CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

The press descending from the heavens.

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Copyright Information
More information

The Printing Revolution in Early Modern Europe

SECOND EDITION

Elizabeth L. Eisenstein
University of Michigan, Ann Arbor

CAMBRIDGE
UNIVERSITY PRESS

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Copyright Information
More information

CAMBRIDGE
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org
Information on this title: www.cambridge.org/9781107632752

© Cambridge University Press 1983, 2005

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First edition published 1983
Canto edition published 1993
Second edition first published 2005
Reprinted 2007, 2008, 2009
Canto Classics edition 2012
3rd printing 2015

Printed in the United States of America by Sheridan Books, Inc.

A catalog record for this publication is available from the British Library.

Library of Congress Cataloging in Publication Data

Eisenstein, Elizabeth L.
The printing revolution in early modern Europe / Elizabeth L. Eisenstein. – 2nd ed.
p. cm.
Includes bibliographical references and index.
ISBN-13: 978-0-521-84543-4
ISBN-10: 0-521-84543-2
ISBN-13: 978-0-521-60774-2 (pbk.)
ISBN-10: 0-521-60774-4 (pbk.)
1. Printing – Europe – History. 2. Europe – Intellectual life. 3. Technology and civilization. I. Title.
Z124.E374 2005
686.2'094–dc22 2005003961

ISBN 978-1-107-63275-2 Paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party Internet Web sites referred to in this publication and does not guarantee that any content on such Web sites is, or will remain, accurate or appropriate. Information regarding prices, travel timetables, and other factual information given in this work are correct at the time of first printing, but Cambridge University Press does not guarantee the accuracy of such information thereafter.

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

Contents

List of Illustrations and Maps *page* vii

Preface to the Second Edition xi

Introduction xiii

Part I The Emergence of Print Culture in the West

1 An Unacknowledged Revolution 3

2 Defining the Initial Shift 13

3 Some Features of Print Culture 46

4 The Expanding Republic of Letters 102

Part II Interaction with Other Developments

5 The Permanent Renaissance: Mutation of a Classical Revival 123

6 Western Christendom Disrupted: Resetting the Stage for the Reformation 164

7 The Book of Nature Transformed: Printing and the Rise of Modern Science 209

8 Conclusion: Scripture and Nature Transformed 286

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

Afterword: Revisiting the Printing Revolution 313

Selected Reading 359

Index 373

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

Illustrations and Maps

Illustrations

Frontispiece	The press descending from the heavens.	*page* ii
Title Page	The foundry directed by Minerva along with the printing shop.	iii
1	Medieval scribe taking dictation.	9
2	Similarity of handwork and presswork shown in two fifteenth-century Bibles.	25
3	Visual aid keyed to text, taken from Vesalius.	30
4	A master printer in his shop.	32
5	"Seeing with a third eye": the art of memory as occult lore.	41
6	The figure of Prudence from Comenius's picture book.	43
7	Finger reckoning.	44
8	Interpreting hieroglyphs before the discovery of the Rosetta Stone.	52
9	A medieval world picture in an Elizabethan book.	55
10	"Thou shalt commit adultery," from the "wicked" Bible.	57
11	Architectural rules for the construction of the Corinthian Order.	60
12	A pattern book for sixteenth-century Spanish tailors.	62
13	An "indo-africano."	63
14	One block used to illustrate two different towns: Verona and Mantua.	67
15	One block used to illustrate two different personages: Baldus and Valla.	68

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

16	Two more identical portraits from the Nuremberg Chronicle: Compostella and Gerson.	68
17	A freshly rendered view of Venice.	69
18	A scholastic treatise produced around A.D. 1300.	74
19	A royal entry depicted for armchair travelers.	106
20	Fireworks commemorating Leicester's arrival at The Hague.	107
21	The lay of cases depicted in Moxon's *Mechanick Exercises*.	115
22	An early twelfth-century minuscule bookhand.	135
23	Roman and Gothic type styles.	138
24	An engraving of Erasmus; a woodcut portrait of Luther.	149
25	Portraits of the author and the illustrators of a sixteenth-century herbal.	150
26	A prize-winning engineer advertises his achievement.	153
27	An example of Lutheran propaganda.	166
28	The title page of Foxe's Book of Martyrs.	194
29	Machiavelli's name placed on the Index.	196
30	Portraits of Christopher Plantin and Benito Arias Montano.	200
31	The Antwerp Polyglot: frontispiece and pages of text.	203
32	A page from Commandino's edition of Euclid's *Elements*.	216
33	A Ptolemaic world map and a medieval pictogram.	222
34	An atlas publisher lists his sources.	230
35	Regiomontanus's advance book list.	237
36	A chart printer's challenge to pilots.	239
37	Tycho Brahe advertises himself: two self-portraits.	242
38	Kepler's House of Astronomy and close-up of detail.	248
39	A page from Kepler's *Rudolphine Tables*.	250
40	The three rival theories of planetary motion presented by Kepler.	252
41	The Tychonic scheme preferred over the Copernican by a Jesuit astronomer.	256
42	Works by Galileo and by Copernicus on the Index in 1670.	264

