

The Future of Written Culture

Envisioning Language in the New Millennium

Naomi S. Baron

Professor of Linguistics
Department of Language and Foreign Studies
American University
Washington, DC 20016-8045
nbaron@american.edu

To appear in a special issue of *Ibérica*, Journal of the European Association of Languages for Specific Purposes. Santiago Posteguillo, ed., April 2005

An earlier version of this paper was presented in a plenary session of the First International Conference of Internet and Language, Castellón, Spain, September 2003. Portions of the paper appeared in 2004 under the title “Rethinking Written Culture” in *Language Sciences* 26,1: 57-96.

Abstract:

In the course of the past three centuries, much of Europe was transformed from an oral culture into one that was fundamentally grounded in the printed word. Print culture flowered for more than 200 years. However, thanks, in large part, to fundamental social changes, coupled with significant developments in writing technologies, the future of written culture as we have known it is increasingly in question. This paper identifies specific parameters that historically came to define written culture and considers the viability of these parameters in the new millennium. Particular emphasis is given to the role of the computer (and computer-based technologies) in reshaping our relationship with both the written and the printed word. While the discussion focuses on the United States, the paper’s conclusions should resonate in other contemporary societies in which similar technological and social variables are at work.

Key Words:

oral culture, writing, technology, Internet, computer mediated communication

Brief Curriculum vitae:

Naomi S. Baron is Professor of Linguistics and Director of the TESOL Program at American University in Washington, DC. She is the author of six books, including *Alphabet to Email: How Written English Evolved and Where It’s Heading* (2000). Her current research focuses on instant messaging and text messaging.

Email, Google, and God

To take the pulse of contemporary culture, popular media (and those whose activities it covers) are often good places to begin. Our exploration of the past, present, and future of written culture therefore opens with two examples from journalistic venues.

The first instance is drawn from a televised religious revival held by the Reverend Billy Graham in March of 2002. Speaking in language with which he hoped his contemporary audience would identify, Graham preached that “Conscience is the email God sends to your brain.” Clearly the ubiquity of electronic mail is generating a new image of divinity.

Our second example – this time from an op-ed article in the *New York Times* – offers an even more far-reaching perspective on how Internet writing technologies have insinuated themselves into our mental and perhaps even spiritual core. In a piece provocatively entitled “Is Google God?” (29 June 2003), columnist Thomas L. Friedman considered the effects of the world’s dominant computer search engine on the way we think about knowledge and power. Friedman quotes Alan Cohen, vice president of a then-new Wi-Fi (wireless fidelity) company:

If I can operate Google, I can find anything. And with wireless, it means I will be able to find anything, anywhere, anytime. Google, combined with Wi-Fi, is a little bit like God. God is wireless, God is everywhere and God sees and knows everything. Throughout history, people connected to God without wires. Now, for many questions in the world, you ask Google, and increasingly, you can do it without wires, too.

The Internet has become a pervasive force in the way we live, learn, and even love. Office workers email the person in the next cubicle rather than getting up and talking face-to-face. Commercial establishments encourage their customers to “visit us on the Web” rather than placing a phone call or showing up in person. Libraries are building infrastructures of databases and online subscriptions, with diminished resources available for hardcopy books and magazines. And the number of Internet tools for making friends or meeting potential partners online continues to skyrocket.

If we look specifically at how the Internet is used for interpersonal communication, we find a lot more than email messages buzzing in cyberspace. Older forms of computer mediated communication (CMC) persist (e.g., Chat, listservs, newsgroups, MUDs and MOOs), but the new major players are IM (instant messaging), Web logs (generally called blogs), and SMS (short text messaging on mobile phones). Though some of the linguistic constructions we find in these forms of CMC appear to be speech-like or even *sui generis* (e.g., Baron, 2003; Hård af Segerstad, 2002; Crystal, 2001), empirically they are all forms of written language.

Concomitant with the surge in written computer-based communication is an increase in the volume of old-fashioned reading materials on the market. The book trade is booming, although sales figures don't reveal the entire story. More books are being produced and sold, though students seem to be reading fewer and fewer of them. Academics commiserate that each year we feel compelled to keep shortening our syllabi, since our students are unwilling or unable to read what we assign.

An odd paradox is emerging regarding uses of and attitudes towards the written word. On the surface, writing is flourishing, with computer mediated communication playing a significant role. Yet as we dig deeper, looking not just at the annual number of emails sent or sales figures at Amazon.com, we detect a cultural shift in the ways in which we think about and use written communication. We write and obviously still read, but do we live in a written culture? That is, has the role of the written word significantly altered in our lives, and, if so, what are the consequences of such a shift? The purpose of this paper is to consider the current state of written culture, both in light of its past and in anticipation of its future.

Rethinking written culture

What is written culture? To speak of a society having a written culture is not at all the same thing as saying that some members of that society are literate. The difference lies in the ways in which literacy functions in the life of the community. Written culture is defined by its practitioners' assumptions about differences between spoken and written code, along with social and legal agreements about notions of authorship.

Historically, it is not uncommon for societies with sophisticated written works essentially to function as oral cultures. In Classical Greece, literacy played an incalculably important role in the emergence of philosophical thinking. Yet fifth-century Athens retained an oral culture. Political and legal proceedings were overwhelmingly

oral, and “literature” (the *Iliad*, the *Odyssey*, the works of playwrights and poets) was intended to be rendered aloud, not studied as written texts (Harris, 1989).

Looking westward, we find that England had largely an oral culture even into the seventeenth century. Despite the presence of an ample body of written work, from *Beowulf* to Francis Bacon, social activity was still heavily based on the spoken word. The Bible was written, though largely read aloud (Saenger, 1997). Wills were recorded, but until the seventeenth century did not have independent legal standing apart from the oral testimony of those who had witnessed them (Danet & Bogoch, 1992). While medieval literacy was important in the lives of the clergy, the new Anglo-Norman nobility, and certain members of the middle class (Parkes, 1991; Clanchy, 1993), the number of people who could read or write was quite small. Moreover, social convention often determined when those with literacy skills actually exercised them. We know, for example, that Geoffrey Chaucer read his *Canterbury Tales* aloud in court to audiences who were presumably literate (Coleman, 1996). In the words of J.A. Burrow,

People in the Middle Ages treated books rather as musical scores are treated today. The normal thing to do with a written literary text ... was to perform it, by reading or chanting it aloud (Burrow, 1982: 47).

