

Durham Research Online

Deposited in DRO:

30 October 2019

Version of attached file:

Accepted Version

Peer-review status of attached file:

Peer-reviewed

Citation for published item:

Warwick, Claire (2020) 'Interfaces, ephemera and identity : a study of the historical presentation of digital humanities resources.', *Digital scholarship in the humanities.*, 35 (4). pp. 944-971.

Further information on publisher's website:

<https://doi.org/10.1093/lrc/fqz081>

Publisher's copyright statement:

This is a pre-copyedited, author-produced PDF of an article accepted for publication in Digital scholarship in the humanities following peer review. The version of record Warwick, Claire (2020). Interfaces, ephemera and identity: a study of the historical presentation of digital humanities resources. *Digital Scholarship in the Humanities* 35(4): 944-971 is available online at: <https://doi.org/10.1093/lrc/fqz081>

Additional information:

Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a link is made to the metadata record in DRO
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full DRO policy](#) for further details.

Interfaces, ephemera and identity: a study of the historical presentation of digital humanities resources.

Introduction

The nature of the much-speculated-upon contents of the Cambridge University Library tower has recently been revealed. It is not, contrary to persistent undergraduate speculation, filled with Victorian pornography; instead it contains a fascinating collection of ephemera- books considered insufficiently serious or academic to form part of the main collection (Harper, 2018). These books were stacked in order of the dates they arrived, complete with original dust jackets which, for many years were routinely discarded, as was common in most academic libraries at the time (Tanselle, 1971, 2003). Yet this long-disregarded material now provides historians with information about the commercial and social context of such texts, complete with an incontrovertible time line against which they can be dated. The current status of the digital interface is similarly precarious. Like dust jackets, they are often regarded as functional ephemera, to be discarded when worn or outdated. This is in some ways understandable. As Drucker (2013) argues, the goals of Human Computer Interface research are to render the interface invisible, the better to facilitate access to digital content. Yet she insists that interfaces themselves are legitimate objects of study in digital humanities.

The following article reports on a study of interfaces to long-lived digital humanities resources and argues that such interfaces, designed when the web was new, also provide information about the nature of the material they surround. Original interfaces, often the products of bespoke design, demonstrate how DH projects visually communicated the meaning and importance of their material. Subsequent changes show how DH led, or responded to, advances in web technologies and interface design conventions.

However, it is impossible to study an object if, as was the case with book jackets, it is not considered worthy of preservation. Yet, while a great deal of attention is paid to digital preservation and curation, both in the DH and Information Studies communities, the question of how, or whether, interfaces should be preserved remains unjustly

neglected. As a result, we risk losing a valuable resource for the study of how DH has developed over the last 25 years.

The following study therefore uses an innovative combination of research methods from book history, interface design, and digital preservation and curation to investigate how interfaces to digital humanities resources have changed over time and argues that the preservation of interfaces is as crucial as that of the content to which they provide access.

The study addresses the following questions:

- What can we learn from a study of interfaces to digital humanities material?
- How have interfaces to digital humanities materials changed over the course of their existence?
- Do these changes affect the way the resource is used, and the way it conveys meaning?
- Should we preserve interfaces for future scholarship?

Methodological context

There is, clearly, a profound intellectual resonance for DH scholarship of ideas from textual bibliography and the History of the Book. Such scholarship addresses the physical presentation of a text, including type styles, images, white space, paper, and the way it is gathered and sewn together to make the book. Yet for many years the study of literary criticism and the theory of dematerialised text was perceived as separate and perhaps inimical to that of books as objects. Literary scholars such as Geoffrey Keynes once regarded textual bibliographers as antiquarians, who fetishized books as objects, simply cataloguing arcane features of printing or binding without any care for the meaning of their contents (Tanselle, 1992, p. 14). Yet, as McKenzie (1999) demonstrates, a study of the materiality of the book provides vital information about its economic and social milieu, and thus about the meaning of the literary text within. Such ideas were a profound influence on Jerome McGann, who applied theories of the New

Bibliography and the Social Edition to digital editing. The Rosetti Archive, was, in many ways, a digital instantiation of such theories (McGann, 1983, p. 84).

DH scholars have demonstrated that techniques from history of the book and textual bibliography may be applied to studies of the materiality of digital texts. Drucker (2002), Hayles (2003) and Kirschenbaum (2001), for example, insist that digital resources have a material nature and that, although digital text is more mutable than print, it should not be thought of as entirely virtual. The way that we consume such resources is, they argue, affected by the physical characteristics and affordances of the machines that deliver them, or the server blades or discs on which they are stored. The intellectual links between digital scholarship and book studies are especially well demonstrated by Galey, who uses the phenomenological methods of textual bibliography to analyse the detail of a digital resource by removing ‘the veil of code’ as he terms it (Galey, 2012).

Drucker (2013) believes that the interface itself should be an object of study. She argues that the goal of HCI and user experience research is to make the interface invisible, allowing users to move through it to the digital content itself. However, just as Tanselle stresses the importance of the physical aspects of printed books, including dust jackets, so Drucker, who has conducted research both on the materiality of digital objects and the design of printed books, argues that interfaces are far more than content facilitation devices. The interface functions like the frame of a picture: it may enhance the presentation of the content but may also be a beautiful object in itself. Thus, we should, as critics, look *at* the interface, not simply *through* it: we must study not simply the contents of a digital resource, but also the details of its presentation, from the code to the interface that surrounds it.

Digital preservation and interfaces

The literature on digital preservation and curation¹ is vast and complex (Poole, 2015)². Questions of how to preserve the interface and design of the original resources have, however, been largely ignored in such debates, which are dominated by the need to make the content accessible. Despite the involvement of several DH scholars in community-based digital curation initiatives, discussion remains dominated by the

paradigm of large datasets in science and social science that, once completed, may be archived, or re-used with a generic interface.

This is not an appropriate solution for DH resources. As Galey and Ruecker (2010) have argued, the design of a digital humanities resource is an intellectual argument; its arrangement in digital space represents a particular view of the data. In DH, therefore, it can be argued that presentation is interpretation, thus the design of the front end and of the search experience is as deliberate as that of a physical museum (Schofield, Whitelaw, & Kirk, 2017). Interface design therefore dictates not only how a digital resource looks, but also how it works, and how information may be accessed and comprehended by users. It may also provide clues as to how the resource fits into the longer history of digital humanities, and before that humanities computing, or even literary and linguistic computing.

However, Maron et al. (2013) argue that few universities have a strategy for the maintenance and preservation of DH content, not least because it may exist in numerous different places: on individuals' computers; a departmental server; in a library or archive, but far too rarely preserved in an institutional repository. Despite the growth of relevant programmes at iSchools, there is still a relative lack of information professionals with sufficient skills in data curation and preservation. Few DH centres have resources to maintain legacy projects: both they and libraries face a difficult trade-off of time spent on preservation, against that on new, or current projects, which may bring in additional revenue (Open Research Data Taskforce & Jubb, 2017).

As we shall see below, DH interfaces and content often evolve and must remain useable over a period of time; yet most are developed, initially, as a result of time-limited external funding. When this ceases, maintenance and updating of content must be funded by institutional resources or unremunerated academic time (Maron et al., 2013). Both commodities tend to be scarce to non-existent. Updating may also require technical skills that many researchers do not possess. They may also not be aware of where to find relevant technical help, if it exists in their institution.

When an academic hands the final manuscript of her book to the publisher her work is at an end. But the long-term survival of a digital humanities resource continues to impose demands on its creators. The need to find funding both for further development, and to ensure existing material remain accessible becomes a constant task for project teams and PIs. Crowd-sourced, or user-generated content places a

further burden on resource creators and institutions, creating an implicit assumption that such a resource is maintained and kept accessible to external contributors. Thus, closing it down becomes a very public act, with concomitant risks to institutional reputation. The projects discussed below are relatively unusual examples of high-profile, long-lived projects. However, many smaller-scale digital projects have been subject to periods where use was low, and funding lower (Warwick, Terras, Huntington, & Pappa, 2007). These projects either struggled to survive or underwent what Nowviskie and Porter (2010) have called 'graceful degradation'.

The interfaces to those resources that do survive long term may have to be redesigned many times, to ensure their continued usability. However, this implies that, to return to Drucker's arguments, interfaces are purely utilitarian- features through which, as opposed to at which, we look. The assumption is that old interfaces can be discarded once they appear dated. This is reasonable in most cases: users distrust digital resources that look dated and want to use the most current technologies (Warwick et al., 2007), thus updating is essential.

A recent account of the problems that King's Digital Lab have faced in securing the future of over a hundred legacy projects is especially instructive in this context. Smithies et al. (2019) describe a landscape in which many projects are over five years old; most have no further funding to make possible updating and maintenance; and those which are built on aging systems and servers may represent a critical risk to the security of university networks under increasing threat of cyber intrusion. The obvious solution in cybersecurity, and financial, terms is to turn off such resources, but to do so means losing valuable, perhaps unique, digital content. The authors describe the complex process by which they evaluated each project, and outline their rationale for deciding how and whether to preserve its content. They have found that each solution must be bespoke: in some cases emulation is proposed, in others preservation of the data alone. This is akin to rebinding a book to preserve its content when the original binding is beyond repair. Librarians are also aware that most readers simply want efficient access to the book, of which thousands of identical copies may exist. However, as books become older and rarer, some scholars wish to use the book in its original binding if possible, with the dust jacket (if there was one) intact. Hence Tanselle (1990, pp. 9–12) warns librarians about the implications of heedless rebinding, because once

discarded the information that original bindings and jackets provide about their historical, social, and literary context may be lost forever.

Thus, we might argue that the original design, and subsequent reskinning, of a digital resource should also be preserved and studied, because of the information that they provide about the social and intellectual context of the digital resource. This means that it must be possible for users who are interested in investigating earlier interfaces to be able to find them. It must also be possible to determine how a contemporary digital interface may differ from its original design or functionality.

Hitherto, this has been neglected in discussions on digital preservation. For example, at no point in their otherwise fascinating article do Smithies et al. (2019) discuss whether they considered it important to try to rescue or preserve original interfaces, or what is lost if this proves impossible. This is hardly surprising, since digital resources have such a relatively short history. Similarly, it was not until the nineteenth century that scholars became aware of the importance of the physical presentation of rare books and began to be interested in historical bibliography (Tanselle, 1992). With the relative maturity of digital resources in the humanities and cultural heritage, we are now reaching an analogous moment in digital preservation.

Experimental design

The following research adopts a case-study approach to a study of the interfaces to digital humanities resources, analysing a sample of projects and their progress over time, in detail. The sample is as follows:

- The Women Writers Project- Brown University and subsequently Northeastern University
- The Valley of the Shadow Project–University of Virginia
- The William Blake Archive- University of Virginia, University of North Carolina
- Proceedings of the Old Bailey Online- Sheffield University and Hertfordshire University
- Digital Images of Mediaeval Music- Kings College London and Oxford University
- The Oxford Text Archive- Oxford University
- Virtual Seminars for Teaching Literature- Oxford University

The reasons for choosing these projects are largely pragmatic: to reach a detailed understanding of interface development over an extended period it was important that resources had as long a lifespan as possible but remained accessible and usable. The above projects were established in the 1990s or early 2000s and are still accessible, even if in a somewhat different form; relatively few DH projects with such a long history are still easily available. Nevertheless, this study is not intended to represent a comprehensive audit of all such surviving projects. Undertaking a larger study of this type could represent the next development of this research, were funding to be granted to do so.

Although digital humanities is now a global field, its antecedents in literary and linguistic computing were largely Anglo-American, based in a small number of universities, some of which are represented in the sample above. Thus, the sample is skewed towards English language resources. It was also important to have fluency in the language of the resources, to gain the most complex possible understanding of them, and their accompanying documentation. However, important work was being done in humanities computing in countries such as Finland, Germany, and Italy during the same time. Thus, future work could be carried out on a sample of projects in collaboration with researchers fluent in such languages.

