Nothing has been more central to conventional understandings of literacy and of being literate than the printed book. If today we had to choose only one object to include in a literacy time capsule, that object would almost certainly be a book. What book, of course, would be a matter much more open to debate. But, it would certainly be a book, because the printed book as a concept and as an artifact has for centuries been not only an icon of literacy but an icon for our literate culture (Bolter, 1991; Landow, 1992; Lanham, 1993). Conceptually, the book is an icon in the sense that it symbolizes the highest forms and ultimate goals of becoming literate, along with the privileges and benefits afforded those who attain literacy. As an artifact, the book is the material representation of the passions and emotions shared by those who care deeply about how literacy can transform and enrich human experience. As the latter, the book is an icon almost in the religious sense of the word.

So, it is with some trepidation that I wish to comment here on the nature of the book in relation to emerging digital technologies. I wish to raise, although not to address in the limited space here, questions such as the following: Is the book the epitome of written expression for all time? Must all other technologies and formats for written discourse inevitably stand in the shadow of the conventional printed book? What are the essential qualities of books that define their advantages and disadvantages when compared to emerging forms of digital communication made possible by computer technology? What might be lost if books disappeared tomorrow and we were left only with digital forms of reading and writing? Does the book’s status as icon limit our understanding and exploration of digital technologies?
My goal is to suggest that such questions are not unreasonable or irrelevant. In fact, I believe they are vitally important questions. They are questions we will be required inevitably to address, if current trends continue. On so many fronts over the previous 20 years, there has been a steady and accelerating increase in the use of digital forms of reading and writing. In many areas of daily life, digital forms of reading and writing have replaced or threaten to replace printed forms. Even in the traditional library, the temple of the book, digital technologies have made significant inroads, particularly in the domain of locating and accessing information. For those of us who are increasingly integrating the World Wide Web into our daily routines, our trips to the library, the bookstore, and the newsstand are becoming less frequent. And, consequently, much more of our reading is done on a computer screen rather than on a printed page. As computers are becoming increasingly more powerful, affordable, sophisticated, and ubiquitous, there is every indication that this trend will continue.

It is understandable that the book might be considered the last bastion of conventional print literacy. In one sense, if it is even conceivable for us to consider that the book might eventually relinquish its centrality to digital technologies, as have other printed forms, the entire edifice of conventional print-based literacy may collapse. For many, considering that the book might not continue in some foreseeable future is inconceivable. However, ignoring questions about the book in relation to increasingly sophisticated digital technologies will not make them go away, nor will considering them to be preposterous without reason or discussion.

A failure to consider the current and future position of the book in relation to digital forms of reading and writing or approaching that issue with a closed mind entails two alternative risks. On one hand, a blind loyalty to books as unequivocally superior to digital forms may unnecessarily inhibit an exploration of the positive potentialities of new forms of digital reading and writing. On the other hand, not considering carefully what books have to offer risks losing whatever their transcendent qualities may be in the face of an uninhibited and uninformed tide of change toward electronic media. If digital texts and printed texts are considered as adversaries in a contest for the soul of literacy, it is unlikely that either will completely fulfill its potential (e.g., see Birkerts, 1994).

A recent example illustrates these two risks and the general relevance today of thinking seriously about books and their future in relation to emerging digital technologies. Recently at a legislative hearing in Texas, a proposal was discussed that would channel all state monies previously earmarked for textbooks to the purchase of a laptop computer for each student (Chapman, 1998). The fact that this proposal was advanced by politicians, a group traditionally sensitive to public opinion, is a poignant indicator of the extent
to which digital technologies have been infused into the public consciousness in relation to literacy and schooling.

More telling is the tenor and substance of the arguments for or against this proposal (see Chapman, 1998). Those arguments tend to be framed in adversarial terms, with those favoring the proposal arguing in general terms that technology is the wave of the future. Those against it, in no less general terms, argue that conventional textbooks are established learning tools that should not be so quickly discarded. They see those who favor the proposal as over enthusiastic and uncritical supporters of new technologies and as ignoring the practical dimensions of acquiring and using computers. Opponents on each side of this issue draw on testimonials or alarming stories to support their respective positions.