The oral character of much of what we now view as literary (= written) works persisted into the time of Queen Elizabeth I and the Globe Theatre. Shakespeare wanted his poetry printed, but he wasn't much concerned about publishing his plays. Though quarto editions of some individual plays appeared during Shakespeare's lifetime, the first folio compilation (which was meant to be read) was done posthumously. For Shakespeare

composed his plays to be seen and, most importantly, heard (Kastan, 2001). The Shakespearean stage used few props, no scenery, no costumes. To understand a performance, the audience relied on listening – a skill in which they were well-practiced from experience in church, Parliament, court, and taverns.

Development in the west of a solidly written culture was made possible by a number of social and technological transformations, perhaps the most important of which was the establishment of printing (Eisenstein, 1979). Although Gutenberg's Mainz Bible appeared in 1455, it would take at least another 200 years before print technology was generally accepted as a substitute for manuscript production and before the audience for print had become substantial. Historians of the book speak of "print culture" not emerging until nearly the eighteenth century (Chartier, 1989; *Transactions of the Book*, 2001). In the west, growth in printed materials available to (and used by) a significant portion of the population was historically a necessary ingredient in creating written culture. Therefore, in this essay, I use the terms "written culture" and "print culture" interchangeably.

Using the written word

Emerging technologies (such as print) and growth in usership of the written word offer one perspective on the question of what constitutes a written culture. Another perspective is overtly functional: Why do we use the written word? We can think about the uses of writing as falling into three broad (and sometimes overlapping) categories: professional,

social, and personal. For brevity, our discussion here focuses on production (rather than decoding) of written text.

Within professional writing, there are a number of functional domains. Historically, the oldest is administrative, evidenced by the use of Linear B for recordkeeping in Mycenaean Greece, c. the fourteenth century BC (Chadwick, 1959). A second professional domain of writing is commercial, though monetary interest only emerged gradually. Samuel Johnson's famous declaration that only blockheads don't write for money (Lipking, 1998) contrasts with the early days of printing, when courtiers and gentlemen typically eschewed publishing their poems to distinguish themselves from the new breed of poets that sought financial gain through print (Saunders, 1951). And third, professional writing can facilitate hurdle-jumping – be it high school students writing research papers or university faculty looking to earn tenure.

The next major writing genre is social. Since the days of early modern Europe, members of the literate class have exchanged letters and other personal compositions (e.g., poems or stories) with specific individuals or circles of friends (Love, 1993; Ezell, 1999). There are also traditions of exchanging words written by others. Especially before the rise of modern authorship, the commonplace tradition encouraged writers to incorporate into their own texts (often without attribution) well-phrased sentiments originally penned, for example, by respected philosophers, poets, or religious figures (Moss, 1996; Berland et al., 2001). With the rise of copyright, attribution of authorship became a legal requirement, but additional venues emerged for appropriating the words of others. The genre known as “complete letter-writers” provided sample letters for all

occasions (Hornbeak, 1934; Robertson, 1942), and for the past century, greeting cards have been an important source of legitimately borrowed text.

We also write for personal reasons. On the mundane level, we make shopping lists, take notes at meetings or lectures, and scrawl reminders to ourselves. More profoundly, some keep diaries, write poetry, compile commonplace books containing quotations from other people's writings, or publish "for the record" works others have written. An example of the latter is the actions of US political analyst Daniel Ellsberg who, in 1971, provided the *New York Times* with a 7000-page secret RAND Corporation report (which came to be known as *The Pentagon Papers*) revealing hitherto unpublished information regarding America's involvement in Vietnam.

Attributes of a written culture

Beyond getting a sense of the uses to which a society might put writing, we need to understand how those uses are woven into the cultural fabric. Three critical attributes of written culture are access to the tools and products of literacy, valuation and evaluation of the written word, and affirmation of individual authorship. Since each of these ingredients is historically contingent, the written culture they help engender is contingent as well.

Access to the tools and products of literacy

For a society to constitute a written culture, a sizeable number of its members need ways of producing, disseminating, and deciphering the written word. People must have access to the tools of production (be they quills on parchment or personal computers) and knowledge of how to use those tools. The complexity of a writing system (e.g., Chinese characters or Japanese kanji) may limit the number of individuals who have the opportunity to learn to read and write (as happened in imperial China) or the amount of material that could be printed (as happened in Japan before the development of word processing in the late 1970s – Gottlieb, 2000). Reproduction and distribution problems existed in the ancient world. William Harris (1989) argues that one reason Classical Greece failed to develop into a written culture (despite the critical role literacy played in its intellectual accomplishments) was that it lacked an efficient means of duplicating and disseminating texts. In the English-speaking world, not until the development of affordable and reliable mail systems did personal letter-writing become part of the general culture (Baron, 2002).

In written cultures, people must be able to read what is recorded. In modern times, literacy skills are generally acquired through formal education. Therefore, in charting the development of a written culture, it becomes important to look at the growth of public education, including the development of compulsory schooling (Baron, 2000: 83-85; Cressy, 1980; Kaestle et al., 1991).

Valuation and evaluation of the written word

A second important parameter in written cultures is the value people place on the written word. To understand how societies value – and evaluate – texts, we can look at writing from linguistic, social, and cognitive perspectives.

One clear indicator of a written culture is that written language is stylistically distinct from speech. In oral cultures that have literacy, writing commonly records formal spoken language (e.g., epic poetry) or provides texts intended to be read aloud (such as the Bible, sermons, or speeches). When a written culture emerges, the written word develops distinct conventions of vocabulary, syntax, and even punctuation. (One sign that a written culture is being re-absorbed by the oral culture is the decline of a separate written register – Baron, 2000.) Another linguistic characteristic of a written culture is the attention paid to writing mechanics: grammar, spelling, punctuation, even handwriting. During the seventeenth and eighteenth centuries, standardized spelling came to matter, and in the nineteenth century, penmanship became increasingly important, especially for the rising middle classes (Thornton, 1996).

Socially, the value a community places on the written word may be evidenced in various and subtle ways. One of these is reverence shown for tangible written volumes. In a written culture, the size and quality of your personal library matter. Leather-bound sets of the complete works of Shakespeare are more highly prized than cheap paperbacks or texts printed off the Internet. What's more, in written cultures, written text often provides a context for social affinity. These gatherings run the gamut from public readings by authors to women's writing circles (Gere, 1987), book discussion groups, or dating services with literary themes.

Another indicator of a community's attitude towards writing is the degree to which reading is done silently. Not until the fifteenth and sixteenth centuries did silent reading become the norm in the west (Saenger, 1997). To read silently – without lips moving – is to encounter writing as an independent medium, not as a tool for re-presenting text as speech in some later venue. An important component of contemporary lower-school curricula (at least in the United States) has been teaching children to read silently.

