



Material Culture & the Internet: The Print History Project

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ABSTRACT

This illustrated talk examines the challenges encountered in an ongoing collaborative project to document and electronically publish a selection of Wellington book trade business histories, print products, and oral interviews from 1840 to the present. Using new media technologies of image scans, digital audio, TEI-XML mark-up text, and full on-line search capabilities, this project brings the material world of print and its practitioners to a global audience, whether academic, professional, or the general public. Issues of digital surrogacy, the new digital canon, and the possibilities of a new kind of publication forum will be addressed. The Print History Project is a collaboration between the New Zealand Electronic Text Centre, the JC Beaglehole Room of the Victoria University of Wellington's University Library, and the Wai-te-ata Press. Its website is:

<http://www.nzetc.org/projects/php>.

What happens to the material object when it goes digital? Who is its audience? How are we shaping their experience? Can we walk the tightrope of access versus preservation? What is the status of the artefact in the digital domain? Are we creating a new digital canon? How are diverse communities of interest impacted, whether historians, curators, archivists, conservators, or heritage specialists? Ultimately, how is computer technology itself shaping the artefact, the research process, and research outcomes?

This paper will examine several challenges encountered in a collaborative project to research, digitise, and electronically publish a representative sample of Wellington's book trade business histories, print products, and oral history interviews from 1840 to the present. Using image scans, digital audio, TEI-XML mark-up, and full on-line search capabilities, this project brings the material

world of print and its practitioners to a global audience. Digital surrogacy, the new digital canon, and a new type of publication forum are just some of the issues which new media technologies oblige us to confront.

PROJECT BACKGROUND

Begun in 2002, The Print History Project <http://www.nzetc.org/projects/php> is an ongoing collaboration between the Victoria University of Wellington and a number of Wellington libraries, museums and archives. The project team consists of Nicola Frean, Special Materials Librarian of the University Library's J.C. Beaglehole Room, Elizabeth Styron, Director of the New Zealand Electronic Text Centre, and Dr Sydney Shep, Senior Lecturer in Print and Book Culture and The Printer at Waite-ata Press. The project was initially funded by the Trustees of the National Library of New Zealand and consistent with their grant criteria

- it had to deliver enduring benefits
- have a breadth of impact
- demonstrate an innovative approach
- involve different parts of the library and information sector
- enhance the status of librarianship and
- increase public recognition of the profession.

A tall order perhaps, but in our application, we argued that The Print History Project would help build a cultural context for an important regional and national industry and showcase examples of the printer's work at key moments in the industry's local history. By representing an innovative approach to the publication of print culture research, the project would create a significant resource base for future researchers, teachers, and institutions. The project would also help to train emergent digital librarians and information professionals by complementing their studies at Victoria University of Wellington, the only New Zealand university to offer a Master of Library and Information Studies. We were also confident that during the research process, participating institutions and repositories would benefit from enhanced

intellectual control over their collections, thereby ensuring greater access to materials in this subject area. Individual item preservation concerns would be addressed and open, restricted or surrogate access evaluated. As an electronic monograph mounted on the web, long-term benefits would include greater visibility of book trade-related holdings at Wellington institutions and increased access to archival and unpublished thesis materials, particularly by national and overseas researchers.

We took the case study approach when considering the scope for the project. We wanted a representative sampling of collections and a range of snapshots so the evolution of the industry in Wellington could be systematically charted. The catalyst for selecting five snapshots was technological change: thus, we wanted to document the introduction of printing to Wellington in the 1840s, the rise of steam presses in the 1880s, the shift to offset in the 1920s, the transition from hot metal to photo-type in the 1960s and the impact of digital type and internet design in 2000. We also wanted to create a design template which would encourage other regions to participate in and publish their book trade and print culture research and collection holdings, as well as enable us at a future date and with additional funding, to extend the date ranges and the depth of the site. In the absence of a multi-volume national history of the book project such as those currently underway in Britain, Canada, America, and Australia, this would be one way of bringing disparate research energies together and to build up the foundations of a regional approach to book history in a country whose national history could actually be more fruitfully defined as a constellation of local, regional, and international intersections.