DEBATE ON THE FUTURE OF THE BOOK: FACT OR FAITH

Debate supported by unsubstantiated belief and purely anecdotal evidence is perhaps to be expected in the arena of politics and public policy debates. However, there is little evidence that literacy educators and researchers as a whole are interested in or capable of engaging in a more thoughtful and in-depth consideration of the issues that underlie developments such as the Texas proposal. What theoretical perspectives would we draw on to provide expert commentary or advice on that situation? What research findings? What informed pedagogical perspectives based on careful analysis of how technology is or might be used to enhance literacy and learning in classrooms? In my experience, except for a relatively small group of colleagues who are particularly interested in technology, few literacy educators and researchers can go beyond the typical superficial generalizations heard in the popular media. In too many discussions about technology, literacy educators make trite statements of blind faith in the survival of printed books. Their arguments boil down to observations that computers are too cumbersome or inconvenient to take to the beach or that you cannot curl up with one to read in bed. Both of these examples are curious because relatively little reflective reading takes place in those two situations.

But why expect literacy experts, regardless of their specialty, to be able to discuss in depth the future of the book in relation to digital forms of reading and writing? My answer is for the same reason that we expect them to have something coherent and knowledgeable to say about other key issues such as the phonics-whole-language debate. They are perceived as the experts. One reason, I think, for the lack of more thoughtful explanation is that many literacy educators and researchers cannot imagine or accept a world in which the conventional printed book might become marginalized to some extent. As
long as one believes that the book will continue to retain its central status and
remain an icon of literacy, one can feel comfortable ignoring or devoting
minimal attention to digital technologies and what they may mean for literacy.

This is not to say that literacy professionals do not support those who are
interested in technology and its effect on literacy. For example, they acknowl-
edge and support the need for technology-focused special interest groups or
committees in professional organizations. But, they do not often see technol-
yogy as an issue on par with more conventional and long-standing issues that
cut across the entire field. They explicitly or implicitly act as if books and the
technology of print they represent are immortal and that newer technologies
for reading and writing can in comparison only be a transitory phenomenon or
an interesting deviation from more important matters. That attitude may reflect
in large measure the natural tendency to gravitate toward the status quo. Part of
the reason that the book is a cultural icon is because it has been so central to
literacy for so long and people have developed a psychological and emotional
affinity to the book. This makes it inherently difficult to consider any other
technology of written communication as serving equally well or better.

Our experience with printed books both as a powerful and familiar means
for acquiring information and as a source of inestimable intellectual stimula-
tion and emotional pleasure makes it extraordinarily difficult to entertain the
possibility that any current or future form of digital text might compare
favorably to it. But, it is important to remind ourselves that defending the
status quo often risks perpetuating narrow-minded and short-sighted perspec-
tives. This risk is no less applicable to matters of reading and writing.

Another reason that it may be difficult for many literacy professionals to
see, to understand, and to attend to the digital transformation taking place in
literacy is because they tend not to view the book as a technology of reading
or writing. As an icon, the book transcends technology and, as the well-estab-
lished status quo, its technology is by definition transparent. In other words,
as an icon, considering the book merely in terms of its technology risks
demeaning its cultural and personal significance. Consider the following
purposefully irreverent description of the book: “[a technology that uses]
environmentally threatening processes and materials including the applica-
tion of toxic chemicals to create alphabetic symbols on dried sheets of wood
pulp and rag mush sewn and glued together between reinforced dead organic
material” (Reinking, 1997, p. 635). As the status quo, the book’s technologi-
cal dimensions can only be considered with conscious effort. Even the ap-
pearance of the computer as an alternative technology for reading and writing
with far-reaching implications for literacy has not led to widespread reflec-
tion upon the book as a technology and what its technological dimensions
have done to us or for us (e.g., Kaufer & Carley, 1993). In short, the topic of
technology in the field of literacy has typically meant considering computers
not books.
Technology and Symbolic Representation

