

One of the most interesting things for me about my papers is that some of the early papers that I wrote about technology and the impact it will have on publishing already seem dated to me, not even two years later. That's certainly the case with this paper for Dennis Stovall's Small Press Development course, in which I discuss the problems with American phones not being engineered for good web access and texting being something Americans don't like to do.

Even if some of the particulars of the paper don't quite fit any more, though, I'm convinced that the ideas within it are sound; technology is changing the way that we interact with media.

The Role of Technology in the Future of Storytelling and Publishing

SINCE THE INVENTION OF THE WRITTEN WORD, ideas expressed by text have had certain inescapable characteristics: They are expressed in a linear fashion, proceeding from word to word, sentence to sentence, opening paragraph to thesis to supporting argument to conclusion; they are unalterable once committed to, “set in stone” as it were; and they are a one-way communication from author to reader, with no opportunities for dialog or for roles to be reversed. Technology is beginning to change all those things, though change to a way of doing things with thousands of years of momentum does not happen overnight.

The most obvious way that technology has changed storytelling is in the delivery of text to the reader. For five hundred years or so, text has come to us in one main form: pieces of paper, either singly or collected by binding or by some other method. Electronic distribution is beginning to change that, though. Already, it is quite common for people to read their daily newspaper online rather than as a physical paper, and newspaper companies are reporting falling subscription rates to prove it⁴¹. Certainly, much research is done on-line rather than in books these days, as information is much easier to find via Google or wikipedia than it is by going down to the library and hunting through the stacks for a book that someone checked out last week.

Pleasure reading, though, is still largely the province of print books. There are some areas where this is not the case: Web comics such as xkcd and ThreePanelSoul are becoming increasingly popular and widely read, and blogs are proving themselves to be popular enough reading to be valuable to marketers and politicians. Even traditional print media is finding its way online through initiatives as varied as Project Gutenberg (www.gutenberg.org) and Dark Horse’s eComics section of its web site. The fact remains, though, that print books is far and away the most common format for reading fiction.

A large part of the popularity stems from the portability and ease-of-use of the book. Paperback books particularly are small enough to be easily carried, require no power, and are comfortable to read. Until very recently, none of these things have been the case for electronic books. Two new technologies are changing that, though.

The first of these is the development of eInk technology. This technology produces a screen that looks very similar to paper—unlike LED displays, there is no backlighting. This gives a surface that is very comfortable to read on, with the added advantage of having a very low rate of power consumption. Sony and Amazon are the biggest companies to have developed ebook readers using eInk technology, but there are several smaller companies with similar products available, such as CyBook, Irex, and Vision.

⁴¹ Wall Street Journal; May 2, 2005; page 1

The second technology to popularize ebooks is the nearly ubiquitous cell phone. Cell phone novels originated in Japan, where superior phone design, greater popularity of texting, and an ideogrammatic, high-context language have combined to enable entire novels to be both written and read on cell phone. Indeed, in 2007, five of the top ten best-selling novels in the country were originally cell phone novels that were later picked up by major publishers and released as standard books.

Both ebooks and cell phone novels offer very new forms of distribution, which has the potential to have a very large impact on the publishing industry; electronic files are immediately copyable and amazingly space-efficient, which means that publishers do not have to worry about storage of books—making a new copy is as simple as cutting and pasting or typing in a few commands, and text files in particular are so compact that hundreds of thousands can fit on a home computer. There is no shipping of texts necessary beyond downloading, which means that distribution of ebooks and cell phone novels is theoretically just as easy for the publisher as it is for a major bookstore. In addition to shipping and storage costs, all material costs for the physical book are eliminated by ebooks. This has the potential to leave the publisher with a much larger percentage of the retail cost than has previously been their due.

This ease of copying and distribution is not without its problems, however. At the moment, ebooks are an uncommon enough item that illegal sharing of files has not become a huge issue (though there are many authors with concerns about it). However, if we take for granted that ebook readers will become more and more advanced, we can posit an “iPod moment” for ebooks—that is, a point at which the interface technology becomes sufficiently advanced and attractive enough to win mass appeal. When this occurs, ebook piracy may very well become a huge issue to both authors and publishers.