Besides linguistic and social measures of valuation, we can approach the problem cognitively. To read is not simply to happen upon information but also to encounter ideas or turns of phrase that affect us intellectually or emotionally. “Reading” a text to which you already know the words (such as a catechism) or zipping through the pages of *USA Today* is a sharply different experience from grappling with Ludwig Wittgenstein's *Blue and Brown Books* or coming to terms with the issue of free will raised in *Paradise Lost*.

How much do we think about what we read and write? With regard to reading, we might ask: Can readers follow the argument presented? Do they understand the plot? Do they remember what they have read? For writing, the questions become: Do we map out our thoughts before committing words to paper or computer? Do we edit what we have written before sending it off publicly?

In a written culture, the common thread between reading and writing is reflection. Reading involves more than the eyes, and writing, more than the hand. Reflection enables readers and writers to distance themselves from the text and ask such questions as: Do I understand what I have read? Will others understand what I have written? Could the text be expressed more clearly?

Notions of authorship

A third attribute of a written culture is authorship: What rights and responsibilities do creators of written texts have, and how have these defining properties of authorship molded our notion of written culture?

First, some history. Throughout the Middle Ages in Europe, an author was essentially an intermediary for conveying divine inspiration or a commentator on the writings of earlier thinkers. Respect for the work of an author was typically delayed until after he was dead (Minnis, 1988). To the extent a living author supported himself from his writings, the money came almost exclusively through patronage.

Contemporary western assumptions about authorship emerged from seventeenth, eighteenth, and early nineteenth century confrontations over copyright – literally, who owned the author’s original manuscript (“copy”) and thus had the right to profit financially by duplicating and distributing it. The battle was between authors (and sometimes their families) on the one hand and printers and booksellers on the other. In England, the Crown, along with its official censoring agent, the Stationers’ Company, played an important role in defining and maintaining the balance between these opposing parties (Feather, 1988; Woodmansee & Jaszi, 1994; Rose, 1993).

Modern copyright law, which grants certain rights and responsibilities to authors, grew out of a synthesis of two important intellectual movements. The first was the growth of modern ideas about individualism and property, as put forth in the political and social philosophy of John Locke (Jaszi, 1991). The second essential ingredient was

German and English romanticism. Building on the earlier Lockean foundation, philosophers and literary figures on both sides of the Channel (including Herder, Goethe, Kant, Fichte, Coleridge, and Wordsworth) fought to establish the notion that authors “owned” the specific linguistic formulation through which their ideas were expressed (Woodmansee, 1984). The authorial model that emerged from these battles is commonly referred to as the romantic theory of authorship.

The newly-enfranchised author who surfaced in the early decades of the nineteenth century was now the undisputed owner of his (or her) intellectual property, that is, the expression of his or her ideas. (The ideas themselves remained in the public domain.) Authors had the right to be paid by those who published and disseminated their writings, with remuneration continuing for a legally established period of time. Besides financial ownership, authors also established the right of propriety over their writings. That is, regardless of monetary considerations, authors retained the “moral” right to insist their texts be protected from manipulation or degradation by others.

With these new rights came new responsibilities. Authors could only claim property rights (and the attendant profits) if they had something original to say, or at least an original way of saying it. Authors were legally responsible for the veracity of their works. And authors bore increased accountability for the mechanics of their finished texts (spelling, grammar, punctuation).

Much as the coming-of-age of printing (along with the expanding size of the reading public) made written materials part of the western social fabric, the emergence of

modern authorship established clear standards for composition (and crediting the work of others). How have the uses and attributes of written culture stood up over time?

Challenging the uses of writing

In professional life, the written word still holds sway, but the media through which written documents are prepared, transmitted, and received are being transformed. Consider the administrative domain, where even well-intentioned managers may be undermining the opportunity for reflection and response that traditional hardcopy text invites. I think of changes in the way my own university communicates with faculty and staff. Official announcements (e.g., of lectures or road closings) used to be made via a daily voice mail message, while items of more lasting significance were sent as paper memoranda to physical mailboxes. Several years ago, administrative communication was shifted to a single daily email, in which bulleted headlines were followed by one-paragraph summaries you might click on for more information. A former dean's death is now sandwiched between tonight's basketball game and tomorrow's lecture on bulimia. If you don't happen to scroll down the page, you might miss the entry entirely.

In the commercial realm of professional writing, the prospects of writing for a living are becoming increasingly worrisome as the publishing industry is now squeezing out "mid-list" books in favor of hoped-for blockbusters. And as for hurdle-jumping, young and old alike receive conflicting messages about what constitutes appropriate written language. In schools and offices, traditional written prose is yielding to

PowerPoint presentations. Learning to bullet salient issues and present them in a graphically interesting way can be a useful skill, but one that may lead to a cognitive style quite distinct from that required for a well-constructed argument (Parker, 2001; Tufte, 2003). In higher education, the Web as a source of resource materials is supplanting the legitimacy of the printed oeuvre, and online postings to class listservs are increasingly being substituted for written essays that presumably require more reflection (not to mention proofreading).

Like writing for professional purposes, written language in the social arena is being reshaped by technology. Take the exchange of our own words with family or friends. Lovers used to pen letters to one another. Children used to write home from summer camp. Today, phone calls or email largely substitutes, leaving nothing to tie up with red ribbons or place in family albums. Similarly, today's Internet affects the delivery system through which members of social circles exchange words. Friends share their own poetry or short stories electronically. Specialized writing Websites enable would-be authors to circulate their writings to unknown others (Hafner, 2001). And writers-without-portfolio who want to review books can do so on Amazon.com. As for exchanging words written by others, the Internet offers e-greeting cards. It also enables us to forward to third parties personal electronic messages we have received and to copy text we have not written into documents bearing our own name.

Finally, with regard to personal uses of writing, technology may be redefining prior notions of privacy and purpose. Think about behaviors in which we engage for our own sake: Do we pray when we are alone? Do we stop at red lights when the way is clear and no police are in sight? Do we write when the only intended audience is ourselves?

Even a generation ago, when commonplace books had virtually died out except among a small number of authors, diaries remained an established genre for personal writing. Today, the number of people keeping handwritten diaries is waning. The paradoxical exception is online genres such as Web diaries or blogs, whose authors (statistically, mostly teenagers or young adults) maintain Web sites on which they post private musings and experiences for strangers to read (e.g., Branscum, 2001; LiveJournal.com). Such Web postings are a cross between traditional diaries and an odd sort of publishing for the record. But unlike the published diary of, say, a Samuel Pepys, these personal chronicles are hardly literature-in-the-making.