The method of analysis is influenced by the work of Vela et al. (2014) who used the Internet Archive's Wayback Machine to investigate the design history of the Perseus Project. The Wayback Machine was therefore used to identify the original presentation of, then track every significant design change to, the websites in the sample. It is impossible to be certain when every change was made to the resources because, especially in its early days, Wayback Machine captures were relatively infrequent. Nevertheless, this method provides the most comprehensive insight currently possible into interface change over time. Each website, and all significant design changes, were examined in detail, in terms not only of their visual design but also of their technical functionality, encoding and markup.

Jakob Nielsen's work has been used throughout the following discussion as context and comparator for the changing design features of the various sites. Nielson began conducting usability studies and publishing articles on web design in 1994, just before the oldest project in this sample was established (Nielsen, 1997). His views quickly became highly respected- considered one of the major references for good

practice in web design and usability- and remain so today. The articles on Nielson's website therefore provide a consistent reference point against which to compare developments found in the sample projects.

Findings

The following section presents the results of the analysis. It takes a dual approach to the presentation of findings, which highlights both change over time, and cross-cutting, recurrent areas of thematic interest. The analysis discusses notable aspects of individual projects, but, in doing so, highlights common themes which recur throughout the sample. These are: navigational metaphors; use of colour; questions of scholarly legitimacy; changes in the original user experience; establishing and maintaining visual identity; search and presentation of a complex resource; and the means to ensure the survival of projects amid infrastructural change. A brief account of each project's origins and history is presented the first time it is discussed.

Physical metaphors for navigation

The Valley of the Shadow Project is one of the most remarkable early digital resources in terms of interface design. It was established by Edward Ayers in conjunction with the University of Virginia Institute for Advanced Technology in the Humanities (IATH), and later, the Virginia Center for Digital History. An experimental website was created in 1994, only a year after the Mosaic image-based web browser was released. The first archived version is dated 1999. It describes itself as "a digital archive of primary sources that document the lives of people in Augusta County, Virginia, and Franklin County, Pennsylvania, during the era of the American Civil War."

(<http://valley.lib.virginia.edu/VoS/usingvalley/valleyguide.html>)

The site's creators were aware that users might be unfamiliar with scholarly websites and sought ways to support this process. On the home page they provide instructions, which visitors are expected to read before progressing further. This text is placed lower on the page than the main navigational links, and thus requires users to scroll down to find it, suggesting that advice from usability experts to avoid doing so may not yet have been widely known (Nielson, 1997).

The most innovative device to aid novice users is found once the user has clicked down another level to an intermediate gateway page. On the left-hand side of the page is the image of a plan of a building, in which each room is labelled with a different topic.

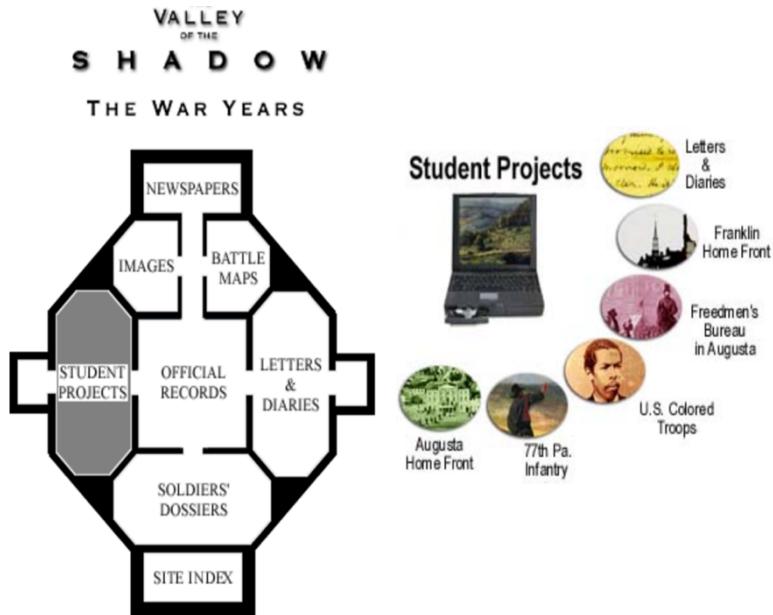


Figure 1: The floorplan of Valley of the shadow

This is, one might argue, the ultimate in skeuomorphic design, where the digital interface mimics the appearance of a physical phenomenon. While many digital resources are called archives, in this case, the design metaphor is that of a physical archive building. The rationale for this choice is explained as follows:

Though people's access to the Web continued to improve, the great majority of people reached the Valley Project through a telephone line and we could not burden the site with large images or elaborate navigation. Will and Michael Mullins, a visiting graduate student from Australia, suggested that we use a floor plan as a way to convey to visitors the sense that they were working with an archive with different "rooms." With a single black-and-white octagonal image, a floor plan by Thomas Jefferson, we provided an overview of the entire archive. The octagon immediately became the most visible symbol of the Valley Project. <http://valley.lib.virginia.edu/VoS/usingvalley/valleystory2.html>

They extend the metaphor further, encouraging visitors to "take a walking tour" of the archive (at <http://valley.vcdh.virginia.edu:80/cwtour.html>) to gain insight into its contents. On clicking this floorplan image, the user can find links to a variety of resources, including those created by students. In all subsequent pages the original navigational image returns and is often complimented by other types of navigation

images, for example that of a compass rose. By 2003, the image has become more complex. The project's opening page now comprises three floors of the archival plan, each in a different colour, as an organizational device to present material from before, during, and after the civil War.

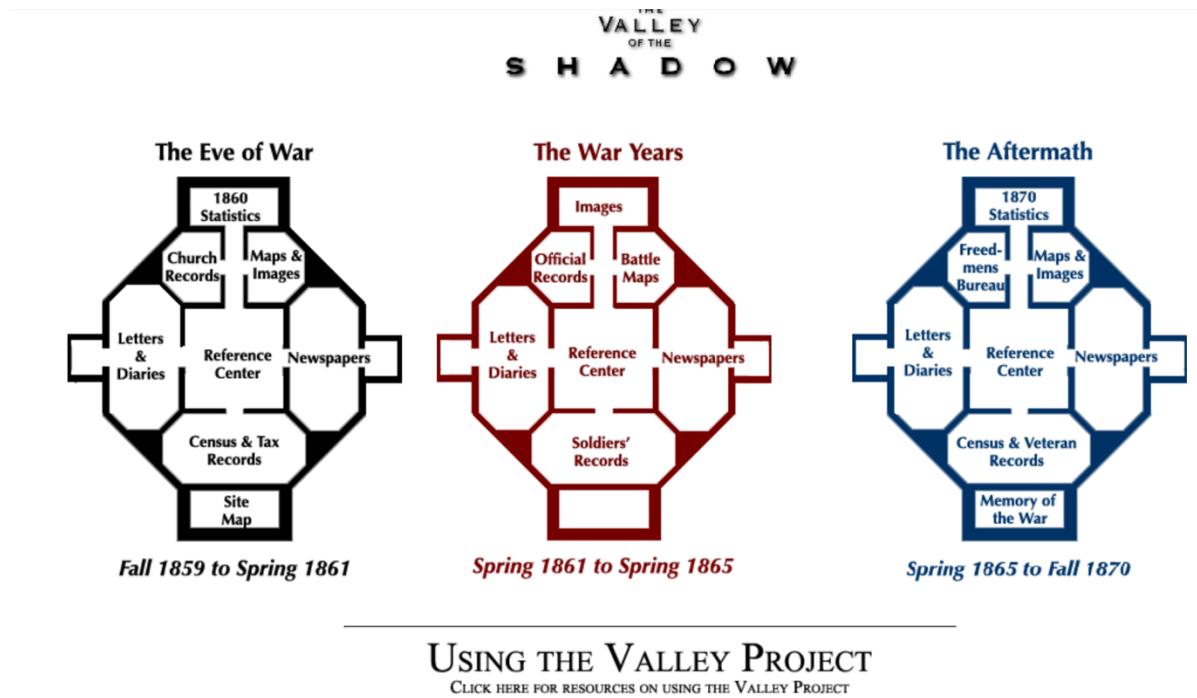


Figure 2: The extended floorplan

The project was archived by the University Library at the end of active development, in 2008. It remains accessible and largely in working order, but the navigation image functionality ceased to work in 2009 when accessed via the Wayback Machine, doubtless because the links to the original image maps were no longer accessible once the resource was moved to a different server. The GIS-based animated battle maps, which must have been technically very advanced when they were introduced in 2003, are also no longer accessible. Thus, users can no longer experience the full functionality of the interface in the way that was first intended. We will return to further discussion of this problem below.

Innovative use of colour

The Women Writers Project Online was established at Brown University in the late 1980s and provided digital texts by female authors, many of which were very difficult to access at that time (<https://www.wwp.northeastern.edu/about/history/>).

Not surprisingly, the webpage for the Women Writers Project, first captured by the Wayback Machine in 1996 was relatively basic, the only decorative features being black and white images of woodblock prints of the type that might have decorated a Renaissance text. These appear behind the title and decorating the bulleted list that provided navigation..



The Brown University Women Writers Project

The mission of the Brown University Women Writers Project is to create, develop, and support a wide range of activities, including new research on texts, information technology leadership role in the community of projects now developing standardized encoding systems cultures to recover and disseminate the range of writings in English by women; and it creates collaborative research - the new tools, practices, and techniques of the emerging technologies.



[Overview of the WWP](#)



[Text Ordering and Other WWP Resources](#)



[Online Texts](#)



[Newsletter](#)



[In Her Own Words: Elizabeth I Onstage and Online](#)



[Related Websites](#)

Figure 3: The original homepage

However, this visual link to the past of printed books was abandoned relatively quickly; the woodblock-print images have disappeared by mid-1999. The site then adopted a

visually experimental design: the navigational hyperlinks are placed at the bottom of the page and highlighted in different colours. Any additional hyperlinks on the rest of the site are in the same colour (for example, links to the texts are always dark red).



Figure 4: The coloured navigation menu

By 2006 the page had been redesigned, using Cascading Stylesheets. Instead of being at the bottom of the page, the links, still in different colours, are diagonally stepped across the front page.