Technology is always a component of literacy. All forms of symbolic expression require technologies of representation that include tools and the means for recording, disseminating, and accessing information. The inscription of clay tablets with a stylus in the ancient world, albeit much less sophisticated than the modern word processor, was nonetheless a technology of writing and reading. Similarly, paper, pens, pencils, typewriters, printing presses, and ultimately books comprise technologies of reading and writing whose characteristics shape, to some extent, how reading and writing are viewed and carried out. The way literacy is conceived and practiced at any point in time is somewhat constrained, if not defined, by the technologies of reading and writing. Just because we have not thought about how books have done so in the past does not mean that they have not had such effects. More importantly, any consideration of recent digital technologies for reading and writing and their merits in comparison to the book must include a deep, dispassionate analysis of their respective technologies. By “deep” I mean, for example, an analysis that extends beyond the obvious physical differences between printed books and computers. True, today a book is more easily carried about and can be read in diverse ambient lighting conditions, while even the best laptops are relatively cumbersome and must be backlit and read in subdued lighting while connected to some power source. These are not trivial differences from a practical standpoint, but they are little more than distractions to determining more consequential and long-term differences between printed and digital texts. If current efforts materialize, it will eventually be possible to create a digital device that is almost identical in physical appearance to a book, but that has even more capabilities than now available in the most sophisticated computers (see Jacobson, Comiskey, Turner, Albert, & Tsao, 1997). We need to know the conceptual added value of those capabilities and what if anything might be lost or gained if such technologies replaced the technologies of the printed book. Elsewhere, I have attempted to define and justify five conceptual differences between printed and electronic texts that are independent of the visual differences associated with their current technologies (Reinking, 1992). We also need to speculate about how such capabilities might transform each and every dimension of literacy, and that too is threatening to those invested in conventional print-based literacy.

Conclusion

In the final analysis, discussions about conventional books and other printed materials should not start from the assumption that they are unequ-
tionably superior to digital texts. Neither, on the other hand, should those who are enthusiastic about the possibilities of digital texts be uncritical in thinking of new technologies as far more beneficial than printed texts. As Richard Lanham (1993) has pointed out, arguing that a book is superior without explicit reasons is like defending the value of a box’s contents on the basis of its wrapping paper. He states, “Before we fix on the book as the center of humanistic culture, shouldn’t we have a better idea of what books do to us and for us . . . having decided what we want to protect, how do we make sure it survives the movement from book to screen?” (p. 99). Similarly, explicit analysis and reasoning must accompany claims for any advantages of digital texts over printed texts. As the Texas proposal suggests, if we wait too long to think seriously about what features of books merit preservation, the tides of change may make discussion moot. For those who believe that the book must be preserved, it will soon be more difficult to assume that it can automatically remain an icon or define the status quo. Any practical advantages the book has, such as portability, are continually being eroded. For example, at one level there is already little contest in comparing a large stack of textbooks on a student’s desk with a laptop computer that contains a whole library of books, plus an e-mail program by which experts may be contacted, the World Wide Web to search for diverse supplementary materials, a flexible search function for quickly finding information, a word-processing program, and so forth.

Likewise, more and more people are turning from printed to digital forms of reading and writing. The people a decade ago who said they would never give up writing first drafts with pencil and paper are often the same people today who say they cannot imagine starting to write even a short letter away from their computer screen. People who resisted using e-mail several years ago are today hardly able to resist checking their messages every time they walk by their computer. Will the conventional printed book too be converted to some analogous electronic form? Put another way, what kind of object will our children put in a time capsule as the icon of literacy for their generation? If not a book, what will it be? More importantly, what role did we play in getting that object there and for what reasons?

REFERENCES