Who today is psychologically driven to publish? Yes, there are still a few Daniel Ellsbergs, but the ranks are significantly filled by journalists looking to break a story. Another cohort of those “publishing for the record” is people who used to turn to vanity presses (now available online – e.g., iuniverse.com/publishyourbook). Individuals are still writing, but the audience they serve is less the general public than themselves.

Challenging attributes of written culture

If traditional functions of written language are being reconfigured, so are attributes historically associated with written culture. Thus, we turn to the question of how shifting technologies and evolving cultural assumptions are challenging the ways we think about access to the tools and products of literacy, valuation and evaluation of the written word, and notions of authorship.

Access to the tools and products of literacy

In most of the developed world, major access challenges come not so much in providing writing materials or basic literacy instruction but in responding to technologies that potentially redefine what texts look like and how they are created and distributed, along with evolving social assumptions about how much time we expend on encoding and deciphering the written word. The arrival of digital text prods us to examine our attitudes towards the codex form, which has been with us for nearly two millennia (Roberts & Skeat, 1983).

In his book *Scrolling Forward*, David Levy (2001) asks whether those who object to reading text online are simply clinging to bound books out of a desire for the familiar or whether there is an actual difference between reading traditional books and online versions. Levy compares his childhood copy of Walt Whitman's *Leaves of Grass* (published by Peter Pauper Press) with a Web version mounted by a librarian at Columbia University. A computer scientist by training, Levy finds virtues in both formats, but notes "how vastly different they are in gestalt" (2001: 42). In the end, Levy prefers the printed version. Not only had Whitman carefully designed his collection of poems to be experienced as a book, but Levy's personal childhood history includes his relationship with a particular copy of the poems. He holds no experiential bond with the digital text.

Academics now debate whether the form in which written materials are produced and digested matters. In *The Myth of the Paperless Office*, Abigail Sellen and Richard

Harper (2001) compare paper and digital technologies in terms of their respective “affordances”, that is, the kinds of work or activities for which a medium is particularly well suited (Gibson, 1979). For example, in office settings, most of us still find it easier to mark up actual paper by hand than to do textual annotations online, and easier to glance simultaneously through a sheaf of printed documents than to do so with their online equivalents. However, the affordances of digital technology make online searching for specific words, or storing information, far simpler than performing the same tasks with physical documents. While enthusiastic organizational specialists predict the rapid decline of hardcopy print, many producers and consumers of the written word may not be ready to relinquish a medium they value for both its aesthetic and practical qualities.

The uncertain future of writing on or reading from paper is matched by the puzzle of how the written word will be disseminated. Will publishers continue to serve as middlemen between authors and readers, or will technology redefine or even eliminate the publisher’s role? For half a millennium, publishing houses have determined both which manuscripts are printed and what those published manuscripts look like. With a few notable exceptions such as Ben Jonson and John Milton, early modern authors were essentially excluded from the editing process, the task being left to compositors in the printing house. Admittedly, some of this editing was slipshod. However, Joseph Moxon observed in the 1680s that since authors were often careless or ignorant about such matters, editing should be left in the hands of professionals (Moxon, 1683-1684 / 1962: 192).

Publishing houses still vet manuscripts and then massage the logic and style, spelling and punctuation of their authors. Despite their occasion grumblings, academics

and popular writers alike have generally found the contributions of publishers to be beneficial. What happens when everyone with access to a computer can become a published author? Phase one of this scenario unfolded a decade ago when desktop publishing tools became widely affordable. Phase two now houses texts in cyberspace, waiting to be downloaded or printed out upon demand. In both instances, the vetting and editing jobs are falling exclusively on the author's shoulders.

Beyond discharging editorial responsibilities, publishers have defined what constitutes an "edition" of a printed work. Readers can legitimately expect all copies of the same edition to be identical. In reality, the tradition of inserting changes even within a print run goes back to the early days of printing, when proof sheets were deemed too expensive to discard simply because they contained errors (Baron, 2000: 56-57). Even today, publishers insert minor changes into new print runs of the same edition. However, like tracing dye lots of yarn or batches of flu vaccine, you can generally pinpoint where such changes have been introduced.

What happens if we shift from traditional editions (or even print runs) to print-on-demand, where actual books are only printed (and bound) when an individual requests one? Now the publisher can insert changes at will, with the result that each copy of a given book is potentially an edition of one. This model is already in place for online newspapers, where dozens of "editions" might appear within a 24 hour period. To update Heraclitus, you may not be able to step into the same edition twice.

What role do internally-consistent editions play in a written culture? A defining shift between the medieval manuscript tradition and the rise of modern print culture was the emergence of what Gerald Bruns has called the "enclosure" of print (Bruns,

1980:113). While earlier readers knew to expect minor differences between manuscript copies of the “same” text (due to scribal error, attempts at correcting the textual model, or insertion of new information or scribalist perspective), the emergence of written culture brought with it a growing assumption that copies of the “same” printed text were, indeed, the same. Over time, this assumption became increasingly justified. Definitive editions of an author’s work could be brought out with the publisher’s tacit promise that all purchasers of the book could literally expect to be on the same page. Modern scholarship has presupposed that references to authors’ works will lead readers to identical text, down to the last capital letter or comma.

The coming of print-on-demand challenges the authoritative, durable notion of text that emerged in the modern west. Written culture as we still know it is predicated upon the assumption that readers experience common texts. If works can metamorphose without notice, it is unclear how communities are to derive shared meaning from them.

We have been looking at ways in which evolving digital technology is poised to redefine production and dissemination of written text. This same technology, along with a nexus of social factors, is undergirding a growing (and troubling) trend: Acts of literacy are being turned into speed contests.

There’s something of a growth industry in books bemoaning what Norwegian social anthropologist Thomas Hylland Eriksen (2001) calls “the tyranny of the moment”. We talk on mobile phones, says Eriksen, to “fill the slow gaps ... when walking down a street or waiting for a traffic light to change” (p. 60). James Gluck notes how we repeatedly push the elevator button for our floor, somehow hoping to speed up the trip (1999:23ff). And in August of 2001, the “new” CNN Headline News began promising

“Real News. Real Fast.” How does speed relate to writing, reading, and the future of written culture? Scribes and authors have long been sensitive to speed issues. In Mesopotamia in the third millennium BC, pictographs (many of which were made with curved lines) yielded to wedge-shaped cuneiforms, which were more quickly incised on clay (Coulmas, 1989: 74-75). Cicero dictated his orations to Tiro, his secretary, who took them down in shorthand (Saenger, 1982: 373). Extensive use of abbreviations in late medieval manuscripts sped up the copying process (Ullman, 1960: 11).