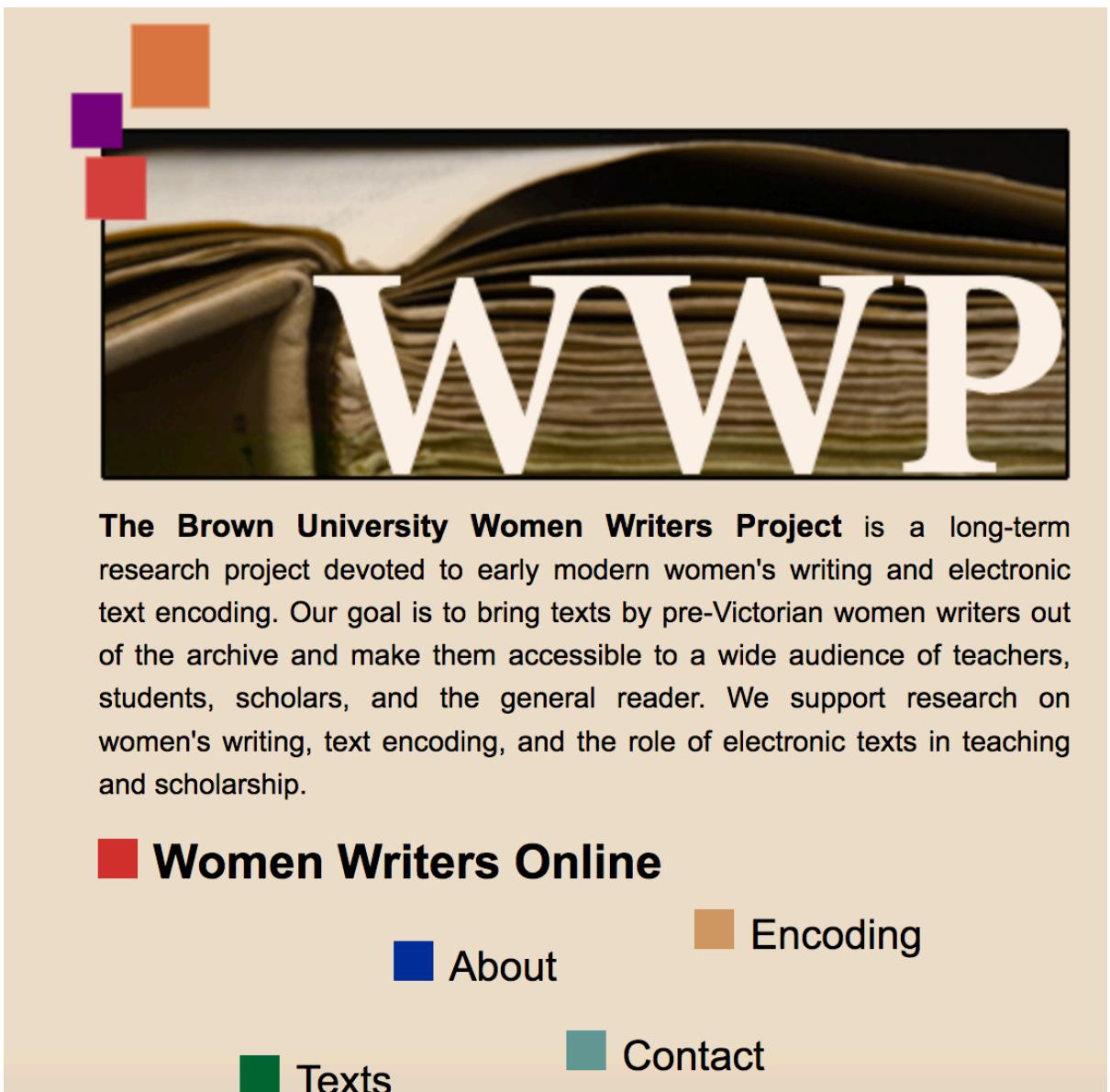


Figure 5: The 2006 homepage

A coloured square marks each link, and the initially black text of the hyperlink changes colour to match the square, on mouseover. Such a use of colour is evidently intended to help users unfamiliar with webpages to distinguish between different parts of the collection.

However, in some cases, innovative designs, intended to improve the user experience for visitors unfamiliar with digital formats, conflicted with the growing standardisation in user interface design, especially that of websites: numerous studies

demonstrated that users found it easier to follow familiar patterns (Nielsen, 2004b). As a result, projects had to decide whether to abandon such innovative design features.

Text colour, particularly that used for hyperlinks, is an interesting example of this. Some projects in the sample, such as the Blake Archive, initially used the standard of underlined, blue hyperlinks. Others, such as Virtual Seminars, preferred to use coloured text for decorative purposes, often with no functional consistency: this was common for the early web, where individuals designed sites in a way that seemed attractive to them. As users became more accustomed to the concept of clicking on menu items, blue, underlined hyperlinks became less prevalent as a form of navigational signposting (Nielsen, 2004a). So, in the case of the Women Writers Project, the use of colour for navigational links was abandoned in 2011, when the resource was radically redesigned.

This new site looks more conventional, in terms of interface design. A horizontal navigation bar provides the main menu beneath the title of the resource, and hyperlinks are now in black text on a pale grey background- the text becomes paler grey on mouseover to indicate its navigational function.

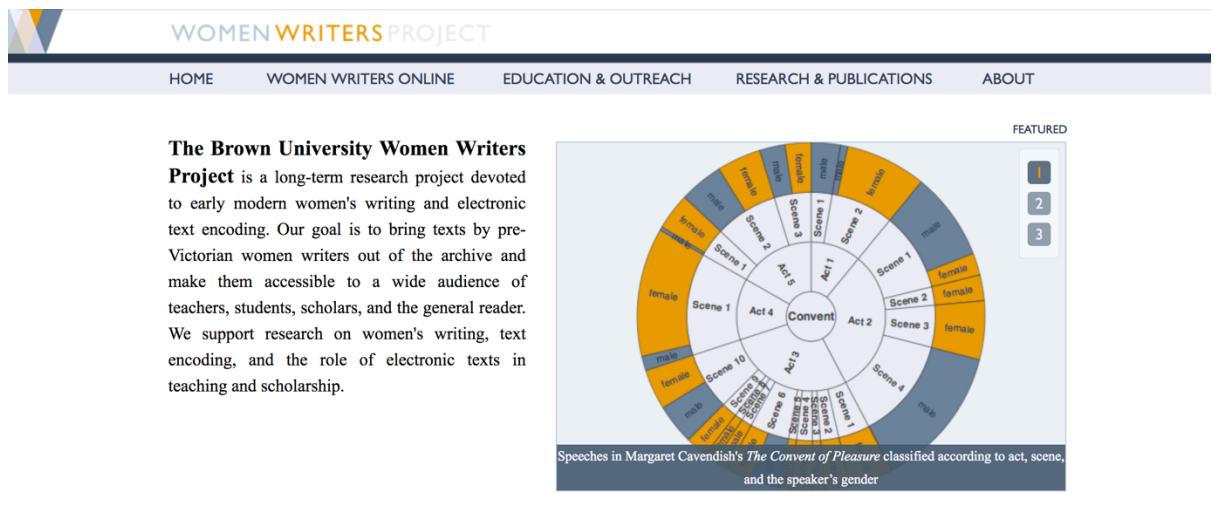


Figure 6: The 2011 homepage

However, a visual echo of the previous design is retained in the form of a small logo graphic of four different coloured diamonds, at the top left of the page, next to the main title; each word of the title is also in a different colour. This is intriguing, because the

use of grey, yellow and paler grey text on very pale grey background breaches accessibility conventions, because it is difficult to read, especially for partially sighted user (Sherwin, 2015). Thus, tensions between usability conventions and visual identity are played out in the re-design of the site.

The 2011 redesign also features three scrolling images, demonstrating the innovative navigation and visualisation features of the interface for the texts in Women Writers Online. Scenes of a play are displayed in a wheel-like visualization; word frequencies are displayed in a graph reminiscent of a stalactite; and a text features a vertical bar tracking word frequency. All use colour as part of the information presentation. Even if their webpage now appears more conventional, such images demonstrate that the Women Writers Project remains keen to innovate in the interface to its texts.

The developing use of colour as interface design conventions changed can also be seen in design changes made to the Old Bailey Proceedings website. The Old Bailey Proceedings Online project was founded in 2000 as a collaboration between the Universities of Sheffield and Hertfordshire. It “makes available a fully searchable, digitised collection of all surviving editions of the Old Bailey Proceedings from 1674 to 1913, and of the Ordinary of Newgate's Accounts between 1676 and 1772” (<https://www.oldbaileyonline.org/static/Project.jsp>). The first Wayback machine capture is in 2003, and thus its presentation is, unsurprisingly, less idiosyncratic than that of older resources in the sample. It is an excellent example of how the navigation of a complex resource has changed. The initial landing page is dominated by blue hyperlink text both from a bulleted top menu and making secondary-level links. The predominance of such textual links over image content encourages the user to explore multiple aspects of this complex resource, either by keyword or theme.

Figure 7: The original homepage

Perhaps because the original page was so dominated by blue text, when the site was redesigned in 2008, the colour palate had entirely changed.

Figure 8: The 2008 redesign

Blue is now replaced by red body text, an unusual choice, given the growing awareness of accessibility requirements for those with red-green colour blindness (Nielson,

2004a). It also reverses usual hyperlink convention, making coloured text turn black on mouseover.

Navigation of a complex resource

Despite changes in the colour, ease of navigation of the resource is always stressed; the same menu appears both across the top of the page and on the left-hand side. The sense of complexity and richness continues when the search link is clicked. As figure 7 shows, the original website includes search in the top-level navigation menu: there are nine main top-level links, with a further four secondary links to resources about different communities in London. When the page was redesigned (figure 8), a simple search box appeared on the top right of the main page as well as providing a menu link to the very complex advanced search box, with ten different categories made possible by JavaScript enabled search boxes. It also provided help links for each category and a link to a tutorial and help for the whole site.

Search Home

The boxes below allow you to search the whole of the **Proceedings** and all published **Ordinary's Accounts** (for the period 1690 to 1772). You may combine keyword searches with queries on tagged information including **surname**, **crime**, and **punishment**. The default setting allows you to search the full text of all the documents available on this website. This page should be used for basic and general searches. Please refer to the other pages listed to your left for more search options.

The screenshot displays a search interface with the following components:

- Keyword(s)**: An input field with a red question mark icon.
- Surname**: An input field with a red question mark icon.
- Given Name**: An input field with a red question mark icon.
- Alias**: An input field with a red question mark icon.
- Offence**: A dropdown menu set to <All Offences> with a red question mark icon.
- Verdict**: A dropdown menu set to <All Verdicts> with a red question mark icon.
- Punishment**: A dropdown menu set to <All Punishments> with a red question mark icon.
- Search In**: A dropdown menu set to <All Text> with a red question mark icon.
- Time Period**: A section with two dropdown menus for "From (month/year)" and "To (month/year)", each with a red question mark icon. Below these are four dropdown menus for "Any" values, each with a red question mark icon.
- Reference Number**: An input field with a red question mark icon.
- SEARCH**: A red button labeled "SEARCH".

Figure 9: The advanced search interface

An advanced search function can be found in almost all the projects in this sample. But the complexity and visual dominance of search in the Old Bailey Proceedings Online is unusual. In the early period of web design, interfaces and search functionality were usually designed by the project team, many of whom were academic experts in their field. They tended to assume that users would carry out the same complex queries as expert researchers, although, by the mid 2000s, research on digital humanities resources suggested that most users welcomed simplicity, and rarely used advanced searches (Rimmer, Warwick, Blandford, Gow, & Buchanan, 2008; Warwick, Galina, Terras, Huntington, & Pappa, 2008). Nevertheless, the search function of Old Bailey Proceedings Online remains highly complex. The message communicated initially by the multiple blue hyperlinks thus persists, despite changes in interface design. If this reflects a wish to make the variety and complexity of the content accessible, then the decision taken is a good one: Old Bailey Online is one of the most widely-used resources in Digital Humanities.

Scholarly legitimacy

The Blake Archive was founded in 1996 to provide access to digitised versions of the poetry and images created by William Blake. Given the technical challenges of displaying images on the web at that time, this was an especially pioneering project. Like the Valley of the Shadow project, it was initially produced in collaboration with the University of Virginia Institute for Advanced Technology in the Humanities (IATH) and subsequently with the Carolina Digital Library and Archives (CDLA) (<http://www.blakearchive.org/staticpage/archiveataglance>). The first archived capture appears on the Wayback Machine in 2001.

The opening page is a typical static webpage of its time; it is long and requires the user to scroll through quite dense and substantial amounts of information. Thumbnail images from Blake's original texts are used at the bottom of pages, framed in blue; presumably this is to provide a visual hint to users of their navigational purpose.



Figure 10: Navigation menu, showing thumbnail images with blue borders

The landing page initially presents the user with detailed information about the project and its creators, stressing their academic affiliations and track record and providing links to project funders. Although this might seem peculiar to modern users, this information appears before the list of items in the navigation menu.

