Hypertext Literature

The Hypertexts of Yesteryear

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The siren call of literary immortality. The desire to cheat death with writing that lives on after one is gone. Who among poets and fiction writers hasn't felt it? But when future generations take stock of today's literature, will our hypertexts be there for the reckoning?

Literary works often disappear without a trace, and preserving any text can be complicated by conflicting, incomplete, or inaccurate sources, not to mention the nuances lost as language and cultural contexts change over the years. Overall, however, posterity has been well served by the medium of print and the institution of the library. With hypertext, the rapid encroachment of software obsolescence exacerbates traditional archival problems and poses some new ones. Can a hypertext endure indefinitely in a readable form while remaining faithful to the original work?

Obsolescence is particularly a threat to work written in proprietary formats and distributed on disk, rather than created for the Web. The numerous works now available in Storyspace, HyperCard, and other program-specific formats will probably someday become unreadable in their current incarnations. Backward compatibility with late-20th-century software won't be maintained forever by new systems. Emulation software often emerges to extend the life of once-popular defunct operating systems, and this may come to the rescue of aging hypertexts. Software emulation isn't foolproof, however, and there's certainly no guarantee that it will be maintained through successive generations of platforms. Upgrading software is usually the only surefire way to keep it afloat, but how long can one count on hypertexts being upgraded?

A literary Darwinist would hold that poetry and fiction (hypertextual or not) will stay on the market as long as people value it, while weak writing will gradually disappear from publishers' catalogs. This may generally be true, yet good work goes out of print all the time for many reasons. There are also many reasons why later generations may show an interest in work dismissed by their predecessors: Tastes change. Previously ignored works may in retrospect emerge as important precursors to later major writings. Even minor work is important to an understanding of a particular literary climate or movement.

Even if one believes that quality ensures an enduring audience in the print world, will this proposition still hold for hypertext? While there are huge numbers of literary print publishers who may take up a good title dropped by another press, there are few companies besides Eastgate Systems publishing hypertext poetry and fiction on disk. When a book goes out of print for a generation or two, it can still be read and studied in libraries and private collections and maintain an audience. It's reassuring that Eastgate hypertexts now reside in over 100 libraries, which presumably will protect them against such immediate threats as disk deterioration. But even when they're carefully archived, discontinued works will lose their readership if their compatibility with modern systems expires. A publisher will be much less likely to resurrect a discontinued text if it requires hunting down an obsolete machine or hiring an engineer to decipher an obso-

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lete file format just to get an idea of whether the piece is worth reissuing.

The Web seems to offer greater hope for hypertext durability. The number of literary hypertext publishers on the Web is growing steadily. HTML may not last forever, but it's an open, universally supported standard that doesn't rely on a single vendor. The huge body of material in the format provides a uniquely compelling motivation for backward compatibility. If HTML does ever become obsolete and is no longer even imported by hypertext programs of the future, an editor could in theory reconstruct an old work with a printout of the ASCII files in one hand and an archived copy of *HTML for Dummies* in the other. (Graphics and other elements may be lost, however.)

The Web isn't a panacea for archival woes, though. Its technical limitations preclude it from being a viable alternative for some of the work published on disk. The popular supplements to basic HTML also present their own archival problems. Since Java, ActiveX, and JavaScript are all caught up in an industry power struggle, their future viability depends greatly upon corporate politics. Java's binary file format would make it harder for a future editor to figure out what's under the hood. Plug-ins for formats such as Shockwave share the drawback of any proprietary software—dependence upon a single vendor. As new standards such as Dynamic HTML and XML evolve, they should eventually reduce the need for proprietary or binary-format elements and make Web text structures more transparent. Nonetheless, there may always be an archivally messy high-end to Web technology that will have an irresistible allure for experimental writers.

Assuming a hypertext can survive for the long haul, the next issue is retaining the integrity of the original text. From the time of publication, the matter of what constitutes the "correct" version of a hypertext can be problematic. Consider the many published hypertexts created in Storyspace, a cross-platform environment that actually looks and sometimes behaves differently on Mac and Windows systems. Which version is the appropriate one to pass on to future generations? The version corresponding to the platform upon which it was actually written? What if the writer was familiar with both platforms and incorporated platform-specific features into each version? Would an ideal authoritative edition be a conflation of the best of both? Similar questions arise when a work exists in both Storyspace and Web formats.

As works in proprietary formats are updated, the version problem can become even more complex. Many writers who created work in HyperCard for the Mac are concerned with porting their creations to Windows or the Web to reach a wider audience and secure them against Apple's possible demise. This may involve redoing the hypertext in a new authoring system. Not only is this a daunting task, it usually guarantees some differences between old and new versions, since one hypertext system can rarely duplicate the interface and features of another exactly. The author may feel that some of the changes are unfortunate compromises but could view other alterations as improvements made possible by the new tools at hand. If the new version is better overall, the author could consider it the definitive edition, but could an editor make the same claim after upgrading someone else's posthumous work?

When the Canadian poet bp Nichol died, he left behind a collection of kinetic poems called *First Screening*, which were written in BASIC for the Apple II. J.B. Hohm created a posthumous HyperCard edition of this work, but wasn't able to replicate all the original animation effects. [1] Hohm considers the new version a translation, and in the preface describes some of the conversion problems as "like translating a verb tense from a foreign language with no equivalent verb tense." Though the problems of preserving animated text are more

severe than those involved with hypertext, the issues are similar.