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

43 Moxon promotes his book and advertises his globes on a title page. 268
44 Royal Society sponsorship of Italian science. 276
45 Books banned by Catholics were publicized in Restoration England. 282
46 Title page of Galileo's *Discorsi*. 283
47 "Beyond the pillars of Hercules." 292

Maps

1 The spread of printing in Western Europe during the age of incunabula. 17
2 The spread of printing in Western Europe during the age of incunabula. 18

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

Preface to the Second Edition

At the request of my publisher, I have written a review essay to serve as an "afterword" to this edition. It discusses some of the questions posed and issues raised since the publication of *The Printing Press as an Agent of Change* twenty-five years ago and provides references to recent studies in order to supplement the selected reading list, which has been retained from the first abridged edition.

Frontispiece

The frontispiece of Prosper Marchand, *Histoire de l'origine et des premiers progrès de l'imprimerie* (The Hague: Pierre Paupie, 1740). The spirit of printing is shown descending from the heavens under the aegis of Minerva and Mercury. It is given first to Germany, who then presents it to Holland, England, Italy, and France (reading from left to right). Note the diverse letters from the Latin, Greek, and Hebrew alphabets decorating the draped garments of the spirit of printing. Note also the medallion portraits of master printers. Germany holds Gutenberg and Fust (Peter Schoeffer's medallion is blank); Laurens Koster represents Holland; William Caxton, England; Aldus Manutius, Italy; and Robert Estienne, France. The choice of the last, who fled Paris for Geneva after being censured by the Sorbonne, probably reflected Marchand's experience of leaving Paris for The Hague in 1707 after his conversion to Protestantism. The composition, like the book it illustrates, suggests how publishers and printers glorified their precursors while advertising themselves.

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

Title Page

The foundry directed by Minerva along with the printing shop. (Engraving on first page of Prosper Marchand, *Histoire de l'origine et des premiers progrès de l'imprimerie*.) (The Hague: Pierre Paupie, 1740.) This shows how print technology was dignified by association with the Goddess of Wisdom and classical mythology. Putti are shown doing the work actually performed by mechanics and journeymen. One putto holds the motto Ars Artium Conservatrix, thereby underlining the preservative powers of print.

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

Introduction

> I do ingenuously confess that in attempting this history of Printing I have undertaken a task much too great for my abilities the extent of which I did not so well perceive at first.[1]
>
> Joseph Ames, June 7, 1749

I first became concerned with the topic of this book in the early 1960s after reading Carl Bridenbaugh's presidential address to the American Historical Association. This address, which was entitled "The Great Mutation," belonged to an apocalyptic genre much in vogue at that time (and unfortunately still ubiquitous).[2] It raised alarms about the extent to which a "run-away technology" was severing all bonds with the past and portrayed contemporary scholars as victims of a kind of collective amnesia. Bridenbaugh's description of the plight confronting historians; his lament over "the loss of mankind's memory" in general and over the disappearance of the "common culture of Bible reading" in particular seemed to be symptomatic rather than diagnostic. It lacked the capacity to place present alarms in some kind of perspective – a capacity which the study of history, above all other disciplines, ought to be able to supply. It seemed unhistorical to equate the fate of the "common culture of Bible reading"

[1] Joseph Ames, preface to *Typographical Antiquities or the History of Printing in England, Scotland and Ireland*, ed. Thomas Dibdin (London, 1810), I:12.

[2] Carl Bridenbaugh, "The Great Mutation," *The American Historical Review* LXVIII (January 1963): 315–31. Other essays on the same theme appearing at the same time are noted in E. L. Eisenstein, "Clio and Chronos," *History and Theory*, Beiheft 6 (1966): 36–65.

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

with that of all of Western civilization when the former was so much more recent – being the by-product of an invention which was only five hundred years old. Even after Gutenberg, moreover, Bible reading had remained *un*common among many highly cultivated Western Europeans and Latin Americans who adhered to the Catholic faith.