The William Blake Archive

rmedia archive sponsored by the Library of Congress and supported by the National Endowment for the Humanities, the Institute for Advanced Technology at the University of Virginia, the University of North Carolina at Chapel Hill, Sun Microsystems, and Inso Corporation. With past support from the Getty Program and the Paul Mellon Centre for Studies in British Art.

Editors
 Morris Eaves, University of Rochester
 Robert Essick, University of California, Riverside
 Joseph Viscomi, University of North Carolina at Chapel Hill

Technical Editor
 Matthew Kirschenbaum, University of Kentucky

Project Manager
 Andrea Lue, IATH, University of Virginia

Project Assistants
 Christopher N. Jackson, University of Virginia
 Kari Kraus, University of Rochester
 Wayne C. Ripley, University of Rochester

[Complete Credits](#)
[Advisory Board](#)

© 1996-2001 by Morris Eaves, Robert N. Essick, and Joseph Viscomi, all rights reserved. Items in the Archive may be shared in accordance with the Fair Use provisions of U. law. Redistribution or republication on other terms, in any medium, requires express written consent from the editors and advance notification of the publisher, The Institute for Technology in the Humanities. Permission to reproduce the graphic images in this archive has been granted by the owners of the originals for this publication only.

Figure 11: Blake Archive original homepage

Users must also agree to terms and conditions and submit a permission form before they are able to access image content. These represent quite significant barriers to entry to the resource. The image thus created is that of a resource intended for expert, academic users, rather than the interested public.

Having scrolled down the page to the bulleted navigation menu, the first link the user finds is to information about the archive, rather than to its contents.



[Return to Welcome Screen]

i Site Information

- [About the Archive](#)
Archive at a Glance, Editorial Principles, About the Editors, Tour of the Archive, Standard References and of the Archive, Frequently Asked Questions, Technical Summary, Articles about the Archive, and more.
- [Search the Blake Archive](#)
Find particular images, texts, or bibliographic information in the Archive. (To search *The Complete Poetry of Blake*, please visit our electronic version of Erdman's text.)
- [Works in the Archive](#)
The Archive proper. Works by Blake and his circle.
- [Contributing Collections](#)
Contact information for the libraries, museums, and individuals contributing to the Archive, and (coming) information about the Blake holdings in their collections.
- [The Complete Poetry and Prose of William Blake](#) edited by David V. Erdman
The text and textual notes--all fully searchable--of Erdman's edition as revised in 1988.
- [General and Specific Bibliographies](#)
Listings for over 500 articles and books about Blake and his work, including widely used editions and standard bibliographies.
- [Archive Update \(5 March 2001\)](#)
The latest news of work completed, work in progress, recent and forthcoming presentations, etc.
Just added: [William Blake](#) at the Metropolitan Museum in New York
- [Related Sites](#)
A list of other Internet sites of interest to users of the Blake Archive.
- [User Comments](#)
Leave your comments for the editors.

Figure 12: the navigation menu for the original Blake Archive page

The implication is that the user must be informed about the credentials of those producing the resource, before she will feel comfortable about using it. Somewhat unusually for resources of this age, the main menu of the Blake archive also presents users with a comment link, encouraging them to engage with the editors. This, again, could indicate the assumption of a relatively small community of academic users, who may wish to contact the editors with their opinions about variants and textual presentation.

Although this project is described as an archive, its initial presentation is akin to a printed scholarly edition, in which the editors' names appear on the title page along with information about the scholarly press that produced the text, usually followed by a scholarly introduction to text and the editorial methods used. In a printed book this

information is presented before the reader is able to access the text itself and provides reassurance about its scholarly legitimacy and authority.

In common with the older projects in the sample, the design of the Blake Archive provides evidence of its creators grappling with problems of how to establish academic credibility for work presented via what was, at the time, a new medium, of questionable intellectual value. By 2002 the menu had been rearranged, and the hyperlink to the archive itself was top of the menu. This suggests a growing confidence on the part of the Archive's technical team that users would be familiar with the use of digital resources and need less reassurance about scholarly quality.

Similar evidence of what might be termed scholarly status anxiety is found in several of the projects in the sample. Designers of such early websites stressed scholarly credibility by using the tropes of book publication and design to link their digital scholarship visually to the printed book as a prestigious publication medium. As we have seen, the Women Writers Project briefly used images of woodblock printed capital letters to establish a visual link to the book (figure 3, above), but this is even more evident in the initial design of the Valley of the Shadow project. The appearance of the landing page immediately recalls the title page of a book, with text, an image, the name of the author and the publication date centred on an otherwise blank page. The viewer must then click on text underneath the image, to access the main navigation page.



Two Communities in the American Civil War



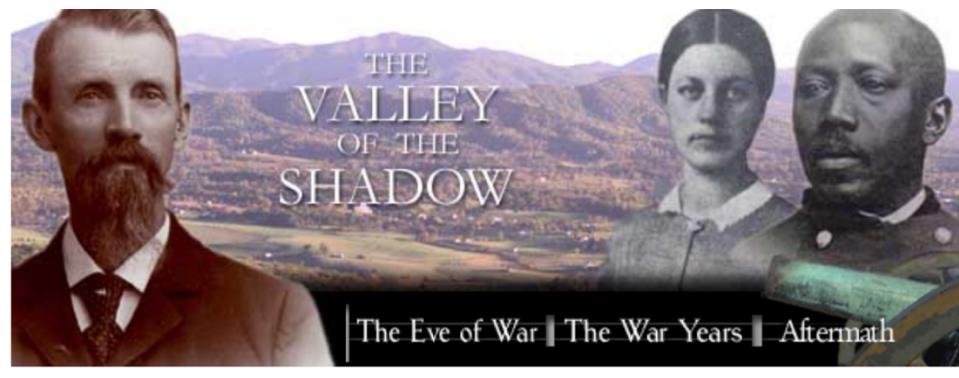
ENTER THE VALLEY ARCHIVE

*Copyright 1999
All Rights Reserved
Edward L. Ayers*

Figure 13: the original splash screen

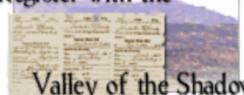
When Valley of the Shadow was initially created, such splash screens were relatively common, although they fell out of use as design conventions developed to avoid the need for users to click down more levels than strictly necessary (Nielsen, 2001). Not surprisingly, therefore, the title screen had disappeared by 2002, meaning the link to book design norms was lost.

Once the main website has been reached, the opening page remains image heavy, with a title image featuring members of the valley community against a landscape background.



Explore Other Digital History Projects

Register with the



Valley of the Shadow

Register with the Valley Project
and receive notification of the
latest updates.

Figure 14: the original homepage

The initial design of the project also used other visual devices to situate it within a context of scholarly legitimacy. The navigation menu- a bulleted list- provides prominent links to the university and to other IATH projects, and to a list of awards for digital projects, both from the scholarly community and the web more generally. The

page features a lengthy ‘story behind the project’, which stresses its scholarly credentials, and includes links to a CD-ROM produced by a commercial academic publisher.

Techincal legitimacy

A similar wish to assert scholarly legitimacy was to lead to very different design decisions, in the case of Virtual Seminars for Teaching Literature. This project began in 1996; it grew from a small pilot project on Isaac Rosenberg’s poem “Break of Day in the Trenches” first launched on the web in 1995

(<http://projects.oucs.ox.ac.uk/jtap/proposal.html>). The Virtual Seminars webpage provides information about its creators, their contact information, and creation date in the bottom left corner of each page. This was a relatively common practice in early academic websites, although, as design conventions developed, this information, if provided at all, appeared only in the header tag metadata, and via a ‘contact us’ link ³. Virtual Seminars also links to a web ring, a device of the early web by which pages about similar subjects made mutual links. It also features prominently displayed logos of web awards.

At a time when the web was widely regarded as a junk medium, such devices were important means of establishing intellectual respectability, as was a named contact, clearly identified with their institution (the fact that one of the creators has a doctorate is noticeable). In the mid 1990s, relatively few people knew HTML, or SGML, coding; all pages were marked up by hand, and maintained individually. Even fewer people would have been capable of marrying this skill with the academic expertise to write tutorials on poetry. It is not surprising, therefore, that such individuals took credit for the resource they had created, on its front page.

From the design of the home page onwards, Virtual Seminars show evidence of being a complex digital resource using highly innovative educational methods and technical functionality, unusual in the late 1990s. For example, it uses layout tables- then a very innovative technique- to organise the content. It is perhaps because use of tables was so new that the borders are still visible; layout tables were soon rendered transparent on most webpages. A table at the top of the page contains the title logo and the one in the middle of the page provides navigational hyperlinks to each seminar.

<p>Home</p> <p>Winner of First Prize in UCISA's 1999 Web Teaching Award:</p>  <p>-----</p> <p>Please remember to visit the Royal British Legion Page</p>	<h2>Virtual Seminars for Teaching Literature</h2>	<p>Winner of the University of Oxford's 1999 Web Teaching Award:</p>  
---	---	--

Main Resources

Figure 15: The top menu table.

This project has received additional funding via the JISC's Digitisation Programme to greatly expand the archive. The new project will run from 2007-2009. To find out more information please visit: <http://www.ww1lit.com/>

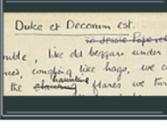
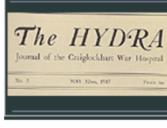
 <p>1. The Seminars</p> <p>[Introduction to WWI Poetry; Isaac Rosenberg's 'Break of Day in the Trenches'; Introduction to Manuscript Studies; Introduction to Text Analysis] + NEW! The War Poems and Manuscripts of Wilfred Owen</p>	 <p>2. The Wilfred Owen Multimedia Digital Archive</p> <p>[All of Owen's War Poetry Manuscripts; Interviews with War Veterans; Photographs; Letters; Video Clips; etc.]</p>	 <p>3. Publications of the War</p> <p>[Complete Run of <i>The Hydra</i> - the Journal of the Patients at the Craglockhart War Hospital, plus propaganda pamphlets, forces' newspapers, postcards, etc.]</p>	 <p>NEW 4. 'The Ghosts May Laugh'</p> <p>[A brief discussion of the play <i>The Ghosts May Laugh</i> set on the Western Front in 1917]</p>
<p>More WWI and poetry links</p> <p>First World War Poetry Discussion Board - Join in the debates!</p> <p>Department of Continuing Education, Oxford, Course Outline</p>			

Figure 16: The central content organised in a table

Within these tables, instead of the more usual blue hyperlinked text, Virtual Seminars used images both for navigation and to indicate the content of each section. This practice may now seem commonplace but was highly innovative at the time. The green hyperlinks, which turn brown when clicked, are also part of a complex visual identity: navigation buttons and title images are in a camouflage pattern providing a visual link to the subject matter.

Introduction to Manuscript study

Figure 17: Camouflage patterned title image.

It is noticeable that, unlike many other projects discussed above, Virtual Seminars does not make references to conventions of book design. The devices they employ to assert intellectual respectability are those of developing web technologies themselves. This may be because the resource was designed by humanities computing practitioners, only some of whom were also academics. Thus, the community to which they looked for intellectual legitimacy in the early days of the web stressed expertise in new technologies rather than knowledge of previous tropes of print publication.

Changing interfaces and unrecoverable features

Digital Images of Medieval Music (DIAMM) is another project that has always been willing to innovate technically, thanks to its continuing relationship with a world-leading digital humanities centre. However, unlike Virtual Seminars, which, having ceased to be updated in 2009, now looks somewhat dated, DIAMM has been constantly redeveloped, and thus provides a fascinating insight into changes in state-of-the-art design and functionality in digital humanities projects.

