

# Turn the Page!

## Integrating Digital Technology into Museum Exhibition

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### ABSTRACT

A Case study of the Lincoln exhibit at the New York Historical Society as well as an examination of the effects of using “turning page” software in exhibitions.

In today's increasingly digital world, exhibition curation has become ever more complicated. Faced with an audience that wants not only interactivity, but also fast delivery many cultural institutions are turning to digital technologies to bridge the gap between user interaction and archival practice. In the past when displaying archival documents there was minimal interaction between the audience and the material, rare books and documents were kept behind glass and left open to a static page. Users could not turn the pages and usually there was minimal information on the materials content. As the Internet began to take the place of physically going to cultural institutions, either for research or pleasure, these institutions faced a new challenge. First, how to replicate the material and the experience of the physical space, but also how to allow users to interact with that same material, how to provide the same services on-line as at the physical location.

Turning page technology is now ubiquitous in today's culture. With the advancement of technology e-readers like the kindle, nook, and now the iPad, have allowed users to have a virtual library in a small device. Not only are these devices simple to use, but they often replicate the experience of reading a book by allowing users to physically "turn pages" and mimicking the action digitally. While this software has become sleeker and more advanced it is by no means a new concept. Museums, libraries and archives have been experimenting with on-line replications of rare books and documents since the early nineties. Attempting to digitally recreate a book creates a new experience for the user. It can be accessed not just at the physical location, but on-line and around the world. Users can "turn pages" and

see not just a part of the book but read the whole if they wish. Some institutions even provide annotation, magnifiers, and audio recordings to enhance the experience.

In 1997 Robert Thibadeau and Evan Benoit outlined a method to digitize books and put them on-line. Named the Thibadeau-Benoit method, what is interesting about this technique is that they chose to focus on user interaction rather than completely accurate renderings of the original material. The method scans pages at 600dpi and runs a series of filters to make the pages readable and viewable on-line (typical on-line resolution is 72dpi so the images are also compressed). Users can change the resolution of each page from low to high, magnify, and while not an animated “page turner” viewers can skim through the digital book with relative ease. Though a simple answer to book digitization this method provides an accurate rendering of the original material and a simple, easy-to-use interface that engages users and gives them the actual experience of reading the book.

Another technology more recently developed is Turning the Pages (TTP) in cooperation with the British Library and Armadillo Systems. The software uses 3-D technology to simulate the depth of the book as well as page thickness. The software is available as a download on the British Library site, but the files created are quite large and whole books have not been translated into this system. The library also offers a downgraded version of the software. Available through a Microsoft Silverlight plug-in the user can “turn the pages” by clicking and dragging with the

mouse. There is also a magnifier, annotation, and audio commentary available. Users can also use a scroll bar to skip to sections of the book. The pages are displayed two at a time, but without the knowledge of how many pages are in the book displayed. The resolution and quality is quite good and for all intents and purposes gives the user the experience of reading a rare book.

Experiential technology is essential to this new frontier. In most of the real world “turning page” applications what is important is the experience of leafing through a book. A secondary consideration becomes the accurate replication of the book itself. While we have been speaking of on-line representations some institutions, including the British Library, have employed touch screen technology on-site to further replicate the reading of a book. This software allows users to interact with a touch-screen panel and “turn pages” using their fingers, even more like reading an actual book. Often the original document is displayed alongside the touch-screen allowing users to interact visually with the original material and digitally rifle through it.

One excellent example of this curation model was the Lincoln exhibit at the New York Historical Society. The exhibit featured primary documents, photos, maps, and clothing and chronicled the changing views of the sixteenth president in New York during the onset of the Civil War. The exhibit also featured several political cartoons presented as wood engravings that provided trivia for visitors. The touch screen displays were always crowded and side-by-side with the original document. Each display was mounted on the wall at eye level and viewers could easily touch

and scan through the pages. However, there was no other functionality associated with it. Users could not magnify or annotate the digital book, but this is understandable for its use in an exhibition. Several of these displays were situated around the exhibit and as users moved through they could examine each while also viewing it in context with other historical documents. At each kiosk users were able to more completely absorb information by being able to actually read the original document. Often there were lines for each kiosk as the simplicity and novelty of the touch screen was a big draw. Gerhard Schlanzky, Director of Exhibitions, was contacted for this report. He says that the New York Historical Society has been using this technology for a few years. It has become so popular that curators ask for its use in nearly every exhibition. He also states that the files are created in-house using available software from the web. The reproductions are also archived for preservation purposes. Though he would not specifically state what resolution the books are scanned at, most institutions scan at 600dpi for greater clarity and quality.