THE PROCESS

Key players in the Wellington book trade were identified and an open invitation to search for resource material was extended to a range of local repositories, large and small. Some institutions provided lists of relevant materials, others would only action requests if the research team

identified specific items rather than permitting staff to explore their own collections, still others unreservedly sent boxes of unique items. We were adamant that we wanted to feature material that was not already available digitally, (though we slightly bent that desideratum by including some NLNZ Timeframes images for the business histories), and that we didn't want to reconsecrate the print canon in the digital medium. The history of printing, particularly in far-flung New Zealand, has a lot more to do with the prosaic day-to-day production of ephemeral items for everyday use than the creation of blockbusters. While we were to feature print products, we also wanted to provide, wherever possible, a cultural context for print. Consequently, although some of our choices might seem eclectic and overly dependent on the idiosyncracies of archive holdings, we are also very aware that we are, perhaps, fashioning a new digital canon – but more of that later.

Once specific items were selected, staff at the JC Beaglehole Room were responsible for assessing conservation needs and assisting students at the NZ Electronic Text Centre to complete the scanning process. An item-by-item tracking system was developed and the Beaglehole Room generated full bibliographic references and appropriate metadata for each item. Archive-quality 300dpi TIFF scans were initially mounted on a local server, then burned to Mitsui Gold CD-Rs. Each image was then compressed to a 100dpi web-mountable JPEG format, uploaded to the server via ftp, and married to its TEI-encoded document description through a set of cascading style sheets. Selected text images were put through FineWriter optical character recognition software or manually transcribed, edited, then marked-up to enable full-text searching. Interpretive captions for each chronological section and business history or print product image were written and encoded. The project template was designed by Stuart King and modified by Conal Tuohy, the Centre's web developer. At all stages in the site development phase, participating institutions as well as

the project team tested the site and made corrections and refinements.

For the user, all the puzzle pieces are assembled dynamically on demand by the XML publishing framework used by the NZETC

(<http://nzetc.vuw.ac.nz/technology/html>).

Apache Cocoon is run inside the Apache Tomcat servlet container using JVM version 1.4 from Sun Microsystems. This system separates content, logic, and style, and enables document delivery in a variety of formats. Moreover, any future content additions or stylistic changes to the project template can be easily implemented. Full-text searching is accomplished through Lucene, a Java-based program published by the Apache Software Foundation.

THE CHALLENGES

Digital surrogates

The title of this paper suggests a paradox. Let us suppose material culture is

culture made material; it is the inner wit at work in the world. Beginning necessarily with things, but not ending with them, the study of material culture uses objects to approach human thought and action (Glassie 1999, 41).

Let us also assume that the Internet is the disembodied, dematerialised realm of the virtual parading as the real, a set of invisible electrical impulses creating a technologically-generated and mediated universe in cyberspace. It would seem, then, that the terms are mutually exclusive. Or is their relationship one of fascinating complexity?

Material culture itself is full of contradictions, what Jules D. Prown terms

the schizophrenic nature of material culture [that] poses a continuous threat of rupture to the enterprise (Prown 1996, 20).

Characterising scholars as 'farmers' or 'cowmen', he articulates a salient distinction: farmers are '...hard material culturists [who] focus on the reality of the object itself'; cowmen are '...soft material culturists [who] read the artefact as part of a language through which culture speaks its mind' (Prown 1996, 21-22). According

to Prown, on the one hand, curators (and perhaps we should add librarians and archivists) as well as some historians and anthropologists gather data about the object's creation and deal deductively with science and technology, with events and actions, with diachronic developments and influences. Social scientists and humanities scholars, on the other hand, gravitate towards inductive methods as well as the linguistic power of metonymy, synecdoche and metaphor to examine synchronic patterns and the underlying structures of cultural belief. To put it bluntly,

farmers are more interested in material and cowmen are more interested in culture (Prown 1996, 20).