DIAMM began in 1998: academic research was based at Oxford University, and the technical work was undertaken at the, then, Centre for Digital Humanities (CCH) at Kings College London (KCL) and the first version of the page archived by the Wayback Machine is from 2000. This used the latest navigational functionality: frames. This technique is now largely forgotten but allowed part of the page to remain static—usually the menu bar(s)—while the body scrolled. This meant that the user could always see the navigation menu, which sometimes proved extremely useful. Virtual Seminars, for example, used frames in its manuscript study pages, to allow users to display different versions of poems concurrently. Jakob Neilson, however, strongly counselled against the use of frames because of poor functionality and usability (Neilson, 1996).

Like Virtual Seminars, DIAMM initially made innovative use of coloured navigation buttons instead of more basic bulleted lists, as Figure 18 demonstrates.⁴

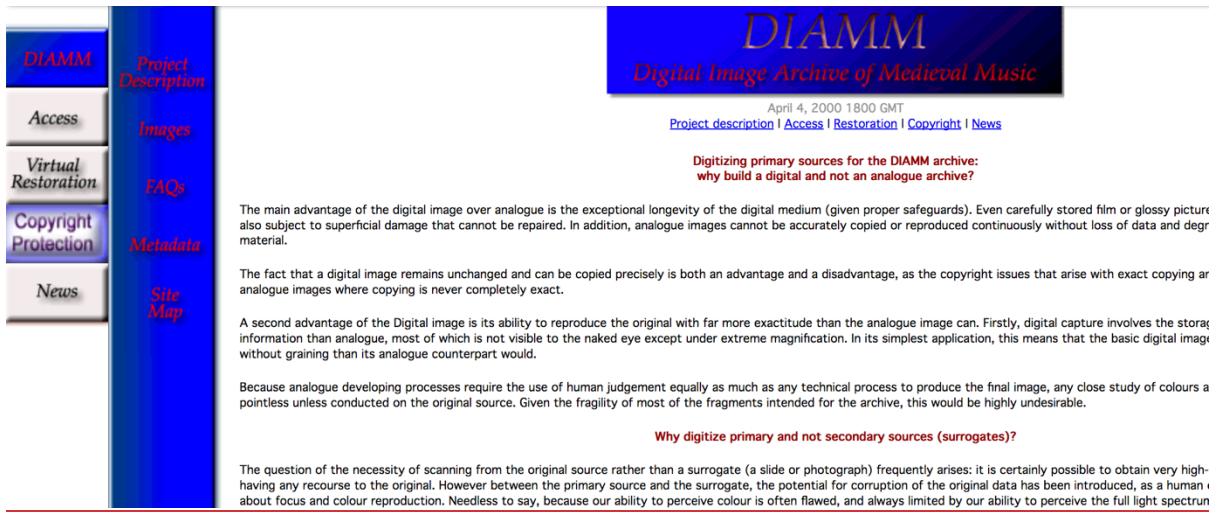


Figure 18: The original homepage

The relatively complex colour scheme of the buttons helps to indicate their functions: for example the distinctive design of the copyright button draws the user's attention to the need for permission to use the images. However, as figure 19 shows, not all of the buttons load well enough to be captured by the Wayback Machine.

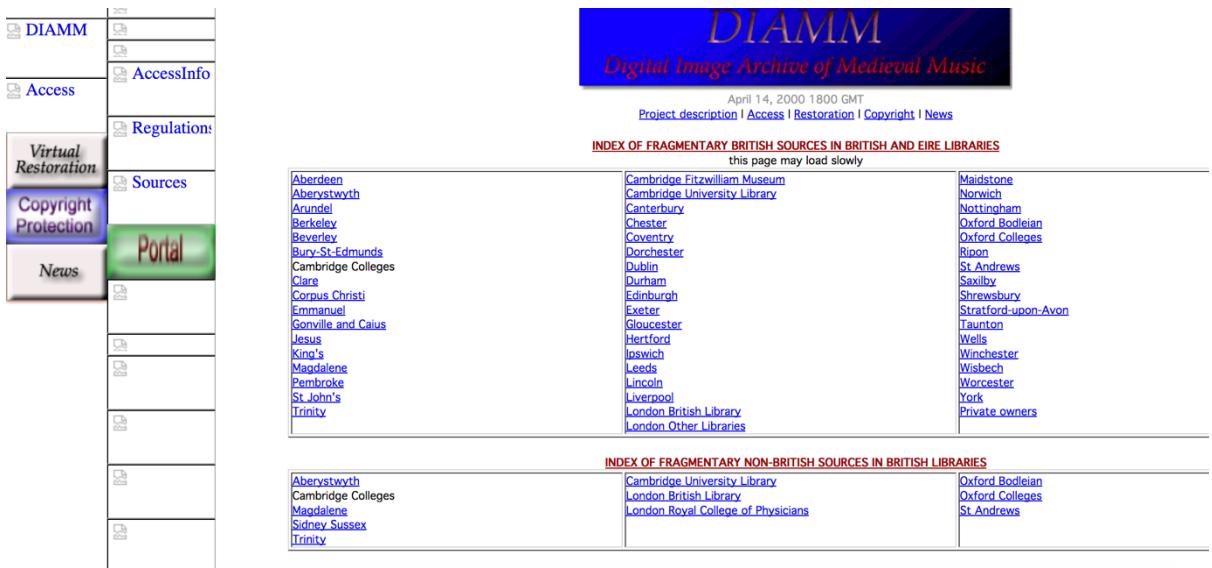


Figure 19: Partially loaded navigation images

This in itself is instructive. As the quotation from the Valley of the Shadow project above shows, in the early days of the web many users accessed webpages via a telephone line

and modem, thus images could be slow to load (Nielsen, 1997). The use of navigation buttons could therefore be problematic. However much current users complain about slow home broadband speeds, the phenomenon of having to wait while an image loads, sometimes literally pixel by pixel, is something that early Internet users may have forgotten, and more recent adopters never experienced. In this case, therefore, the Wayback Machine emulates the experience of using the early web.

Such an experience also helps to demonstrate some of the particular challenges of making digital images available in the early days of the web, even in compressed form. As we have seen in discussion of the Blake Archive, the original experience of using such websites was necessarily somewhat forbidding to a user. The old Bailey project welcomes users with different suggestions about how to navigate its, mainly textual, content. However, users of resources whose content consisted predominantly of images were compelled to use passwords and copyright permission forms to access rare and precious material, even in digital form. This seems almost contrary to the purpose of digital resource creation, and to the advice Neilson was already providing about how to make commercial websites as easy to use as possible. However, websites such as the Blake Archive and DIAMM were providing expert users with unprecedented access to digital materials and so might reasonably expect them to persist, despite hindrances such as passwords and permissions (Warwick et al., 2008). The only alternative would have been expensive and lengthy trips to see the original manuscripts in situ.

Nevertheless, no doubt because of usability considerations, by 2001 the DIAMM front page had lost its frames, although some of the navigation buttons remain, in the middle of the top page. For the first time a logo also appeared which links the project, visually, to its historical subject matter using a red-and-white colour scheme and an image of illuminated lettering. A more significant redesign can be found in 2004. The page became much simpler, with the content organized using layout tables with black text on a white background.

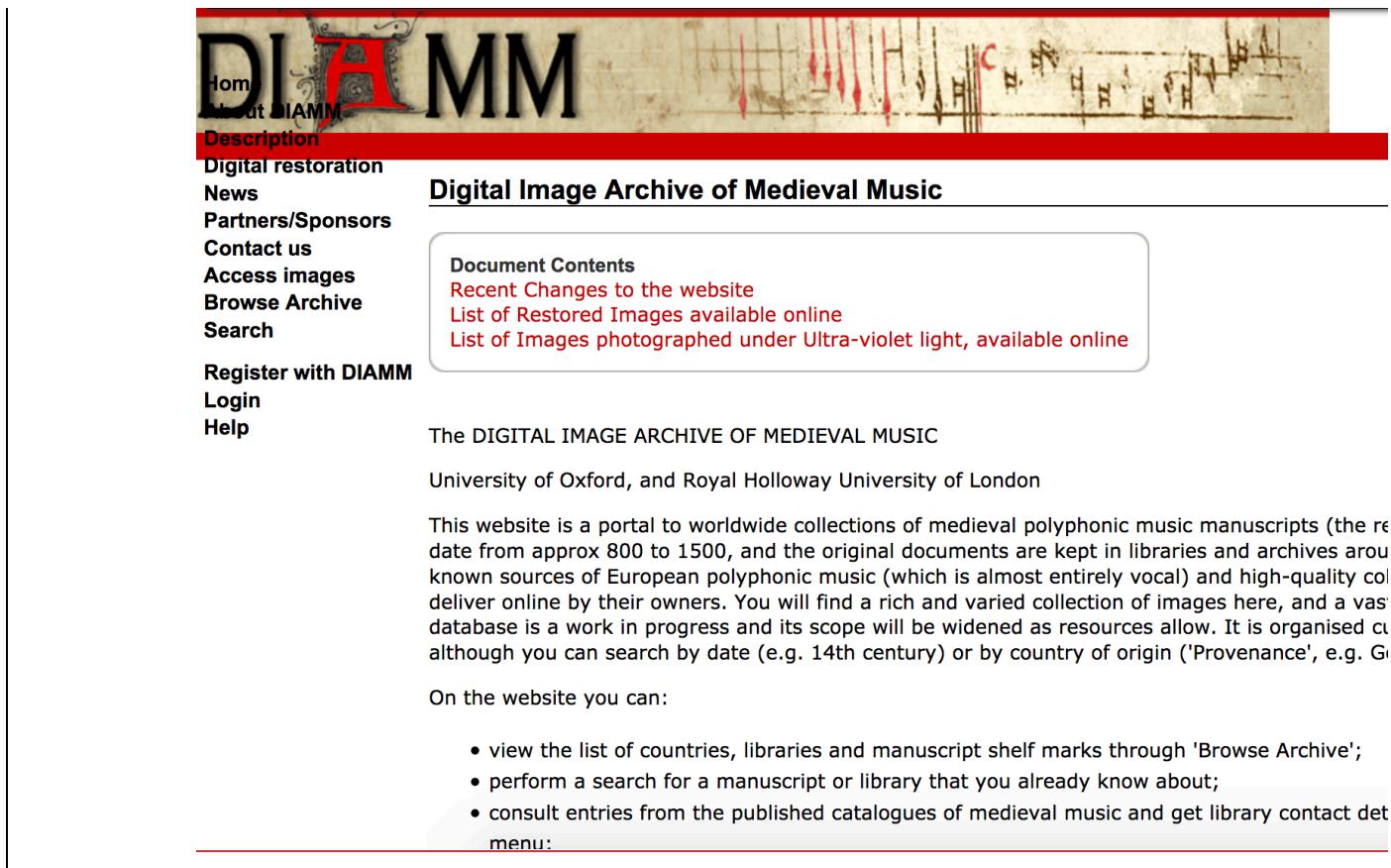


Figure 20: The 2001 redesign

The logo is superimposed on a background of music manuscript and the red, illuminated A is accented by red stripes above and below the border. The navigation menu has become more conventional with links in a black, bold, sans-serif text. At the bottom of the menu the login link replaced the need to register for image content, making access to the resource far simpler.

As figure 20 shows, the table itself, seen via the Wayback Machine, renders incorrectly; the left-side navigation overlaps the title image. This demonstrates another historical problem of interface design- whether to make table dimensions fixed or variable. Fixed dimensions allowed designers more certainty about how their page would look but might annoy a user with a non-standard sized screen. The aim was to make the page as accessible as possible for the browsers then available, rather than to guarantee future-proofing. In 2004 few websites were designed for mobile access; nobody predicted the ubiquity of tablets or large screened smartphones. Both mobile phone screens and computer monitors were smaller than those of today, and of far

lower resolution. Indeed, DIAMM advised users to check that their monitor was calibrated correctly to access a high definition image (the assumption being that it was not) (www.diamond.ac.uk/images). DIAMM's images were digitised according to the most rigorous technical standards, in an attempt to guarantee longevity (www.diamond.ac.uk/images), yet no such thought seems to have been given to interfaces in the case of this, or any other, digital project. As a result, we can never fully recreate the experience of viewing an old interface using a modern screen of a higher technical specification than those for which they were designed.