Technology cranks up production speed even further. Early twentieth-century advocates of introducing typewriters into elementary schools produced evidence that first, second, and sixth graders wrote four times the number of words when composing an assignment on a typewriter than when writing by hand (Haefner, 1932: 269). Similarly, word processing tends to generate more words and longer sentences than when writing longhand (Stoddard, 1985). The proliferation of online communication in the 1990s – email, Chat, listservs, instant messaging – enables us to produce “Real Text. Real Fast.” And much like scribes of old who used abbreviations to save time and space, today’s teenagers often lace messages with abbreviations (e.g., *k* for “okay”) and acronyms (e.g., *ttyl* for “talk to you later”).

For all its advantages, speed also has its downside. Writers from Quintilian and Saint Jerome to Henry James have commented that when dictating to an amanuensis rather than inscribing texts themselves, they tend to become rambling and unfocused (Baron, 2000: 35-36, 204). High school and university students feverishly scribbling class notes or answers to exam questions have long reported physical pain and even

psychological damage from the repeated experience of trying to write both quickly and with good handwriting (Sassoon, 1993).

Users of online communication are generally agreed that the medium tends to be sloppier than traditional written equivalents. The reasons are both social and linguistic. Writing in general is becoming increasingly informal and speech-like (Baron, 2000). Online writing presents an opportunity to express ourselves less self-consciously than traditional writing (Hale & Scanlon, 1999) or even to forge a new linguistic genre (Crystal, 2001). Resistance to editing online text reflects a broader trend towards diminished concern with how we present ourselves to others (Baron, 2003). Fueled by prevailing social support (at least in the United States) for celebrating diversity, these trends may also reflect growing acceptance of whatever other people say or think – including the style, grammar, and spelling used to express such thoughts in writing.

What's the hurry when writing online? Some of the rush comes from the technological ease with which online texts can be dispatched. But a lot of the pressure to compose-and-send (i.e., without waiting to ponder over our response or even without reading through our draft) seems to be social. As more of the population goes online and as asynchronous email gives way to synchronous instant messaging, interlocutors are literally sitting and waiting for us to reply.

The flip side of the hurried writer is the hurried reader. For decades, American marketers have been offering systems to help people increase their reading speeds. The Evelyn Wood Reading Dynamics program, popularized in the 1960s, finds contemporary counterparts in schemes (such as one recently advertised on the radio) for those who don't "have time to read the old-fashioned way." Digital technology may be reinforcing

the drive to read quickly by setting time restrictions on access to online texts.

Contemporary publishers are experimenting with differential fee structures for viewing a work on-screen, for saving it to a hard drive, or for printing it out. (Not everything available on the Web is downloadable or printable.) Online libraries such as questia.com offer use of their holdings by the week, month, or year – with a scale of prices to match. We can envision time-based contrivances whereby readers are charged by the minute for texts accessed electronically – hardly a system encouraging readers to reflect on texts. The question now is whether this mindset of creating and deciphering text on the fly affects the ways in which we value and evaluate the written word.

Valuation and evaluation of the written word

How important is print culture in contemporary English-speaking society? Granted, no one is suggesting cutting back on literacy programs. Bill Gates sat for a poster for the American Library Association, and Oprah Winfrey's book club rockets unknown works to financial stardom. Yet we also hear rumblings that writing need not be a lasting medium (i.e., one worthy of careful scrutiny) or suggestions that not everyone needs sophisticated literacy skills (e.g., Negroponte, 1995). We can think about the valuation issue from linguistic and social perspectives, as well as with respect to the extent to which we reflect upon what we read.

Let's start with linguistic measures. Is written language still a genre distinct from speech? Beginning in the final decades of the nineteenth century, writing pedagogy in the United States began encouraging a style less formal than the hitherto prevailing norm.

This new trend was supported in the twentieth century by the growth of journalism and increasing adoption of many of the pedagogical assumptions of progressive education (Baron, 2000: Chapter 5). If the written work I receive from students today is any indication, stylistic differences between written prose and casual speech are barely discernable in many writers. Online technology reinforces this emphasis on speech-like informality, often replete with indifference to grammar or spelling.

What about social outlooks on written culture? Earlier we talked about such properties of a written culture as reverence for written text, silent reading, affinity groups based on the written word, and attention to the amount that people read. How do these variables play out in today's literacy climate?

Begin with the question of where the written materials of a culture reside. Before the invention of printing, few lay people owned books. For those who were literate, royal or religious libraries were generally the main sources of texts (Casson, 2001). The rise of western print culture changed not only the number of books available but access to them. The well-to-do began building personal collections, and those of lesser means took advantage of first subscription libraries and then public libraries. In the twentieth century, inexpensive editions, including "quality" paperbacks, put book ownership within everyone's reach (Epstein, 2001).

As increasing numbers of books and serial publications appear online, it becomes less clear where texts can be said to reside and who owns them. In what sense do I "own" a copy of "King Lear" if what I possess is a sheaf of downloaded pages? Where does John Grisham's latest thriller reside if I pay to view it on an ebook reader but can't print it out? Will our academic sense of learning shift if we don't have tangible, bound

volumes to read and reread? Will our cultural assumptions about the importance of reflecting on “good” literature alter if we no longer peruse our own bookshelves or those of a library or bookstore?

What are we “reading” when we encounter text online? Since online text can generally be accessed randomly (not just linearly), do two people “reading” the same online site come away with a shared experience? To the extent that a shared culture entails common experiences (e.g., all reading the same King James version of the Bible), it’s unclear if print culture can survive the fragmenting effects of hypertext.

Beyond the tangible issues of textual ownership and shared reading experiences lie several critical social issues. One of these is the positive valuation that print cultures attribute to artifacts associated with the written word. By the nineteenth century, owning an extensive library had become a status symbol. In fact, the *nouveau riche* (many of whom cared little for reading), often purchased books by the yard to lend their residences the air of respectability.

Further evidence of the social standing of books in print culture resides in the role books play in everyday cultural life. On the face of things, print culture is thriving at the start of the present millennium: Book clubs and reading groups continue to proliferate, gift certificates for books have become a popular solution to the perennial problem of buying presents, and both online and brick-and-mortar booksellers are doing lucrative business. Yet we need to distinguish between buying books and reading them. As Hugh Amory mused, “perhaps the majority of the books ever printed have rarely been read” (Amory, 1996:51). In assessing the contemporary social life of books, there is also the digital factor. Is contemporary technology undermining reverence for physical texts?

David Levy may prefer the Peter Pauper edition of *Leaves of Grass* to the online version, but what about his students?