Cell phone novels will likely not have the same issues with piracy that ebooks do, primarily because (in the US at least) cell phone internet browsers are engineered to be much more limited in their browsing ability, which restricts the user’s ability to navigate to sites where pirated works could be downloaded. As US cell phones get more and more sophisticated, of course, it’s very possible that piracy of cell phone novels could become subjects of piracy, though this would presuppose a popularity of the novels in the US. This has yet to happen, due in part to the US distaste for text messaging, but there are already websites such as textnovel.com that are promoting cell phone novels in the US, even going so far as to offer \$1,000 cash prizes to the authors of the best cell phone novels.

Ebooks and cell phone novels, then, both have a great deal of promise and some interesting new problems for the publishing industry; however, they are only the most obvious of the possible changes that modern technology may make to the way that we tell stories. Whereas they have a great impact on the distribution of text, they make no great substantive changes to the nature of that text. With any new media, though, come new ways of presenting ideas, and electronic fiction is no exception.

Interactive fiction lends itself very well to computers, but interestingly seems to have started in print books in about 1976, when Vermont Crossroads Press published “Sugarcane Island,” which was the forerunner of the popular “Choose Your Own Adventure” series of books. Rather than straightforward linear narratives, these books were told from a second-person perspective and presented a decision nexus at the end of each short (generally no more than two pages) section. At this nexus, the reader was given a choice between a number of different

options, and instructed to turn to a particular page depending on which option was chosen. In this fashion, it became possible to read the same book several times with a different story evolving each time.

It was five years later that Microsoft came out with the first text-based computer game for personal computers, perhaps spurred on by 1974's release of *Dungeons and Dragons*. *Adventure* was not nearly as popular as the later *Zork* series of games by InfoCom, but it was the first to introduce the second-person narrative to the computer, and it is with *Adventure* that the line between text and game begins to blur. While certainly marketed as games, *Adventure* and all the other text-based games that followed in its wake were in many ways closer to Tolkien than to chess: Certainly there was an evolving story line, characters, and a plot. If there were riddles to solve and reader control over the story line, those would serve only to make these programs a new kind of storytelling, rather than games. Indeed, today *Adventure* and all its descendants are known collectively as "interactive fiction", and there are many devotees of the genre who still practice it—ifdb.tads.org is a database of over 3000 pieces of interactive fiction at the time of this writing.

Another form of writing with many decision nexuses for the reader originates with technology developed for the World Wide Web: Hypertext. Hypertext allows the reader of a document that has been marked up to navigate throughout the document by clicking on hyperlinks. In this way, it's possible to tell a linear story with hyperlinks that, for example, point to a glossary or list of characters, so that the reader can easily access information. Even more interestingly, though, hypertext lends itself very well to telling non-linear stories. In a piece of hypertext fiction, the reader is free to follow whatever links catch their fancy, in effect strolling around to look at the work of art that the author has created from various points of view.

On its own, this sort of fiction is interesting, but perhaps not terribly important to publishers—no more so than any other emerging genre is, at any rate. Hypertext fiction, however, is native to the web. Its use of hyperlinks makes it quite easy for a piece of hyperfiction to link to a separate website. If hyperfiction proves to be popular, this ability will almost certainly bring up interesting legal questions. Can an author write a story that links directly to someone else's website? And if so, is the author liable to the readers if the content of the linked website becomes somehow objectionable? Should the author have to pay to use a link to Microsoft.com in their story, or should Microsoft pay the author for advertising for them?

The web as a storytelling medium has other possibilities, and other potential problems. It is an exceptionally fertile ground for the type of "viral" fiction that Jon Sanborn and friends produced in June of 1997. This fiction consisted of a series of emails from a company called Dysson, the first of which appeared to be a misdirected email containing some mysterious figures the supposed sender of the email needed to have checked. In successive emails, hints were given that not all was as it seemed at Dysson; the sender of the mysterious first email commits suicide, and successive emails from other sources hint that perhaps the death was foul play. The mysterious figures from the first email become central to the story line, and the plot continues to twist and turn.