The Blake Archive also shows how the user experience for a long-lived resource may change, but in this case, this is likely to have been as a result of deliberate, radical redesign undertaken when the archive moved from IATH at the University of Virginia-to the University of North Carolina library (<https://blog.blakearchive.org/2016/12/12/william-blake-archive-redesigned/>). The new homepage is dominated by beautiful, impressively detailed reproductions of Blake's images. Users are immediately immersed in rich image content, in contrast to the original text-heavy pages from which images could be accessed only by completing a permissions form. The resource is now oriented predominately towards visual experience as opposed to that of reading the text.

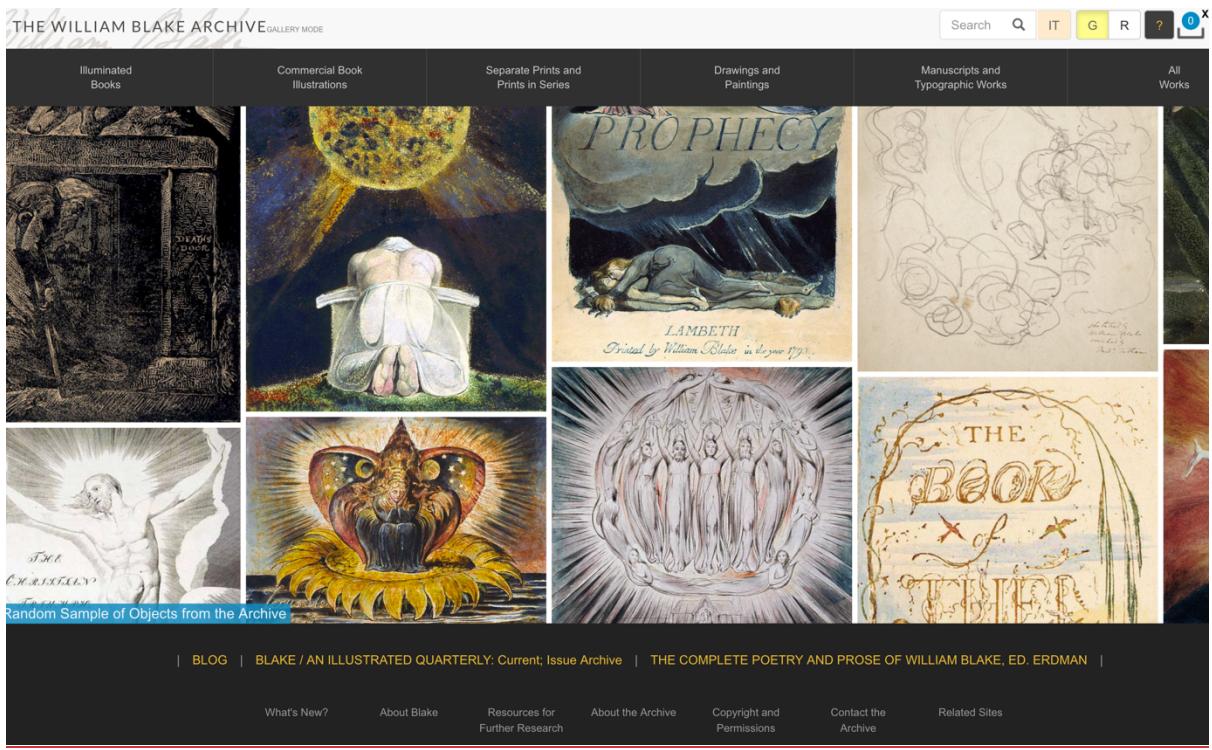


Figure 21: The redesigned homepage

The top-level links, in a horizontal strip across the top of the page- a style familiar from corporate websites- guide the user towards complex image-viewing functionality. The links that once constituted the top menu, and those to the more traditional scholarly output of the quarterly journal, the edited print edition, and even the project blog, are now relegated to the bottom of the page, indicating lesser prominence. This suggests a move away from the original emphasis on scholarly discussion and editing, and the abandonment of reference to predominant print formats.

By 2016, the far greater technical capacity to present and manipulate images on the web means that the user experience is completely different from that of the original website. This resource is no longer the preserve of academic specialists; its new design allows any interested user to access digital images of once rare and precious print originals, thereby emphasising the public mission of digital scholarship. The user of the redesigned Blake Archive must therefore approach its contents a very different way from that of the original; it is no longer by and for academics but produced by a library with a strong emphasis on outreach and engagement.

Visual links to the past of web design

Although it did not undergo such a radical overhaul in visual presentation, the DIAMM website was redesigned four subsequent times, in 2009, 2011, 2012 and 2017. These changes made evident the difficulty of balancing attractive, innovative visual design with optimum usability, as conventions developed and technology changed. For example, all the redesigned home pages remain faithful to the visual identity established in 2004 by retaining the red illuminated capital in the logo. But in 2009 the navigation of the site was simplified using CSS stylesheets: navigation links are now across the top of the page, while the content itself is clearer.

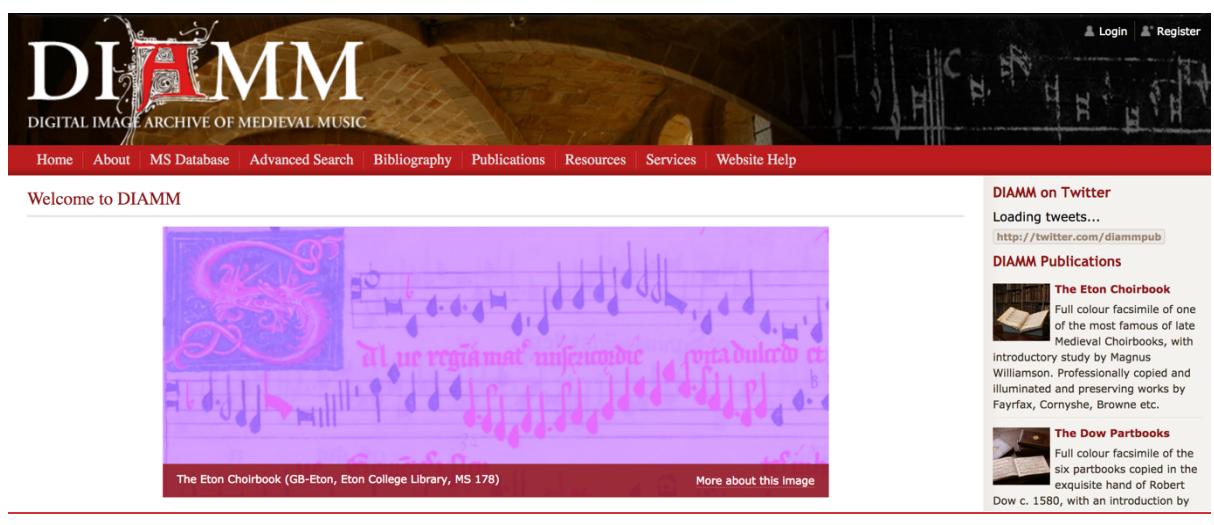


Figure 22: The 2012 redesign

By late 2012, even more image content was used on the top page: a detailed image provides the background to the title logo, and that of an original manuscript features in the centre of the page. Rather unusually, images of manuscript are also used to frame the main textual content, recalling the earlier practice of using images as wallpaper on early websites. This practice had fallen out of favour at a time when images slowed page loading times. The greater use of images to decorate the 2012/2013 site, therefore, may be evidence of the designers' confidence that most users will now use a broadband connection. Instead of making reference to previous conventions of book design, the designers of DIAMM seem deliberately to be alluding visually to the more recent past of web design itself.

Another relatively unusual design decision is the use of a serif font in the main navigation menu, which provides a visual echo of the logo. Fonts such as Times New Roman, familiar from word-processing, were often used in early web design, but were subsequently abandoned in favour of sans serif fonts, for greater legibility. However, by 2012, improvements in screen resolution were beginning to make this issue one of significant debate (Nielson, 2012). Thus, advances in display technology make possible, once again, the use of the apparently outdated conventions of serif fonts and wallpaper images, as a deliberate link to the visual identity and longevity of the resource.

By 2017, however the balance had tipped back in favour of simpler design and greater usability: sans-serif fonts have reappeared; a simple search box is available from the top menu; the high contrast of white text on a black background improves.

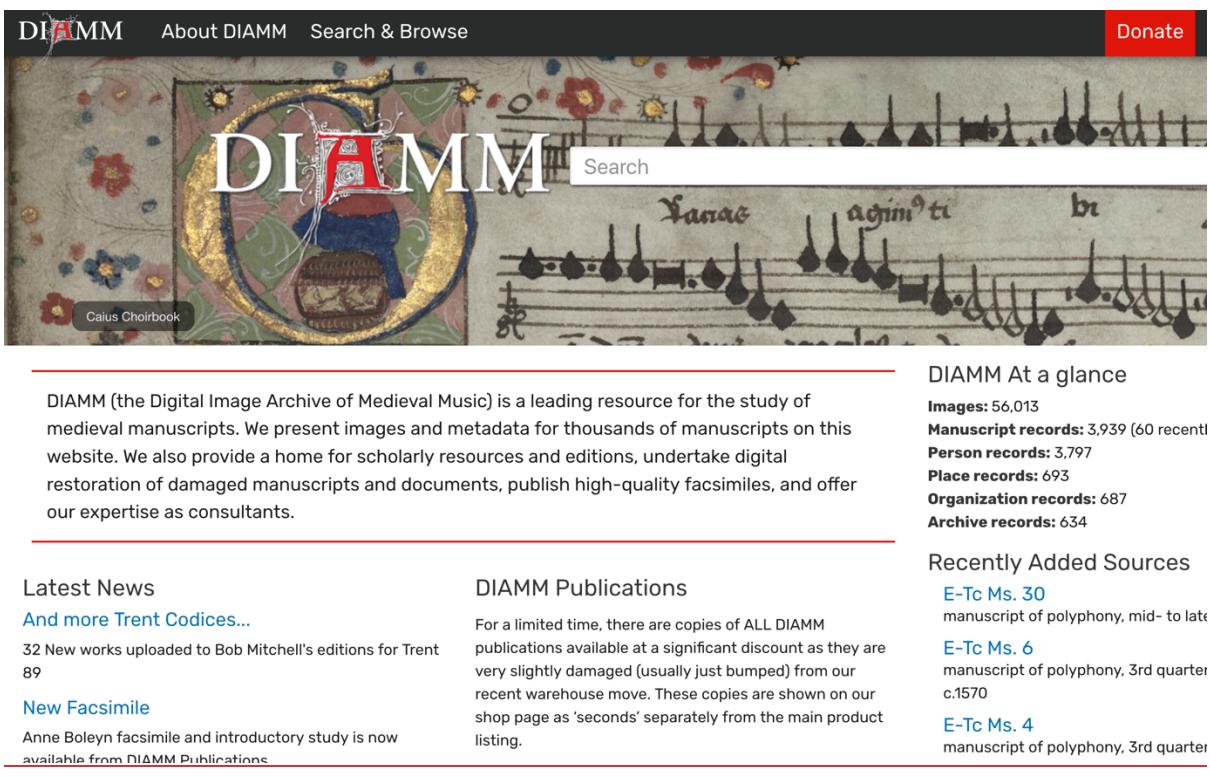


Figure 23: The 2017 redesign.

However, the visual link to the historical materials is enhanced: the background to the DIAMM logo now consists of a large panel of scrolling images, illustrating different aspects of the digitisation process. The home page provides immediate access to information about recent developments and recently added material, showing the influence of the blog style of information design. Red is now less prominent, used only

for a line to divide the whitespace, and blue hyperlinks have reappeared- another nod towards the past of web design.