In the tradition of distinguished predecessors, such as Henry Adams and Samuel Eliot Morison, the president of the American Historical Association appeared to be projecting his own sense of a growing distance from a provincial American boyhood upon the entire course of Western civilization. As individuals grow older they *do* become worried about an unreliable memory. Collective amnesia, however, did not strike me as a proper diagnosis of the predicament which the historical profession confronted. Judging by my own experience and that of my colleagues, it was recall rather more than oblivion which presented the unprecedented threat. So many data were impinging on us from so many directions and with such speed that our capacity to provide order and coherence was being strained to the breaking point (or had it, perhaps, already snapped?). If there was a "run-away" technology which was leading to a sense of cultural crisis among historians, perhaps it had more to do with an increased rate of publication than with new audiovisual media?

While mulling over this question and wondering whether it was wise to turn out more monographs or instruct graduate students to do the same – given the indigestible abundance now confronting us and the difficulty of assimilating what we have – I ran across a copy of Marshall McLuhan's *The Gutenberg Galaxy*. In sharp contrast to the American historian's lament, the Canadian professor of English seemed to take mischievous pleasure in the loss of familiar historical perspectives. He pronounced historical modes of inquiry to be obsolete and the age of Gutenberg at an end. Here again, I felt symptoms of cultural crisis were being offered in the guise of diagnosis. McLuhan's book itself seemed to testify to the special problems posed by print culture rather than those produced by newer media. It provided additional evidence of how overload could lead

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

to incoherence. At the same time it also stimulated my curiosity (already aroused by considering Bible printing) about the specific historical consequences of the fifteenth-century communications shift. I had long been dissatisfied with prevailing explanations for the intellectual revolutions of early modern times. Some of the changes to which McLuhan alluded suggested new ways of dealing with some long-standing problems. But McLuhan raised a number of questions about the actual effects of the advent of printing. They would have to be answered before other matters could be explored. What were some of the most important consequences of the shift from script to print? Anticipating a strenuous effort to master a large literature, I began to investigate what had been written on this obviously important subject. To my surprise, I did not find even a small literature available for consultation. No one had yet attempted to survey the consequences of the fifteenth-century communications shift.

While recognizing that it would take more than one book to remedy this situation, I also felt that a preliminary effort, however inadequate, was better than none and embarked on a decade of study – devoted primarily to becoming acquainted with the special literature (alas, all too large and rapidly growing) on early printing and the history of the book. Between 1968 and 1971 some preliminary articles were published to elicit reactions from scholars and to take advantage of informed criticism. My full-scale work, *The Printing Press as an Agent of Change*, appeared in 1979. When it was abridged and retitled for the general reader in 1983, illustrations were added but footnotes were dropped. They have been restored for this new second edition. Nevertheless, any reader seeking full identification of all citations and references should consult the bibliographical index in the unabridged version.

My treatment falls into two main parts. Part I focuses on the shift from script to print in Western Europe and tries to block out the main features of the communications revolution. Part II deals with the relationship between the communications shift and other developments conventionally associated with the transition from medieval to early modern times. (I have concentrated on cultural and intellectual movements, postponing for another book problems pertaining to

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

political ones.) The second part thus takes up familiar developments and attempts to view them from a new angle of vision. The first part, however, covers unfamiliar territory – unfamiliar to most historians, at least (albeit not to specialists in the history of the book) and especially exotic to this historian (who had previously specialized in the study of the French Revolution and early nineteenth-century French history).

While trying to cover this unfamiliar ground, I discovered (as all neophytes do) that what seemed relatively simple on first glance became increasingly complex on examination and that new areas of ignorance opened up much faster than old ones could be closed. As one might expect from a work long in progress, first thoughts had to be replaced by second ones; even third thoughts have had to be revised. Especially when I was writing about the preservative powers of print (a theme assigned special importance and hence repeatedly sounded in the book), I could not help wondering about the wisdom of presenting views that were still in flux in so fixed and permanent a form. The reader should keep in mind the tentative, provisional character of what follows. This book should be read as an extended essay and not as a definitive text.

It also should be noted at the outset that my treatment is primarily (though not exclusively) concerned with the effects of printing on written records and on the views of already literate elites. Discussion centers on the shift from one kind of literate culture to another (rather than from an oral to a literate culture). This point needs special emphasis because it runs counter to present trends. When they do touch on the topic of communications, historians have been generally content to note that their field of study, unlike archeology or anthropology, is limited to societies which have left written records. The special form taken by these written records is considered of less consequence in defining fields than the overriding issue of whether any written records have been left. Concern with this overriding issue has been intensified recently by a double-pronged attack on older definitions of the field, emanating from African historians on the one hand and social historians dealing with Western civilization on the other. The former have had perforce to challenge

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

the requirement that written records be supplied. The latter object to the way this requirement has focused attention on the behavior of a small literate elite while encouraging neglect of the vast majority of the people of Western Europe. New approaches are being developed – often in collaboration with Africanists and anthropologists – to handle problems posed by the history of the "inarticulate" (as presumably talkative albeit unlettered people are sometimes oddly called). These new approaches are useful not only for redressing an old elitist imbalance but also for adding many new dimensions to the study of Western history. Work in progress on demographic and climatic change, family structure, child rearing, crime and punishment, festivals, funerals, and food riots, to mention but a few of the new fields that are now under cultivation, will surely enrich and deepen historical understanding.