The Lincoln exhibit provides a good case study for examining how digital technology cannot only provide user interactivity and set preservation standards. Digital recreations allow users to interact with rare and archival material without damaging the original documents. They also allow greater access to the material through on-line copies, users from around the world can see and read the book without leaving their homes. These digital reproductions also serve to preserve copies of the book for future use. Should the original deteriorate a digital copy is still

available, and at least for now, digital copies should last “forever.” This is of course provided that suitable migration and checking of the digital files is maintained.

Not only has the New York Historical Society begun using this technology, but institutions like the Museum of Modern Art, the Whitney, and as mentioned above, The British Library have all utilized this new technology. However, what purpose do these reproductions serve? Are they in the same realm as digital reproductions of artwork? Are they merely copies or do they in some way represent the works themselves? Many critics of the technology have asked: “Is the virtual page-turning function really necessary for greater understanding of these works?”<sup>1</sup> Many of these rare books have already been reprinted in book form and are for sale in bookstores and on-line. Does the digital reproduction faithfully represent the actual act of reading a book or is this just a new fad? How does this translate to preservation efforts as well? If copies already exist, in the original media, why is it necessary to create new copies outside of it?

Access is a strong point in the favor of digital reproduction. Not everyone has the money or time to purchase print reproductions of rare books. Most people in the country, however, have access to an Internet connection. Digital books provide a tool for learning for those who otherwise would never come in contact with a rare book or manuscript. Schools can also take advantage of this technology by allowing students to connect on-line to a free resource rather than taking costly field trips or purchasing print reproductions. However, this raises other issues of access. Should

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<sup>1</sup> Institute for the Future of the Book, Museum, 2006, 29 April 2010  
<<http://www.futureofthebook.org/blog/archives/museum/>>.

digital reproductions replace actually going to a museum and physically interacting with an object. Museum and library professionals would obviously disagree, but the very availability to users of their collections necessarily might prevent them from actually visiting the museum. In the increasing availability of information, successive generations find going to libraries for research tedious and slow. Why go to a place when all the information is online at your home? Access has always been a balancing act between preserving the collection and allowing people to view. Digital technology complicates matters further. You want people to visit your museum, but you also want to allow access to those unable to go (in other states or countries for example). There is no easy answer to this question. Another complication is that digital reproductions often generate interest in the original and prompt users to visit museums and libraries. There is no way of knowing who looked at the website and decided not to visit vs. people who visited and became interested in visiting. Web statistics only go so far. What is important for access is to remind users that the digital reproduction is not the real thing. However faithful a reproduction the digital copy is just that a copy, it can never replace the original item nor can it be a substitute for viewing it in the long-term.

Another issue involved with digital reproductions is their faithfulness to the original. As mentioned before the Thibadeau-Benoit method does not rely on exact faithfulness, but rather the enjoyment of the user. Other institutions, like the British Library, form a kind of middle space between user interaction and reproduction. The question is how important is it to digitally reproduce all aspects of the original material? If print reproductions exist is that not automatically more faithful to the

original being in the same medium? Should there be standards for digital reproduction? In preservation, it is often better to have many copies in disparate locations, sometimes even in different mediums. Does this work for digital reproductions. The British Library TTP software does not create the feeling of looking and reading a book, however clear the image quality is. Is the content of the book important or the fact that it is a book? Or both? For future generations, I think it is important to document and reproduce the feeling of reading a book digitally. As e-readers like the kindle and nook become more popular and inexpensive, printing books may become obsolete. The ability to have an entire library at your fingertips in a device slightly larger than a book is a great advantage to any person. If books become obsolete how will future generations know what holding a leather-bound book was like if not for the digital reproductions? This is an extreme scenario that also involves that every book in the world be destroyed, but it is still a legitimate question. Suppose the Lindisfarne Gospels deteriorate? Are modern printing techniques enough to accurately reproduce the gospels? Are even digital techniques enough? As technology advances it is important for the professionals in this industry to truly examine what should be saved. Is the book, the frame, the binding, the page thickness, etc, important or is it the content?

For now, digital books seem to be the new trend in not only popular culture, but exhibition as well. People are always captivated by new technology and digital technology allows you to do things that traditional analog media cannot. One example was applying appropriate light conditions in Paris for an early manuscript of James Joyce's *Ulysses*. With digital rendering users can magnify and search



through books much faster than with analog media. Digital technology is also cheap and cost-effective. It allows users to access material without compromising the integrity of the original. As technology moves forward even better quality of turning page software can be expected. But we have to ask ourselves at what price? There can be no substitute for physically handling a rare book or manuscript. To feel the old paper or vellum, to smell the dusty pages, is this worth compromising through digital technology? It is not known at this time, but in the interest of drawing visitors to the museum digital technology can be seen to be worth the price.

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