DIAMM therefore provides a fascinating example of a resource that has been regularly redesigned and updated to conform to the latest technical standards of interface design and XHTML coding. However, it is sufficiently confident in its visual design and functionality to make conscious references to its own longevity and part in the history of web design, while remaining true to its visual identity. The development of DIAMM demonstrates the difficulty of balancing often contradictory demands of functionality, usability and attractive visual design- a balance that must constantly be renegotiated as software and hardware develop.

Sustainability and infrastructural change

DIAMM's history is, in many ways, what one might wish for all digital resources. It has continued to be funded and developed throughout its life. Unfortunately, this is rarely the case: digital resources may suffer a precarious existence, however well-funded the universities which host them might be. The visual presentation of a digital resource may provide information about the relationship between digital humanities resources and local and national organizational infrastructures.

The Oxford Text Archive (OTA) was founded in 1976, as a repository of digital literary texts. It was based at the Oxford University computing services, and its website was first archived by the Wayback Machine in 1997. Its visual identity does not initially reference the university; the small crest in the top left-hand corner is the only Oxford University branding⁵.



Figure 24: The original homepage

In 1996 the OTA had become part of the Arts and Humanities Data Service (AHDS)- a national service to preserve and make accessible the data from arts and humanities research, and its visual identity is clearly modelled on the AHDS, using the same font for the title graphic, and the red and black colour palate. The OTA identified itself more with a national infrastructural body, leading innovation in digital humanities resources, rather than its university, with its more traditional brand. Perhaps as a result, the OTA website adopted innovative design features, such as a circular navigation image, which appeared in 2001.



Figure 25: The 2001 redesign, showing the circular navigation image.

In 2008, following the demise of the AHDS, the OTA reverted to the Oxford University Computing Services, and its website was branded accordingly. As a result, the visual design becomes less innovative: the navigation image is replaced by an- already outdated- bulleted list and the logo rendered in dark blue, making it less visually arresting.

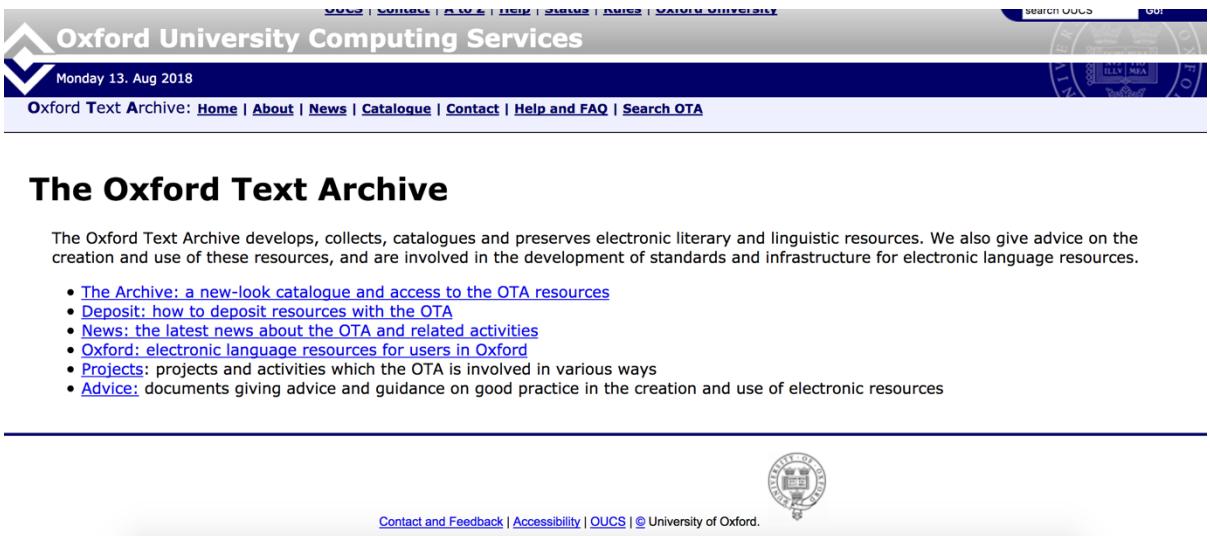
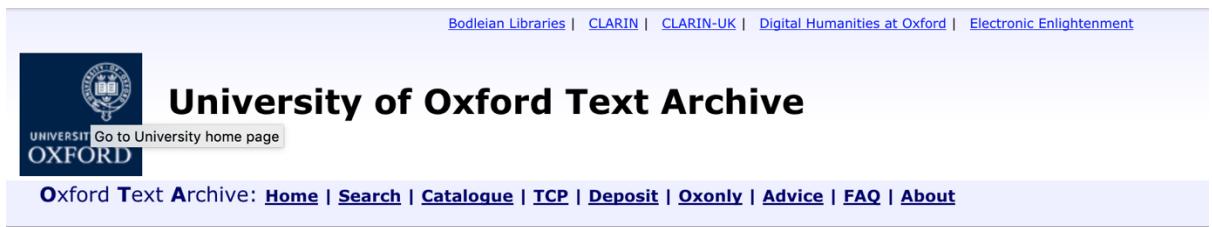


Figure 26: The 2008 site, rebranded in Oxford University style

In 2012 its name also changed to the *University of Oxford* Text Archive, emphasising the OTA's place in the institution, and in 2016, following further reorganisation of university IT services, the OTA became part of the Bodleian Library, taking on their brand. At this point top level links to other DH projects in Oxford, and to the EU-funded CLARIN project appear, replacing those to generic IT services.



The screenshot shows the University of Oxford Text Archive homepage. At the top, there is a navigation bar with links to Bodleian Libraries, CLARIN, CLARIN-UK, Digital Humanities at Oxford, and Electronic Enlightenment. Below this is the University of Oxford logo and a link to the university home page. The main title "University of Oxford Text Archive" is prominently displayed. Below the title is a horizontal menu with links to Home, Search, Catalogue, TCP, Deposit, Oxonly, Advice, FAQ, and About. The main content area features a section titled "The Oxford Text Archive" with a brief description of its mission and a search bar labeled "Search everything". A list of links follows, including Browse, TCP, Deposit, Oxford users, Advice, and FAQ.

The Oxford Text Archive

The Oxford Text Archive develops, collects, catalogues and preserves electronic literary and linguistic resources for teaching and learning. The OTA also gives advice on the creation and use of these resources, and is involved for electronic language resources.

- Search: for titles, authors, and words in texts ([more](#))

Search everything

- [Browse](#): browse the main catalogue and get access to the OTA resources
- [TCP](#): explore the separate catalogue for the Text Creation Partnership texts from EEBO and Evans projects
- [Deposit](#): how to deposit resources with the OTA
- [Oxford users](#): electronic language resources for the University of Oxford (page restricted to University of Oxford users)
- [Advice](#): documents giving advice and guidance on good practice in the creation and use of electronic resources
- [FAQ](#): frequently asked questions

Figure 27: The 2016 redesign- note the links at the very top of the page.

The design therefore highlights the OTA's status as a DH project, rather than generic service, and its place in a larger infrastructural organisation, this time on a supranational scale. Such interface changes are a visual reminder of the vicissitudes that many Digital Humanities projects have faced over long years of operation. The OTA can be seen developing from one individual's project, to part of a national infrastructure project, which proved to be ahead of its time technologically, then reverting to being part of university computing services and finally declaring its place as part of the library, locally, and an EU network, internationally.

The development of the material originally to be found on the Virtual Seminars resource is an example of another way in which digital resources can survive and be maintained and funded- as part of a new resource collection. The design of the tutorial on "Break of day in the Trenches" is noticeably different from the other seminars- a simple white page decorated with a top and bottom border of poppies and barbed wire. This suggests that this material formed part of the pilot project from which Virtual Seminars developed. Sadly this is now only accessible as part of the later resource and even Virtual Seminars itself cannot easily be accessed via the Wayback Machine. A search returns the correct link, but, when clicked, the top-level domain of the relevant

Oxford University webserver appears instead. This may be due to an automatic redirection script in the original pages. It is fortunate, therefore, that completed digital projects have been archived on a different server- projects.ox.ac.uk- which can be searched via Google. This provides a very good example of why it is inadvisable to rely purely on the Web Archive to preserve the interface history of digital projects. It is unlikely that many other universities have archived completed digital projects, as Oxford did. Had this not occurred the entire history of Virtual Seminars' development could have been lost.

Virtual Seminars themselves were subsequently to form part of the education section of the First World War Poetry Digital Archive: a vast, multifaceted collection of digitised material, which includes an archive of crowd-sourced content from thousands of members of the public. At first glance the design of the World War I Poetry Digital Archive may seem very different from the earlier resource. Unlike the clean design of Virtual Seminars, the interface to the World War I Poetry Digital Archive is extremely complex and crowded. Thus, it is important that it has a simple unifying design feature- the use of different shades of pale blue, as background to the white or black text of the navigation menu.

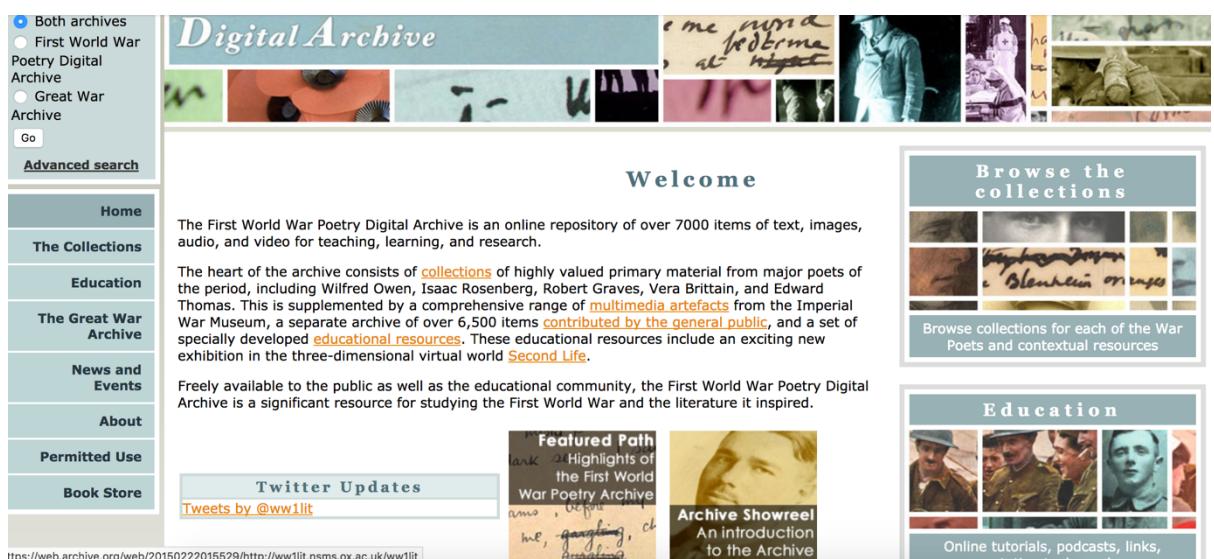


Figure 28: The original homepage of the World War I Poetry Digital Archive

The homepage is framed by contemporary photographs, organised in window-like squares, some of which, to the bottom right of the page, act as navigation devices, while

others, across the top of the page, provide a visual link to the resource's content. These grid structures are reminiscent of the layout tables of the Virtual Seminars project, an impression that is further reinforced when the section on the poets is accessed. Photos of each poet are arranged inside a square frame, which can be clicked to gain access to the works. The only real difference between this visual device and that of the original Virtual Seminars is that the frames surrounding the photographs are outlined in pale blue. Thus, however large and complex the new site may be, its design retains visual clues to its past. Rather than undergoing multiple redesigns of the same website, this content has survived and remained accessible as part of three different resources, each more complex than its predecessor. Ultimately, however, even the First World War Poetry Archive succumbed to the vicissitudes of project-based funding, and does not appear to have been actively updated for around a decade. The contrast between the fate of this project and that of the Oxford Text Archive provides an unwelcome reminder that however much agility digital resources may demonstrate in visual design and technical functionality, without sustainable institutional links, and thus funding, their survival is not guaranteed.