But although the current vogue for "history from below" is helpful for many purposes, it is not well suited for understanding the purposes of this book. When Jan Vansina, who is both an anthropologist and a historian of precolonial Africa, explores "the relationship of oral tradition to written history," he naturally skips over the difference between written history produced by scribes and written history after print.[3] When Western European historians explore the effect of printing on popular culture, they naturally focus attention on the shift from an oral folk culture to a print-made one. In both cases, attention is deflected away from the issues that the following chapters will explore. This is not to say that the spread of literacy will be completely ignored. New issues posed by vernacular translation and popularization had significant repercussions within the Commonwealth of Learning as well as outside it. Nevertheless, it is not the spread of literacy but how printing altered *written communications within the Commonwealth of Learning* which provides the main focus of this book. It is primarily concerned with the fate of the *un*popular (and currently unfashionable) "high" culture of Latin-reading professional elites.

[3] Jan Vansina, *Oral Tradition: A Study in Historical Methodology*, tr. H. M. Wright (London, 1973), pt. 1, sec. 2, 2 ff.

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

I have also found it necessary to be unfashionably parochial and stay within a few regions located in Western Europe. Thus the term "print culture" is used throughout this book in a special parochial Western sense: to refer to post-Gutenberg developments in the West while setting aside its possible relevance to pre-Gutenberg developments in Asia. Not only earlier developments in Asia, but also later ones in Eastern Europe, the Near East, and the New World, have been excluded. Occasional glimpses of possible comparative perspectives are offered, but only to bring out the significance of certain features which seem to be peculiar to Western Christendom. Because very old messages affected the uses to which the new medium was put and because the difference between transmission by hand copying and by means of print cannot be seen without mentally traversing many centuries, I have had to be much more elastic with chronological limits than with geographical ones: reaching back occasionally to the Alexandrian Museum and early Christian practices; pausing more than once over medieval bookhands and stationers' shops; looking ahead to observe the effects of accumulation and incremental change.

One final comment is in order. As the title of my large version indicates, I regard printing as *an* agent, not *the* agent, let alone *the only* agent, of change in Western Europe. It is necessary to draw these distinctions because the very idea of exploring the effects produced by any particular innovation arouses suspicion that one favors a monocausal interpretation or that one is prone to reductionism and technological determinism.

Of course, disclaimers offered in a preface should not be assigned too much weight and will carry conviction only if substantiated by the bulk of a book. Still, it seems advisable to make clear from the outset that my aim is to enrich, not impoverish, historical understanding and that I regard monovariable interpretations as antipathetic to that aim. As *an* agent of change, printing altered methods of data collection, storage and retrieval systems, and communications networks used by learned communities throughout Europe. It warrants special attention because it had special effects. In this book I am trying to describe these effects and to suggest how they may

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

be related to other concurrent developments. The notion that these other developments could ever be *reduced* to *nothing but* a communications shift strikes me as absurd. The way they were reoriented by such a shift, however, seems worth bringing out. Insofar as I side with revisionists and express dissatisfaction with prevailing schemes, it is to make more room for a hitherto neglected dimension of historical change. When I take issue with conventional multivariable explanations (as I do on several occasions), it is not to substitute a single variable for many but to explain why many variables, long present, began to interact in new ways.

It is perfectly true that historical perspectives are difficult to preserve when claims made for a particular technological innovation are pressed too far. But this means that one must exercise discrimination and weigh the relative importance of diverse claims. To leave significant innovations out of account may also skew perspectives. I am convinced that prolonged neglect of a shift in communications has led to setting perspectives ever more askew as time goes on.

****

I am grateful to several institutions for partial support during the interval when I worked on this book. The University of Michigan at Ann Arbor and the John Simon Guggenheim Memorial Foundation helped me at the beginning. Work was completed during my term as a Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford, where support was provided by the National Endowment for the Humanities (Grant FC-20029–82) and the Andrew W. Mellon Foundation.

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

© in this web service Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
978-1-107-63275-2 - The Printing Revolution in Early Modern Europe: Setcond Edition
Elizabeth L. Eisenstein
Frontmatter
More information

The Printing Revolution in Early Modern Europe

SECOND EDITION

© in this web service Cambridge University Press www.cambridge.org