Significantly, the majority of published material culture research is by cowmen and the materiality of material culture is frequently devalued by the academy (Corn 1996).

Book history or print culture suffers from a comparable identity crisis. It is rooted in the nineteenth-century descriptive bibliographic tradition which documents ideal or copy-specific information, either to make editorial decisions or to reconstruct printing house practice in the production and transmission of texts. It is also populated by contemporary literary critics and cultural historians who are primarily concerned with the reception and consumption of texts across time and space. Many scholars engage with what Thomas Adams and Nicolas Barker term the 'whole socio-economic conjuncture' (Adams 1993, 54). In the process however, the textual object, whether book, pamphlet, broadsheet or piece of ephemera often quietly slips away, either because of inexperience in identifying salient physical details or, more problematically, because of the absence of theoretical and methodological models to integrate the physical evidence with its numerous contextual interpretations. But, the object never goes away.

The late D.F. McKenzie coined the now-famous phrase 'the sociology of texts' in

his 1985 Panizzi Lectures at the British Library. It was a salubrious corrective to what he saw as an increasing imbalance between book and history, print and culture:

at one level, a sociology simply reminds us of the full range of social realities which the medium of print had to serve from receipt blanks to Bibles. But it also directs us to consider the human motives and interactions which texts involve at every stage of their production, transmission and consumption. It alerts us to the role of institutions and their own complex structures, in affecting the forms of social discourse, past and present (McKenzie 1999, 15).

As such, one could argue that book history is a subset of material culture studies, sharing comparable concerns and comparable intellectual challenges.

McKenzie did not live long enough to engage rigorously with electronic texts, but his concept of the sociology of texts is, nonetheless, relevant to the digital realm. It might be claimed that the digital surrogate, that pixelated image of the physical print object, is a new and distinctly different electronic record in its own right. However, because this electronic document is not digitally born, the circumstances of its production, transmission and reception in both the real and virtual domains are still highly pertinent. In a landmark article, Joanna Sassoon considers the relationship between photographic originals and digital referents. She claims that the process of digital reproduction is a process of translation, a change between forms of representation, far more complex than Walter Benjamin and his work of art in the age of mechanical reproduction ever envisaged. While scholars have debated issues of intellectual and legal control over the uses of images as well as image fidelity, fewer have engaged with what is lost in the process such as context and materiality of the object or, significantly for our purposes, the impact of this loss upon research (Sassoon 1998, 11-12). Sassoon's conclusions are apt:

the image is moved by its custodian into a new discursive space - into that of the marketplace. This new discursive space is created to exploit and commodify the aesthetic qualities of image content rather than to promote either the research potential or polysemic nature of the object (Sassoon 1998, 11).

If the digital image becomes such a new and marketable commodity, wherein does or can meaning lie?

In The Print History Project, we have captured a, not the, surrogate of an extant material object. At no point are we endeavouring to replace the physical with the virtual; in fact, we are only too aware of the limitations and possibilities of both medium and intermediaries. We regard our site as a first port of call, foregrounding information about material aspects of the creation of print products and, hopefully, encouraging viewers to experience these objects at first hand. We hope the success of our project will never lead to Sassoon's prophetic reasoning:

Will the imperative to digitise collections involve so much investment in creating access to the image content of collections that the considerable hidden investment required to prevent the physical disintegration of the original artefact will be placed in jeopardy? Will the creation of digital collections result in the ongoing preservation of the original by limiting access to originals to those for whom materiality is central to research, or will future generations become so focussed on screen-based images that the original object is seen as irrelevant by custodial institutions? If this is the case, how will the increasing availability of digital images affect the study of materiality and the entangled histories of an relationships between artefacts in which so much of the history is embedded (Sassoon 1998, 13-14)?

A New Digital Canon?

