaissance and Reformation culture—Eugene F. Rice, Jr., *The Foundations of Early Modern Europe, 1460-1559* (New York, 1970)—begins with a long discussion of printing and its effects. Historians of science have also begun to show more interest in the effects of printing on the formation of scientific disciplines. And a vastly productive and influential group of historians of printing, including both French and American scholars, has done much to give the subject wide publicity and to win younger scholars to its study. In these circumstances, Eisenstein might well have taken the time to carry out case studies using primary sources.³⁴

“Books do furnish a room”; whether they do anything else depends on those who read them far more than on those who copy or print them. The story of early modern intellectuals must in the end be a history of ideas, however unfashionable that enterprise has come to be. Like all good histories of ideas, it will have to be based on the primary sources. The role of scribes and printers will certainly form part of that history, and we will owe that in some part to Eisenstein’s work. But the story of the medium cannot be substituted for the story of the message.

34 For Eisenstein’s earlier publications, see n. 2 above. For the history of science, see, for example, Robert S. Westman, “Three Responses to the Copernican Theory: Johannes Praetorius, Tycho Brahe, and Michael Maestlin,” in *idem* (ed.), *The Copernican Achievement* (Los Angeles, 1975), 285-345. For recent work on the history of printing and the book, see Eisenstein, 29, n. 71; 30, n. 72.