To the extent books surrender their physicality, we potentially redefine our relationship with the written word. One of the most important affordances of the enduring book has been the ease with which it enables us to contemplate its contents. Assuming the book belongs to us, we can underline and annotate as we see fit, implicitly anticipating a return to the work in the future. Marginalia enable the reader to establish a dialogue with the work's author – questioning an argument, presenting a counterargument, or even correcting a typographical error. Now there are two sides to the story, and the physical text upon which these arguments are written is no longer interchangeable with another copy of the same work. Reflecting upon what we read (even if we're not making annotations) takes time and is antithetical to the type of reading-on-the-run that characterizes much online reading.

Finally, though technology isn't the culprit here, much of the reading people do today doesn't demand a lot of thought, much less annotation. Neither Garfield nor Danielle Steele requires the same sort of uninterrupted time or undisturbed space that the traditional library or study afforded "serious" readers. The critic George Steiner has long worried that the conditions for concentrated reading are contracting. In response, he has proposed establishing "houses of reading" in which those who are "passionate to learn to read well would find the necessary guidance, silence, and complicity of disciplined companionship" (Steiner, 1988: 754).

Notions of authorship

If our cultural assumptions about valuing and evaluating the written word seem to be changing, so are contemporary notions of authorship. The most hotly debated hole in the authorial dike is the impact networked computing is having on historical notions of copyright. From the early days of the American Republic, intellectual property law has rested upon two premises: protection of the rights of authors and support of the public good (US Constitution, Article 1, Section 8, Paragraph 8). A fundamental issue in copyright law has always been how these two premises (and sets of interests) should be balanced. How do we motivate authors to create new works (from which they can benefit financially) while at the same time making those works readily available (“open access”) to promote the common good?

The issue of open access is particularly salient in the US, where commitment to public interest is embedded not only in national policy but in the American psyche. Nowhere are these presumptions about the right to free access clearer than in the computing community. The role of hippies and communes in creating some of the earliest computer bulletin boards for freely exchanging information is generally acknowledged (Rheingold, 2000), as is the “gift” mentality (Taylor & Harper, 2002) that motivates distributing copy-protected computer code and other copyrighted material. Contemporary efforts to support free access include the Open Source Code movement (www.opensource.org) and the Electronic Frontier Foundation (www.eff.org).

Today’s “digital dilemma” is that contemporary networking technology makes it possible to copy (typically violating the legal copyright on) practically any information

available on the Web – music, movies, computer source code. Fueled by the ease of copying (and the gift culture mentality underlying so much of earlier computer culture), “the availability of [digital information and networks] has bred a mindset that seems to regard copyrighted works as available for the taking without compensation” (*The Digital Dilemma*, 2000: 133).

How does society resolve the dilemma? One approach is to focus on educating users, while at the same time developing powerful encryption technology that renders digital theft more difficult (Barlow, 1997: 369-370). Another tack looks to redefine existing notions of copyright. Rather than purchasing intellectual property, users might lease it from owners (or their intermediaries). At the end of each month, users would receive “intellectual property bills,” much like electric or gas bills. But there are other possible scenarios as well. One reconfigures the author’s balance of rights and responsibilities; another redefines how authors might earn their keep.

Copyright practices over the past 200 years have guaranteed authors both control (propriety) and the prospect of financial gain (through property rights). The relative importance of propriety versus property is in part cultural. French copyright law, for example, has been intensely concerned about the right of the author (*droit d’auteur*) to maintain strict control over the integrity of his or her text, while Americans have tended to focus on the money. But the balance may also be linked to the nature of the work. While authors of trade books understandably put a premium on financial gain, most academics tend to be more interested in publication for reasons of hurdle-jumping (publish or perish) or publishing for the record than in royalties. In fact, a group of scientists is lobbying to make the contents of scientific journals freely available online

(Harnad 2001-2002). One mechanism for achieving the give-away is for the journals themselves to openly post their holdings online. Another is for individual authors to “self-archive” their own work on personal Web sites. With self-archiving, authors retain proprietary control over their texts, though the holder of the copyright (typically an academic publisher) no longer makes as much money from journal subscriptions.

But what if authors wish (or need) remuneration for their labors? If they can’t count on making money by selling their works, perhaps we should seriously consider a scenario concocted by John Perry Barlow, who is co-founder of the Electronic Frontier Foundation – and former lyricist for The Grateful Dead. Barlow suggests that the band’s business practices contain an important lesson for contemporary intellectual property holders. Unlike many bands, The Grateful Dead allowed fans to audiotape its concerts. The result, of course, was a lot of intellectual property circulating for free. However, with the growing popularity of the band being fanned by circulation of those tapes, demand for tickets to live concerts soared (Barlow, 1997: 362).

Barlow suggests authors should look to make money not from selling static, finished works but from real-time performances:

commercial exchange will be more like ticket sales to a continuous show than the purchase of discrete bundles of that which is being shown Live access ... will be much easier to cordon than access to static bundles of stored but easily reproducible information (Barlow, 1997: 367, 368).

The model is an intriguing one: Download Stephen King’s latest thriller for free, but pay to ask him questions online. While the concept might work well for media mavens who relish books tours and television interviews, how might recluses such as Thomas

Pynchon fare? And what about dead authors whose copyrights (currently life plus 70 years in the US) haven't expired?

An even deeper challenge to the model emerges when we consider the sort of “product” that is constructed during a live concert (or in the case of authors in, say, online question and answer sessions) as opposed to the “product” generated through a studio recording (or in a published book or article). Real-time performance has its own special vibrancy, though the “text” that results is markedly distinct from work that can be edited and reworked until the artist (or author) is satisfied. Unlike live performances of the same work (which may differ from one show to the next), “finished” works (e.g., studio recordings, novels) present just one object for review. Traditionally, our standards for “finished” works have been more exacting than for live events (a concert in Anaheim, an interview on National Public Radio). To the extent that Barlow's model of author-as-performer takes hold, we reinforce the legitimacy of the hurried writer and the hurried reader. Authors have less motivation to polish their texts (because what is being sold is access to the authors, not their books). And readers have less opportunity to reflect on what they read (because much of the text they pay to access online is literally here today, gone tomorrow).

Finally, there is the question of supply and demand. If anyone can access a work for free (or at very low cost), does the work lose its value in the public eye? Collectively, does the society of Internet users increasingly find authors of static texts to be anachronistic? And if so, is written culture – at least as we have known it in the modern west – on the way out?