Let us move from the artefact to the digital experience. Who is the audience and how are we shaping their experience? We were conscious from the start that the project offered one interpretation of Wellington's book trade history and would be pitched at

academics, professionals, trade practitioners, and the general public alike. While some users would browse the site at will, others would appreciate some structured interaction. The site, therefore, focuses on several case studies within each decade and divides the artefactual record into objects describing business practices and objects highlighting a range of print products. Although each window is a discrete entity, hypertext linking and indexing enable cognate windows to be explored in user-directed navigation. For those who wish to investigate the narrative linearly, there is a starting point for each decade, a kind of interactive storyboard. Thus, for the 1840s, it is the 1843 Burgess Roll which includes names of the local book trade players; for the 1880s, Bishop's map marks the geographic location of book trade firms.

Moving further into each decade, a snapshot of business histories is realised through digital reproductions of archival correspondence, tools of the trade, or historic photographs of each firm. A series of representative examples of print products are also exhibited; many are little-known objects such as ration tickets, postcards, maps, plans, short-run periodicals, auction catalogues, newspapers and sheet music, as well as both Maori and English-language publications. These artefacts are not only the mainstay of New Zealand's printing industry, but are precisely those objects which rarely survive, are not deemed worthy of preservation, or are not considered significant enough, in and of themselves, for certain sectors of the academic community to take seriously. Consequently, our 'new digital canon' is meant to challenge preconceptions about what book historians should research and how. It also introduces a wider audience to the fascinating array of printed matter produced throughout this country's history.

Each image is complemented by a text commentary meant to target a general, educated audience, rather than an exclusively academic one. Full-text has been captured for the images and for some, excerpts of the text have also been

transcribed and encoded. Each of these full-text entries can be searched. For those who wish to explore aspects of this window in more detail, additional source readings have been included. Many of these are research projects and theses because that is where cutting edge print culture research is happening in New Zealand. All too often, these sources are buried below 'codex line,' exist in single copies, and are difficult to trace. In the future, we may be able to create an on-line book history research library offering full-text, searchable versions of these works. Finally, each window has a complete bibliographic reference with repository location and shelf mark included for those who would like to visit the actual artefact. Last, but not least, anyone who would like to inquire about an artefact or contribute to the project is encouraged to contact a member of the project team.

If our selection process is consciously creating a new canon, then are our presentation methods likewise influencing a new generation of viewers? We offer a particular window on the print world. Are we *prima facie* prejudicing the eye as well? Let me explain by analogy. Books and print objects in general are notoriously difficult to display, even in the flesh. The British Library's in-situ Turning the Pages exhibition used a touch screen to replicate the interaction between reader's hand and the book; it was revolutionary and came at a revolutionary price. More often, the static default standard prevails, such as that used for documenting contemporary designer bookbindings in which the book is splayed out in a most unnatural and potentially damaging fashion in order to view the back and front covers and spine. The New Zealander Edgar Mansfield broke the tyranny of the hitherto three separate picture planes by integrating design across all three panels. Photography followed suit, yet literally flattened the interpretive activity. This method does not make for a satisfying visual experience and cannot at all accommodate the fundamental three-dimensionality of the book form, particularly the book object as sculpture.

For technological reasons, a desire for wide audience access, and because of the NZETC house-style, we have static, flat, digital images which must be passively viewed from the window provided. Computer animations, 360 degree pans, zooms, and fly-throughs could have been employed to simulate the reading and viewing experience, but they were more than our level of funding enabled. Hypermedia projects such as those hosted by the Electronic Cultural Atlas Initiative [ECAI] (<http://ecai.org>), engineered at the University of Virginia (<http://valley.vcdh.virginia.edu/>), or developed by the University of Sydney's Archaeological Computing Lab (<http://acl.arts.usyd.edu.au/projects/ourprojects/sydneytimemap.html>), are robust examples of how and where sophisticated digital technology can take the researcher and audience today. Thus, while we might be guilty of branding our objects with a new digital form of product recognition (which actually may be no different than print-based derivative reproductions), we also have to be aware that we are creating, in effect, a new edition of the work. Ultimately, we are reliant upon users moving beyond the realm of the digital to re-engage with the physical object for a fully contextualised and interactive experience.