Conclusion

The books in the Cambridge University Library tower, complete with their dustjackets, provide a serendipitous timeline of information not only about book design, but also of the changing economy and society in which they were produced. In similar fashion, the Wayback Machine's actual timeline enables us to derive valuable information about the development of digital humanities projects, and the interfaces to them. However, original bindings and dustjackets were once discarded, even by academic libraries. There remains a risk that the same fate awaits early interfaces to digital projects, which may be disregarded as ephemeral wrappers of lesser significance than their content.

This would be deeply regrettable, since, as we have seen, a study of such interfaces provides valuable information about how long-lived digital resources have developed over time and responded to changing assumptions about the scholarly value of digital resources. Visual presentation can also provide information about the changing place of digital humanities projects in local and national infrastructures, and the way that they have sought to survive in challenging funding environments.

A study of how the web presence of such projects has developed reminds us about how changing access conditions, technical standards, and hardware, especially in terms of image display, have affected web design. The projects discussed above were pioneering in their use of an experimental medium, once assumed to be of dubious intellectual merit; thus, it was important to establish their intellectual credibility in the scholarly community. It is perhaps not surprising, therefore, that the interface designs of many early websites referred back to the tradition of printed books. Other sites, such as those produced at Oxford, turn away from such conventions, and, even in their earliest iterations, stress the novelty of this new dissemination medium by showcasing innovative design features, not all of which have survived subsequent design iterations. All of the projects, however, offer detailed information about the intellectual and technical credibility of the project team, and some may feature awards and webrings. Such early websites therefore demonstrate the perceived challenges of convincing potential users of the intellectual credibility of digital resources.

The original versions of these websites were often visually experimental. Project teams could assume no knowledge, on the user's part, of how to use digital resources, and so were creative in the use of visual navigation devices such as colour, the arrangement of resources in tables or even an image of a floorplan of a physical archive building. Subsequent redesigns might make them look more conventional, because of growing awareness of good practice in user interface design. It is nevertheless significant that the interfaces to all the projects in the sample have maintained some form of visual links with their original identity, by means of fonts, logos, an original colour scheme, or imagery, or the arrangement of navigation and content on the page. However, some redesigns, such as that for the Blake Archive, may change the user experience, and the visual identity, very radically. In that case it is even more vital that users should be able to access earlier versions of the site, because the user experience implied by its design has been so radically altered.

It is still possible to find early versions of many digital resources using the Wayback Machine, and other web archiving applications.⁶ However, this is not a perfect solution. Once-experimental functionality, such as imagemaps, frames or animations, or the setup of early web servers, may be incompatible with the Wayback Machine's harvesting technology. This means that some digital resources are already either wholly or partially inaccessible in their original form, and this may become even more of a

challenge in future. It is vital that the final form of the project should be preserved, ideally in fully usable form, but it is also important that early versions remain accessible to scholars who wish to study their original presentation and functionality.

It is for all these reasons that we should be conscious of the need to preserve original interfaces and their significant iterations when redesigned. This is a responsibility that project creators will need to consider. Of course, resources must be kept up to date, and thus interfaces redesigned, but at the time of doing so, it would be relatively easy to archive the previous form of the interface, perhaps in an institutional repository. It is far easier, at least, than trying to reengineer a partially functioning former interface, or for researchers to have to make conjectures about how it might have worked, based on intermittent historical screen captures.

It is significant, in this context, that many of the projects in this sample, had, or still have, strong collaborations with libraries, where important work in digital preservation is already being undertaken. Given the relationships that already exist, there is therefore an excellent opportunity for the DH community to work with libraries to preserve original interfaces and their subsequent iterations. It is better to make conscious decisions to archive all versions of sites that are still accessible, as part of an agreed preservation strategy. Not to do so means that we risk losing a wealth of information about the development of the early web and the status of digital humanities resources.

References

- Drucker, J. (2002). Intimations of Immateriality: Graphical Form, Textual Sense, and the Electronic Environment. In E. Bergmann Loiseaux & N. Fraistat (Eds.), *Reimagining Textuality: Textual Studies in the Late Age of Print* (pp. 152–77). Madison: University of Wisconsin Press.
- Drucker, J. (2013). Reading Interface. *PMLA*, 128(1), 213–220.
<https://doi.org/10.1632/pmla.2013.128.1.213>
- Galey, A. (2012). The Enkindling Reciter: E-Books in the Bibliographical Imagination. *Book History*, 15(1), 210–247. <https://doi.org/10.1353/bh.2012.0008>
- Galey, A., & Ruecker, S. (2010). How a prototype argues. *Literary and Linguistic Computing*, 25(4), 405–424. <https://doi.org/10.1093/lrc/fqq021>

- Harper, F. (2018, May 2). Banished books: Exhibition reveals fabled Tower Collection at Cambridge University Library [Text]. Retrieved December 11, 2018, from <http://www.lib.cam.ac.uk/news/banished-books-exhibition-reveals-fabled-tower-collection-cambridge-university-library>
- Hayles, K. (2003). Translating Media: Why We Should Rethink Textuality. *Yale Journal of Criticism*, 16(3), 263–90.
- Kirschenbaum, M. (2001). *Materiality and matter and stuff: what electronic texts are made of*. *Electronic Book Review*(12). Retrieved from <http://www.altx.com/ebr/riposte/rip12/rip12kir.htm>
- Maron, N. L., Yun, J., & Pickle, S. (2013). *Sustaining Our Digital Future: Institutional Strategies for Digital Content* (p. 91). New York: Ithaka S+R.
- McGann, J. J. (1983). *A Critique of Modern Textual Criticism*. University of Chicago Press.
- McKenzie, D. F. (1999). *Bibliography and the sociology of texts*. Cambridge, U.K. ; New York: Cambridge University Press.
- Nielson, J. (1996). Why Frames Suck (Most of the Time). Retrieved January 2, 2019, from Nielsen Norman Group website: <https://www.nngroup.com/articles/why-frames-suck-most-of-the-time/>
- Nielson, J. (1997). Changes in Web Usability Since 1994. Retrieved December 21, 2018, from <https://www.nngroup.com/articles/changes-in-web-usability-since-1994/>
- Nielson, J. (2001). 113 Design Guidelines for Homepage Usability (Jakob Nielsen). Retrieved December 7, 2018, from Nielsen Norman Group website: <https://www.nngroup.com/articles/113-design-guidelines-homepage-usability/>
- Nielson, J. (2004a). Guidelines for Visualizing Links. Retrieved December 7, 2018, from Nielsen Norman Group website: <https://www.nngroup.com/articles/guidelines-for-visualizing-links/>
- Nielson, J. (2004b). The Need for Web Design Standards. Retrieved December 7, 2018, from Nielsen Norman Group website: <https://www.nngroup.com/articles/the-need-for-web-design-standards/>
- Nielson, J. (2012). Serif vs. Sans-Serif Fonts for HD Screens. Retrieved December 7, 2018, from <https://www.nngroup.com/articles/serif-vs-sans-serif-fonts-hd-screens/>
- Nowviskie, B., & Porter, D. (2010). The Graceful Degradation Survey: Managing Digital Humanities Projects Through Times of Transition and Decline. *2010 Conference of the Alliance of Digital Humanities Organizations*. Presented at the 2010 Conference of the Alliance of Digital Humanities Organizations, Kings College London.

Retrieved from <http://dh2010.cch.kcl.ac.uk/academic-programme/abstracts/papers/html/ab-722.html>

Open Research Data Taskforce, & Jubb, M. (2017). *Research Data Infrastructures in the UK*. Universities UK.

Poole, A. H. (2015). How has your science data grown? Digital curation and the human factor: a critical literature review. *Archival Science*, 15(2), 101–139.
<https://doi.org/10.1007/s10502-014-9236-y>

Rimmer, J., Warwick, C., Blandford, A., Gow, J., & Buchanan, G. (2008). An examination of the physical and the digital qualities of humanities research. *Information Processing & Management*, 44(3), 1374–1392. <https://doi.org/10.1016/j.ipm.2007.09.001>

Schofield, T., Whitelaw, M., & Kirk, D. (2017). Research through design and digital humanities in practice: What, how and who in an archive research project. *Digital Scholarship in the Humanities*, 32(suppl_1), i103–i120.
<https://doi.org/10.1093/llc/fqx005>

Sherwin, K. (2015). Low-Contrast Text Is Not the Answer. Retrieved December 21, 2018, from Nielsen Norman Group website: <https://www.nngroup.com/articles/low-contrast/>

Smithies, J., Westling, C., Sichani, A.-M., Mellen, P., & Ciula, A. (2019). Managing 100 Digital Humanities Projects: Digital Scholarship & Archiving in King's Digital Lab. *Digital Humanities Quarterly*, 13(1). Retrieved from <http://www.digitalhumanities.org/dhq/vol/13/1/000411/000411.html>

Tanselle, G. T. (1971). Book-Jackets, Blurbs, and Bibliographers. *The Library*, s5-XXVI(2), 91–134. <https://doi.org/10.1093/library/s5-XXVI.2.91>

Tanselle, G. T. (1990). *Textual criticism and scholarly editing*. Charlottesville: Published for the Bibliographical Society of the University of Virginia by the University Press of Virginia.

Tanselle, G. T. (1992). A Description of Descriptive Bibliography. *Studies in Bibliography*, 45, 1–30.

Tanselle, G. T. (2003). Dust-Jackets, Dealers, and Documentation. *Studies in Bibliography*, 56, 45–140.

Vela, S., Cerrato, L. Ilovan, M., Li, T., Rockwell, G., Ruecker, S., 2014. “The Biography of an Interface: Perseus Digital Library.” In *Canadian Society for Digital*

Humanities/Société Canadienne Des Humanités Numériques (CSDH/SCHN)

Conference. St Catherine's, Ontario.

Warwick, C., Galina, I., Terras, M., Huntington, P., & Pappa, N. (2008). The master builders:

LAIRAH research on good practice in the construction of digital humanities projects.

Literary and Linguistic Computing, 23(3), 383–396.

<https://doi.org/10.1093/llc/fqn017>

Warwick, C., Terras, M., Huntington, P., & Pappa, N. (2007). If You Build It Will They Come? The LAIRAH Study: Quantifying the Use of Online Resources in the Arts and Humanities through Statistical Analysis of User Log Data. *Literary and Linguistic Computing*, 23(1), 85–102. <https://doi.org/10.1093/llc/fqm045>

Notes

¹ Digital preservation and curation are often used synonymously, but essentially, the former term refers to preserving and archiving data so that it may be used again, and curation to a larger range of activities that enhance the data, such as the addition of metadata, migration and emulation, which may make it easier to discover and use in future.

² The Digital Curation Centre provides an excellent resources section, listing the various reports and recommendations at <http://www.dcc.ac.uk/resources>

³ Nevertheless, DIAMM retains such information in a somewhat abbreviated form on its main page until 2003

⁴ This was innovative, but not unique: similar buttons could be found on the British National Corpus website, established in 1996 and based at the Oxford University Computing services.

(<https://web.archive.org/web/20020808223725/http://www.natcorp.ox.ac.uk:80/>)

⁵ Unfortunately, as with the DIAMM site above, the logo image loads too slowly to be captured by the Wayback machine

⁶ A list of these may be found at <http://www.dcc.ac.uk/resources/external/category/web-archiving>