In the end, Sanborn's experiment with viral fiction ended badly—when it was revealed that the whole thing had been a fiction, many of the people who had been emailed cried hoax. Very negative reviews of the incident were written by the New York Times, and Monty Python's Eric Idle took the incident so seriously that he virtually abandoned the Internet thereafter.

Still, the very strength of reaction shows that there is the possibility of very moving fiction done in this vein—though would-be authors would be well advised to make sure their participants were willing.

Other writing on the web takes the place of user-defined, computer-controlled collaborations. “The Periodic Table as Assembled by Dr. Zhivago, Occultist” at zhivago.gtrlabs.org, for example, is a poetry creation machine. At this site, you select any number of poetry fragments as represented by the elements of the periodic table, decide how you want to mix them (by dissolving, centrifuge, heat, or others), and tell the computer to “react.” The computer then gives you a poem (or occasionally a string of gibberish) generated by your specifications. While this sort of thing is probably a bit too avant-garde to see much mainstream interest, it’s certainly the sort of thing that a small-press e-publisher could be interested in.

So we can see that there are many possible changes coming to the worlds of storytelling and of publishing due to technology. Broadly speaking, those changes fall into the categories of changes to content (non-linear hyperfiction *vs* linear books), and changes to format (electronic media *vs* print media). Certainly these two categories of change are interrelated; having a story generator based on user input similar to the poetry generator mentioned in print book form would be theoretically possible (as all the instructions that the computer follows while generating texts are, themselves, written in text), but would be so tedious to the reader as to render them unfollowable. Some sorts of stories, then will have to be told only in electronic media.

The problems of electronic distribution of text, then, are the first that will be confronting the publishing industry. Chief among these problems, as previously mentioned, is that of illegal downloading of texts. Piracy has plagued the music industry since Napster demonstrated the power of file sharing in 1999. There is much to learn from studying the way that the music industry has tried to deal with piracy, and much of it is negative lessons: Following in Sony’s footsteps and using rootkits to install software on customer’s computers to enforce copy protection is probably a bad idea, as is taking the RIAA’s lead and suing anyone suspected of pirating protected works. Both Sony and the RIAA have suffered tremendous bad publicity due to these efforts, and have done very little to discourage illegal file sharing.

If any example is to be followed, it is that of Apple’s, with iTunes. The biggest selling point of iTunes is that it is very easy to use, quick, and relatively cheap. Songs can be searched for and downloaded with much less effort than trying to navigate around various illegal file-sharing sites, and while albums are not free on iTunes, they are at least cheap. If publishers follow this example and sell ebooks for, say, half the price of a paperback, people will embrace the new format. If publishers continue to charge \$8-\$12 dollars for obscure titles and more for big name authors, there will be enough discontent in the customer base for those with the technical know-how to put together effective file-sharing sites for ebooks.

There is another problem with ebooks for publishing companies, however: Just as storage, shipping, and material costs are irrelevant to ebooks, publishers themselves have no definite role. When a publisher is doing no more than edit a manuscript, why should authors not simply hire reputable editors and sell their books on their own websites, or even work out a deal with Amazon or Borders to sell books through those sites? Certainly, the point at which publishers will face this problem is far down the road, as publishers will remain a force at least until electronic books supplant printed books, but it is still a question that the industry as a whole should be considering.

My feeling is that the role of marketing in publishing will become more and more important, so that who an ebook is published by becomes an easy way for a reader to tell if they are likely to enjoy reading that ebook. In a world where anyone with an internet connection and a word processor could self-publish on the web, publishers will be a way for readers to begin to separate the wheat from the chaff. As time, we may find that the publisher develops more roles as well. Perhaps the author has the text written for a piece of interactive fiction, but does not know the ins and out of programming well enough to write the scripts needed, and the publisher will help with that. Certainly, the publisher will be instrumental in negotiating with the major ebook selling sites, such as Amazon.

There is a great deal of change coming to the world of books, for authors, readers, and publishers—it's a very exciting time to be getting involved in it, and I look forward to seeing how all these trends play out.