The interactive electronic monograph

Is computer technology itself shaping these artefacts and dictating new research methods? Richard Cox recently responded at length to Nicholson Baker's attack on libraries catalysed by the British Library's sell-off of its American newspaper collection. In *Double Fold: Libraries and the Assault on Paper*, Baker (2002) exposed institutional assumptions behind microfilming and digital image capture of original documents purportedly suffering from the brittle paper syndrome, and traced a pattern of collection rationalisation including deselection and destruction. This work created a flurry of activity in the usually quiet library world. Cox's *Vandals in the Stacks?* (2002) speculates on the role of surrogates:

We really do not know the actual impact of either microfilm or digitisation on scholarship and the providing of information in general to genealogists, amateur historians, hobbyists, journalists, citizens groups, and the public. ... What is the evidence to suggest microfilming complete runs of newspapers did in fact enhance scholarship and research more broadly defined? Will librarians and archivists compile, effectively, the evidence about the use of digital materials on the World Wide Web? In responding to Baker, archivists and librarians have to be more serious about studying what they do and communicating the nature of their work to researchers, funders, and policymakers (Cox 2002, p.63).

In 2000, Suzana Sukovic, from the University of Sydney's Fisher's Library, documented the relationship between humanities researchers and electronic texts. She was involved in the digitisation and text encoding of a previously unpublished Australian diary from 1897, now available on the Scholarly Electronic Text and Image Service (SETIS) site (<http://setis.library.usyd.edu.au/ozlit/browse.html>). While examining the information-seeking behaviour of humanities scholars, Sukovic investigated how computing in the humanities was or was not influencing the research process. She found that her cohort was not particularly well-served by electronic finding aids which did not address high-level semantic responsiveness for information retrieval. Furthermore, most humanities scholars rarely engage with electronic texts or computer-assisted research given the characteristic solitary, random, non-linear, non-sequential, and serendipitous nature of their profession. Her conclusions were mixed:

If we have a view of computers as research tools of limited use on one side, and a view of technology as the basis for a research revolution on another - attitudes of most scholars are somewhere along the continuum (Sukovic 2000, 19).

However, in practice, few scholars are willing to move theoretically or methodologically beyond, in literary circles at any rate, the traditional study of

authorial intention as mediated through the idiosyncrasies of individual stylistic textual formations. In other words, a focus primarily on text blinds scholars to other avenues of and technological vehicles for research.

Mark Olsen advocates a new approach to scholarship if the electronic revolution is to have any impact on the humanities:

Rather than the study of single ideas, thinkers, or problems, intellectual and cultural history using electronic text can be thought of as the systematic investigation of the development and transformation of 'meaning systems' (Sukovic 2000, 19).

A paradigm shift? Quite possibly. But where is the material object or information carrier which shapes this meaning system? Ironically, the electronic dematerialisation of the object which in turn creates a new electronic record will force scholars to actively engage with both: the 'original' artefactual context which gives richness to meaning; the electronic record which creates new meanings in a digital system. In straddling this different version of the digital divide, we can reframe Steven Lubar's insights: 'Artefacts, more than any other evidence, allow us to understand the ways in which technology is socially constructed' (Lubar 1996, 33).

In 1999, Robert Darnton proposed a new model of scholarly publishing based on structured layers in a pyramid:

The top layer could be a concise account of the subject, available perhaps in paperback. The next layer could contain expanded versions of different aspects of the argument, not arranged sequentially as in a narrative, but rather self-contained units that feed into the topmost story. The third layer could be composed of documentation, possibly of different kinds, each set off by interpretive essays. A fourth layer might be theoretical or historiographical, with selections from previous scholarship and discussions of them. A fifth layer could be pedagogic, consisting of suggestions for classroom discussion and a model syllabus. And a sixth layer could contain readers' reports,

exchanges between the author and the editor, and letters from readers, who could provide a growing corpus of commentary as the book made its way through different groups of readers (Darnton 1999, <http://www.nybooks.com/articles/546>)