Envisioning written culture in the new millennium

Whatever eventually becomes of modern written culture, its material manifestations aren't disappearing any time soon. People will still read and write, paper mills will continue to do a brisk business, and manufacturers can count on making bookshelves for years to come. What's more, there is no immanent threat to authorial copyright on trade publishing that has substantial sales potential. This much is generally agreed upon by a spectrum of writers who have contemplated the future of the book (e.g., Nunberg, 1996; Epstein, 2001; Levy, 2001; Sellen & Harper, 2001; text-e.org, 2001-2002).

What does seem to be at issue is what roles reading and writing, books and paper will assume in the cultural life of the coming decades. Among the questions whose answers remain uncertain are these:

Reading: How much reading will be done online versus in hard copy? How many people will be "serious", patient readers?

Writing: How much writing will be done manually (with pen and ink or at a keyboard) and how much through voice recognition devices? How many people will write how much? About what? In what style?

Authorship: Will the romantic model of authorship be replaced by one with different assumptions about the need for individual creativity? Will new forms of marketing or even patronage be necessary to support people trying to write for a living?

Copyright: Will copyright be replaced by licensing? Will traditional notions of copyright be applied to some works (e.g., trade books) but not others (e.g., scientific articles)?

Publishing: Will books in the future largely be published only on demand? Given increases both in the rate of self-publishing and in traditional publishing house costs, will authors become solely responsible for editing and formatting their works?

Language Standards: Are we entering an era in which the mechanics of written text are viewed as less important than we have believed them to be over the past 300 years? If so, should – or can – we attempt to reverse the current trend?

One plausible scenario is what we might call “print culture sans print”. Writing might continue to be culturally valuable, but handwritten missives or printed codices would decline in importance. Perhaps William Mitchell (1995) was right in *City of Bits* when he disparagingly described books as “tree flakes encased in dead cow” (56). Under this “print culture sans print” scenario, we would become increasingly comfortable relaxing with ebooks or studying complex texts online. We might learn to produce well-edited works without resorting to printing out physical copies to mark up by hand, and

could expect developments in computer hardware and software to facilitate annotating online text so as to rival the affordances of paper.

This scenario would encourage some additional changes in our notions of written culture. Printed books that continued to be produced might become more collectors' items than objects for daily use; concerns about spelling and punctuation could slacken (following the present trend) without denying the importance of writing as a cultural artifact. That is, we can imagine a society in which many of the values of print culture would be maintained without relying primarily upon familiar print technology and editorial assumptions.

An alternative scenario might be dubbed "print sans print culture". Print might remain a physically prominent component of our cultural universe, but the multifaceted aspects of western written culture would diminish in importance. That is, printed works might persist, but for what individual and social ends, and with what broader impact? (By analogy, think about university diplomas that are still written in Latin, though practically none of their recipients can decipher the text.) How likely is this latter scenario? As we have seen in this paper, in many ways, we are already moving in the direction of print without a print culture.

What might such a society look like? It's tempting to fall back on history for ideas, to the sixteenth and seventeenth centuries, when printing presses were starting to proliferate, but before print had helped create the western European cultural assumptions that we have identified as print culture.

Tempting, yes, but perhaps not very useful. The early modern European citizenry, which possessed minimal literacy skills and had restricted access to reading or writing

materials, has little in common with a population that is overwhelmingly literate, is awash in books, and has an abundance of computers (not to mention cheap paper and pens). What is more, the technological genie is out of the bottle. We will need to feel our way to a new cultural praxis regarding the written word.

Acknowledgments

I am grateful to Professor Santiago Posteguillo for his leadership in organizing the First International Conference of Internet and Language, which enabled dozens of international scholars to share their thinking on the intersection between computer technology and language.

References

- Amory, H. (1996). "The Trout and the Milk: An Ethnobiographical Talk". *Harvard Library Bulletin* 7,1: 50-65.
- Barlow, J.P. (1997). "The Economy of Ideas: Everything You Know about Intellectual Property is Wrong" in A.D. Moore (ed.), *Intellectual Property: Moral, Legal, and International Dilemmas*, 349-371. Lanham, MD: Rowman & Littlefield.
- Baron, N. (2000). *Alphabet to Email: How Written English Evolved and Where It's Heading*. London: Routledge.
- Baron, N. (2002). "Who Sets Email Style: Prescriptivism, Coping Strategies, and Democratizing Communication Access". *The Information Society* 18: 403-413.

- Baron, N. (2003). "Why Email Looks like Speech: Proofreading, Punctuation, and Public Face" in J. Aitchison & D. Lewis (eds.), *New Media Language*, 85-94. London: Routledge.
- Berland, K., J.K. Gilliam, & K.A. Lockridge (eds.) (2001). *The Commonplace Book of William Byrd II of Westover*. Williamsburg, VA, and Chapel Hill, NC: Omohundro Institute of Early American History and Culture, and University of North Carolina Press.
- Branscum, D. (2001). "Who's Blogging Now?". *Newsweek*, 5 March, 62-63.
- Bruns, G. (1980). "The Originality of Texts in a Manuscript Culture". *Comparative Literature* 32: 113-129.
- Burrow, J.A. (1982). *Medieval Writers and their Work*. Oxford: Oxford University Press.
- Casson, L. (2001). *Libraries in the Ancient World*. Oxford: Oxford University Press.
- Chadwick, J. (1959). "A Prehistoric Bureaucracy". *Diogenes* 26: 7-18.
- Chartier, R. (ed.) (1989). *The Culture of Print: Power and the Uses of Print in Early Modern Europe*, trans. L.G. Cochrane. Princeton, NJ: Princeton University Press.
- Clanchy, M.T. (1993). *From Memory to Written Record: England 1066-1307*, second edition. Oxford: Blackwell.
- Coleman, J. (1996). *Public Reading and the Reading Public in Late Medieval England and France*. New York: Cambridge University Press.
- Coulmas, F. (1989). *Writing Systems of the World*. Oxford: Blackwell.
- Cressy, D. (1980). *Literacy and the Social Order: Reading and Writing in Tudor and Stuart England*. Cambridge: Cambridge University Press.
- Crystal, D. (2001). *Language and the Internet*. Cambridge: Cambridge University Press.