The Web poses a different set of textual source problems. When an author writes for the Web, there's really no single urtext but rather numerous different versions presented by different browsers. Fonts and graphics are displayed differently on the Mac and Windows, and there are other formatting and interface differences from one browser to another. The author may not even be fully aware of these differences. Continued browser evolution will mean that even if future browsers support all the elements of a Web text, the work is likely to look and even behave differently from the author's original conception. Twenty years from now, running a 1990s-vintage hypertext under a modern browser may arouse controversy similar to that provoked by playing Bach on the piano, raising the same question: Does the new technology distort the original work or enrich it with new features—dynamic variation in the case of Bach and (presumably) improved navigational tools in the case of hypertext?

How should writers respond to these issues? Should we try to supplement our hypertexts with detailed descriptive specs that would allow future editors to reconstruct them exactly as they were conceived? Or should we simply resign ourselves to inevitably losing some of the look and feel of our works? Perhaps we should regard the hypertext file as something like a score that may be rendered in various ways by different delivery systems, with each rendering potentially as valid as the next for showing the work in a new light. This, of course, was the original philosophy behind the limited formatting control offered by HTML. Malleability is one of the goals of hypertext, so should the author surrender control over interface and formatting as well as text disposition?

What would we need to put in a time capsule that would allow a future editor to accurately reconstruct a hypertext without access to a functional version or knowledge of the specific software originally used to create it? Let's consider a typical Web piece. The HTML code itself could provide a good record of formatting and link structure but would have to be supplemented by an explanation of all the tags used and exactly how they should be rendered. Other additions would include: detailed descriptions of any complex features (frames, image maps, rollovers, Java applets, JavaScripts, and so on); frame-by-frame storyboards of every animation; a description of the current browser interface, explaining which elements were essential and which were not; and screen shots showing examples of layout and interface. Then, not willing to trust to ASCII and now-standard graphics file formats, we would probably put everything into hardcopy as well (audio or video components would present an addition problem). Finally, what about negative preservation? Should the author record any perceived problems with the current implementation, giving an editor permission to overcome them with improved software tools of the future?

Such a time capsule would be impractically time-consuming and tedious to create, but there are less drastic measures a writer can take in the spirit of this approach. HTML work can be carefully commented to explicate frames, scripts, applets, plug-ins, and even animations. Any hypertext could be supplemented with an author's technical description of unusual elements. Many hypertext writers delight in putting technical anomalies into their work. For example, *Uncle Buddy's Phantom Funhouse*, by John McDaid, is designed to crash at a narratively appropriate moment. [2] In Ed Falco's *Sea Island*, clicking on the Links button generates the standard Storyspace list of link and path names for the current node—but these lists unexpectedly form individual poems. [3] Authors may dislike explaining their work or giving its secrets and surprises away, but such rogue elements are likely to be overlooked and therefore

not preserved by editors transferring a hypertext from one system to another.

Critical writings and technical papers about specific hypertexts will help preserve aspects of their inner workings. One hates to admit it, but publishing adaptations of hypertext for print could also be a valuable service to future readers. Despite all that a hypertext loses when reduced to a printout of one or two possible readings, this printed sampling could someday be all that survives of a work. Or it may provide the spur for a publisher to reconstruct an obsolete digital version.

We should encourage our university and community libraries to collect hypertexts. We should also keep an eye on the art world, which already is grappling with the complex preservation problems posed by installations that use mechanical, video, and electronic elements. Cyberart conservation projects will undoubtedly arise, and these could grow to encompass hypertext literature, particularly crossover works with strong visual elements.

Ultimately, we should pay heed to archival concerns but shouldn't let them shackle us. Cutting-edge technology will often prove ephemeral, but that doesn't mean we need shun it, any more than we should eschew performance art simply because it may not speak to posterity. Sometimes speaking to our own time is just as important.

References

[1] Nichol, bp. *First Screening*. J.B. Hohm, Ed. (Red Deer College Press, 1993).

[2] McDaid, John. *Uncle Buddy's Phantom Funhouse* (Eastgate Systems, 1992).

[3] Falco, Ed. *Sea Island* (Eastgate Systems, 1995).

Report from the 4th Workshop on Open Hypermedia Systems

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The 4th Workshop on Open Hypermedia Systems (OHSs) was held in connection with the 1998 ACM Hypertext Conference in Pittsburgh, PA. The main objective of the workshop was to gather the OHS community and to further develop the understanding, interaction and exchange of information between researchers in the field. The specific objectives of the workshop were: (1) to allow newcomers to present their work to the established OHS community; (2) to present the latest developments in existing OHS projects (e.g., status reports and descriptions of new developments and future work); and, (3) to further advance the work on OHS definitions and standards undertaken by the OHS Working Group.

The workshop participants were selected based on position papers which were submitted in response to a call for participation. A total of 12 position papers were accepted for the workshop. The topics discussed in the position papers were used to influence the set of topics to be discussed at the workshop. The 20 participants consisted of a mix of both well-known people and newcomers, which provided an excellent forum for exchange of experiences and ideas,

The workshop web site is at:
`http://www.aue.auc.dk/~kock/OHS-HT98/`