Practising what he preached, Darnton collaborated with the American Historical Review to produce their first foray into e-journalism. An Early Information Society: News and the Media in Eighteenth-Century Paris (Darnton 2000, <http://www.indiana.edu/~ahr/darnton/>) is a multi-media work combining interpretive text, illustrations, maps, police transcriptions of 'cafe talk', a cabaret concert with downloadable audio, the original lyrics of French comic songs from the 1750s, an on-line discussion forum, and finally a 73 page print monograph. Although this e-article has yet to explore all the layers which Darnton proposed, it points towards a dynamic use of academic research to target multiple audiences in various media and represents a new kind of reading, not the least because it inserts self-conscious markers of the text's own transmission, and documents, in effect, its own sociology.

How many scholars have actually taken up Darnton's call? Or, are new forms of scholarly communication impeded by:

- traditions of academic promotion which include the pressure to publish (in print) or perish
- the conspicuous absence of collaborative research role models in the humanities
- the demands of publishing consortia as they move towards being full e-text providers of the traditional academic journal article,
- or as they race to develop economic print-on-demand services and
- a general suspicion that digital publications are the emperor's new virtual clothes?

It is a telling reflection on such institutional and professional constraints that Darnton, who has already blazed a formidable trail in book history studies, still includes the physical book at the apex of his pyramid.

What if we were to promote the web-based interactive, interpretive monograph; one which displaces the print monograph, one which exists only in the electronic realm?

It used to be said that students engaged in sustained computing in the humanities were embarked on professional suicide. Will academia embrace a new model of scholarly communication - the electronic monograph? Darnton is clear that endorsement has to come from the top:

If everything comes together successfully, will electronic monographs be recognised as books? Will they acquire enough intellectual legitimacy to pass muster among suspicious tenure committees and to relieve the pressure on academic careers? This is the point at which veteran scholars can make a difference. Those who have proven their ability to produce first-rate conventional books could help create books of a new kind, far more original and ambitious than a converted dissertation (Darnton 1999, <http://www.nybooks.com/articles/546>).

It is encouraging that The Print History Project was proposed and accepted as one of this scholar's four nominated peer-reviewed outputs (1998-2003) in the New Zealand Tertiary Education Commission's recent Performance Based Research Fund benchmarking exercise.

THE FUTURE

Despite looking trendy by embarking on a digitisation project, there are some real reasons for getting on the bandwagon, both in terms of New Zealand collections and in terms of book history scholarship. The key is access. In May 2002, the National Library of New Zealand hosted the inaugural Digital Impact Forum. As a prelude to this event, several of my colleagues at Victoria University of Wellington were commissioned by the Library to undertake a survey of digitisation activities in NZ. Based on the responses of 131 out of 311 organisations contacted, their conclusions are timely. Inter-institutional collaboration is increasingly of importance in digitisation projects. Smaller repositories are in need

of access to technical expertise and equipment, as well as funding partners to help initiate projects. Digitisation is seen to be the answer to the interlocking network of public profile, public marketing, and public funding. Concerns are legion, not the least of which are national standards, cooperation at the big picture level, and spreading around the funding pie (Dorner 2002, http://www.natlib.govt.nz/files/forum/dorner_files/frame.htm).

The Print History Project provides a successful model of inter-institutional collaboration, in that it

- consciously and consistently operates under the umbrella of international digital and metadata standards,
- provides training to emergent researchers and digital librarians
- can continue to be built dynamically as research in the field develops, as more institutions participate, and as funding is found for the inclusion of other media.

Thanks to a substantial grant from the University Research Fund, we are working on a set of thirteen oral history interviews of surviving members of the Wellington book trade 1950 to the present. Short essays with digital audio clips and photographs will be added to the site along with full-text searchable interview abstracts and pop-up transcripts of streamed audio material. As we quickly discovered, web-based oral history involves a whole different set of technological and intellectual challenges ranging from digital voice capture and archiving to reformatting for the web, from electronic copyright and access provisions to mark-up modifications and metadata for audio.