- Danet, B. & B. Bogoch (1992). "From Oral Ceremony to Written Document: The Transitional Language of Anglo-Saxon Wills". *Language and Communication* 12, 2: 95-122.
- The Digital Dilemma* (2000). National Research Council, Committee on Intellectual Property and the Emerging Information Infrastructure. Washington, DC: National Academy Press.
- Eisenstein, E. (1979). *The Printing Press as an Agent of Change*. Cambridge: Cambridge University Press.
- Epstein, J. (2001). *Book Business: Publishing Past Present and Future*. New York: W.W. Norton & Company.
- Eriksen, T.H. (2001). *Tyranny of the Moment: Fast and Slow Time in the Information Age*. London: Pluto Press.
- Ezell, M.J.M. (1999). *Social Authorship and the Advent of Print*. Baltimore: Johns Hopkins University Press.
- Feather, J. (1988). *A History of British Printing*. London: Croom Helm.
- Gere, A.R. (1987). *Writing Groups: History, Theory, and Implications*. Carbondale, IL: Southern Illinois University Press.
- Gibson, J.J. (1979). *The Ecological Approach to Visual Perception*. New York: Houghton Mifflin.
- Gluck, J. (1999). *Faster: The Acceleration of Just About Everything*. New York: Vintage Books.
- Gottlieb, N. (2000). *Word-Processing Technology in Japan: Kanji and the Keyboard*. Richmond, Surrey: Curzon.

- Haefner, R. (1932). *The Typewriter in the Primary and Intermediate Grades: A Basic Educational Instrument for Younger Children*. New York: Macmillan.
- Hafner, K. (2001). "Web Sites Begin to Get Organized, on Their Own". *New York Times* Circuits, 18 January, E1.
- Hale, C. & J. Scanlon (1999). *Wired Style*. New York: Broadway Books.
- Hård af Segerstad, Y. (2002). *Uses and Adaptation of Written Language to the Conditions of Computer-Mediated Communication*. Department of Linguistics, Göteborg, Sweden: Göteborg University.
- Harnad, S. (2001-2002). "Skyreading and Skywriting for Researchers: A Post-Gutenberg Anomaly and How to Resolve It" in text-e.org.
- Harris, W. (1989). *Ancient Literacy*. Cambridge: Cambridge University Press.
- Hornbeak, K. (1934). "The Complete Letter Writer in English, 1568-1800". *Smith College Studies in Modern Languages* 15, 3-4.
- Jaszi, P. (1991). "Toward a Theory of Copyright: The Metamorphoses of 'Authorship'". *Duke Law Journal*, April, 455-502.
- Kaestle, C.F., H. Damon-Moore, L.C. Stedman, K. Tinsley, & W.V. Trollinger, Jr. (1991). *Literacy in the United States: Readers and Reading since 1880*. New Haven, CT: Yale University Press.
- Kastan, D. S. (2001). *Shakespeare and the Book*. Cambridge: Cambridge University Press.
- Levy, D. (2001). *Scrolling Forward: Making Sense of Documents in the Digital Age*. New York: Arcade Publishing.
- Lipking, L. (1998). *Samuel Johnson: The Life of an Author*. Cambridge, MA: Harvard University Press.

- Love, H. (1993). *Scribal Publication in Seventeenth-Century England*. Oxford: Clarendon Press.
- Minnis, A.J. (1988). *Medieval Theories of Authorship*, second edition. Philadelphia: University of Pennsylvania.
- Mitchell, W. (1995). *City of Bits: Space, Place, and the Infobahn*. Cambridge, MA: MIT Press.
- Moss, A. (1996). *Printed Commonplace-Books and the Structuring of Renaissance Thought*. Oxford: Clarendon Press.
- Moxon, J. (1683-1684 / 1962). *Mechanic Exercises*, reprinted edition (H. David and H. Carter, eds.). London: Oxford University Press.
- Negroponte, N. (1995). *Being Digital*. New York: Alfred Knopf.
- Nunberg, G. (ed.) (1996). *The Future of the Book*. Berkeley, CA: University of California Press.
- Parker, I. (2001). "Absolute PowerPoint". *The New Yorker*, 28 May, 76.
- Parkes, M.B. (1991). *Scribes, Scripts, and Readers: Studies in the Communication, Presentation, and Dissemination of Medieval Texts*. London: Hambledon Press.
- Rheingold, H. (2000). *The Virtual Community*, revised edition. Cambridge, MA: MIT Press.
- Roberts, C.H. & T.C. Skeat (1983). *The Birth of the Codex*. Oxford: Oxford University Press.
- Robertson, J. (1942). *The Art of Letter Writing: An Essay on the Handbooks Published in England during the Sixteenth and Seventeenth Centuries*. London: Hodder & Stoughton Ltd.
- Rose, M. (1993). *Authors and Owners: The Invention of Copyright*. Cambridge, MA: Harvard University Press.

- Saenger, P. (1982). "Silent Reading: Its Impact on Late Medieval Script and Society". *Viator* 13: 367-414.
- Saenger, P. (1997). *Spaces between Words: The Origin of Silent Reading*. Stanford, CA: Stanford University Press.
- Sassoon, R. (1993). *The Art and Science of Handwriting*. Oxford: Intellect.
- Saunders, J.W. (1951). "The Stigma of Print: A Note on the Social Basis of Tudor Poetry". *Essays in Criticism* 1: 139-164.
- Sellen, A.J. & R. Harper (2001). *The Myth of the Paperless Office*. Cambridge, MA: MIT Press.
- Steiner, G. (1988). "The End of Bookishness". *Times Literary Supplement*, 8-14 July, 754.
- Stoddard, P. (1985). "The Effects of the WANDAH Program on the Writing Productivity of High School Students". Paper presented at the UCLA Conference on Computers and Writing, 4-5 May.
- Taylor, A.S. & R. Harper (2002). "Age-Old Practices in the 'New' World: A Study of Gift-Giving between Teenage Mobile Phone Users". *SIGCHI: ACM Special Interest Group on Computer-Human Interaction*, Minneapolis, 439-446. New York: ACM Press.
- text-e.org (2001-2002). *Screens and Networks: A New Relationship with the Written Word*. A virtual symposium on the Web (N. Akikha and G. Origgi, moderators). Available at: <http://www.text-e.org>.
- Thornton, T.P. (1996). *Handwriting in America*. New Haven, CT: Yale University Press.
- Transactions of the Book (2001). A Conference at the Folger Shakespeare Library, Washington, DC, 1-3 November.
- Tufte, E. *The Cognitive Style of PowerPoint*. Cheshire, CT: Graphics Press.

Ullman, B.L. (1960). *The Origin and Development of Humanistic Script*. Rome: Edizioni di Storia e Letteratura.

Woodmansee, M. (1984). "The Genius and the Copyright: Economic and Legal Conditions of the Emergence of the 'Author'". *Eighteenth-Centuries Studies* 17: 425-448.

Woodmansee, M. & P. Jaszi (eds.) (1994). *The Construction of Authorship: Textual Appropriation in Law and Literature*. Durham, NC: Duke University Press.