Future developments include deepening the site's interactivity and including, à la Darnton, peer-reviewed journal-style articles, research monographs, and abstracts of works-in-progress, particularly from postgraduate students. Other academics are thereby encouraged to use this forum to think about their research outputs and new methods of conducting

research. We are also highly aware of the need for ongoing feedback, both academic and general. Several mechanisms are possible and will be built into the site:

- a guest book commentary,
- an e-form to encourage viewers to share further resource discoveries,
- off-line one-on-one electronic correspondence, and
- possibly, an on-line open forum with searchable archive embedded in the site.

CONCLUSION

Paul Turnbull of The Endeavour Project(<http://coombs.anu.edu.au/~cookpr oj/>) has argued eloquently for new approaches to academic research:

a growing number of scholars in the humanities and social sciences are exploring the potential of hypermedia to generate new lines of research that transcend the practical or conceptual limitations of print. New styles of collaborative research employing digital media are emerging, involving partnerships between scholars and leading cultural institutions (Turnbull 2000, 40).

The Print History Project exemplifies this trend, but rather than turning our back on our print heritage, we embrace the challenge of straddling the print/digital divide. For us, the study of print culture, like material culture, is as much about the object, whether virtual or real, as its cultural contexts, whether historical or newly mediated in a digital world.

REFERENCES

Thomas R. Adams and Nicolas Barker 1993, 'A New Model for the Study of the Book' in Nicolas Barker, ed. *A Potencie of Life: Books in Society* London: The British Library, pp.5-43.

Baker, Nicholson 2002, *Double Fold: Libraries and the Assault on Paper* London: Vintage.

Corn, Joseph J. 1996, 'Object Lessons/Object Myths? What Historians of Technology Learn from Things' in W. David Kingery, ed., *Learning from Things: Method and Theory in Material Culture Studies*. Washington and London: Smithsonian Institution Press, pp.35-54.

Cox, Richard 2002, *Vandals in the Stacks?: An Answer to Nicholson Baker's Assault on Libraries*. Westport, CT: Greenwood Press.

Darnton, Robert 1999, 'The New Age of the Book' *The New York Times Review of Books*, 18 March, vol. 46, no.5, accessed as (01.03.04)
<http://www.nybooks.com/articles/546>

Darnton, Robert 2000, An Early Information Society: News and the Media in Eighteenth-Century Paris. *American Historical Review* vol. 105, no.1, February (01.03.04)
<http://www.indiana.edu/~ahr/darnton/>

Dorner, Dan, Brenda Chawner, Samantha Searle 2002, 'Creating a Digital Babylon? Findings of a Survey of Digitisation Activities in New Zealand'
http://www.natlib.govt.nz/files/forum/dorner_file/frame.htm (01.03.04)

Glassie, Henry 1999, *Material Culture*, Bloomington and Indianapolis: Indiana University Press.

Lubar, Steven 1996, 'Learning from Technological Things' in W. David Kingery, ed., *Learning from Things: Method and Theory in Material Culture Studies*. Washington and London: Smithsonian Institution Press, pp.31-34.

McKenzie, D.F. 1999, *Bibliography and the Sociology of Texts*, Cambridge: Cambridge University Press.

Prown, Jules D. 1996, 'Material /Culture: Can the Farmer and the Cowman Still be Friends?' in W. David Kingery, ed., *Learning from Things: Method and Theory in Material Culture Studies*. Washington and London: Smithsonian Institution Press, pp.19-27.

Sassoon, Joanna 1998, 'Photographic Meaning in the Age of Digital Reproduction' *LASIE*, vol.29, no.4, December, pp. 5-15.

Sukovic, Suzana 2000, 'Humanities Researchers and Electronic Texts.' *LASIE*, vol.31, no.3, September, pp.5-29.

Turnbull, Paul 2000, 'The Endeavour Project: Exploring Cross-Cultural History in Hypermedia' *LASIE*, vol.31, no.1, March, pp. 37-44.

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