

# MEDIEVAL INTERNET: RESEARCH, KNOWLEDGE AND PLAY, THE NEW TIME TRAVEL

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## **ABSTRACT**

In the last ten years, we have lived through a revolution in communication with the appearance of Internet. Now the diffusion of any article, image or video can be free and worldwide with the consequent explosion of contents, also medieval ones. Manuscripts, museum pieces, images, activities, etc.: everything can be spread through Internet; everything can reach any computer in the world. We can find everything from online libraries that offer a perfect view of their manuscripts to games that allow us to take part in historical battles. This is a new world of communications that also generates doubts about the academic methods of seeking information, and even the economic system of scientific publishers.

## **KEY WORDS**

Museums, Heritage, Internet, Web 2.0, Medieval Internet.

## **CAPITALIA VERBA**

Musea, Patrimonium, Retis Retium, Latum stamen uniuersum II.Nullum, Retis Retium Mediaeualis.

## 1. A new way to the Middle Ages<sup>1</sup>



ILLUSTRATION 1. MEDIEVALHELPPDESK.JPG.

### Medieval Helpdesk:

- Hello, Are you Brother Ansgar?
- Ah, yes, hello.[...]
- I haven't been able to do anything the whole morning because of this.
- I see. Well, I'm sorry. We're introducing this new system and everybody wants help immediately. Eh... so you can't use it?
- Right. It has just been laying here.
- Have you tried to open it?
- Open it? If it's that simple I wouldn't have called helpdesk, would I? [...]When you're used to paper rolls it takes some time to convert to turn the pages of a... beek.
- Book.

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1. This article will appear first on paper and later there will be an electronic version. It contains dozens of web links. If you are reading the electronic version the corresponding links can be consulted from the notes. If you are reading this text on paper, you can access the links in the article on the web Delicious.com grouped together under the label "medievalinternet". This is a much faster and more effective method of navigating round the proposals we make, but also allows the reader to discover contents associated with each of these and also see what other people who have chosen these same contents consider interesting. All the webs that appear in these notes have been consulted between 15th January and 15th March 2008. <<http://delicious/tag/medievalinternet>>.

**We are digital immigrants.** The difficulties that the monk Ansgar is experiencing in this hilarious video<sup>2</sup> are the same as all digital immigrants have had,<sup>3</sup> and by that I mean everyone who went to school or university in the 20<sup>th</sup> century. That means all those who studied with books, listened to teachers, and wrote on word processors but still thinking about our work being read on paper. Now we have entered the 21<sup>st</sup> century and, like Ansgar, the parchment rolls have been snatched from our hands and we have to work with a new tool that has pages. It's a tool that allows us to have manuscripts from the other side of the world on our desk, stroll round the inside of a cathedral that no longer exists and simultaneously maintain conversations with colleagues in three different universities.

**What is the Internet nowadays?** The Internet<sup>4</sup> has meant a radical change in the way we communicate and exchange information. We now do so globally and instantaneously. The Internet has also been the base for the expansion of audio-visual tools as a substantial and popular element of expression. Photography and video are nowadays used and shared by millions of people on webs. The Internet has broken the traditional barriers to publication, namely a very large infrastructure and the difficulties of diffusion beyond the local sphere. Now an electronic publication hardly requires money, the process is immediate and the diffusion, if one wants, is global. Anyone can start a blog, a web or an on-line journal and be read by people all over the world. Anyone who has knowledge of a subject, however specific and minor this may be, can participate in a collaborative project, such as an on-line encyclopaedia. The concept of copyright from the paper era, based on the cost of publishing and the charge for the object produced, is disappearing in a world where information is omnipresent and free. The Internet of static webs, where each page held contents in a permanent way has given way to a environment of webs that are updated constantly with the latest thematic information, every day, every hour and every minute. Search engines are appearing that search for information from among dozens of different websites and present the results personalised for each user according to his or her tastes and interests.<sup>5</sup> New ways of searching for information are being created and, thereby, new methods of researching. Groups of people are forming on Internet linked not by geographic or linguistic proximity but more through sharing professional or personal interests about a subject that they are enthusiastic about...

**Medieval studies.** The scholars studying the medieval epoch are by definition one of these minority, geographically disperse groups described above. However

2. NRK. "Medieval Helpdesk with English subtitles". Youtube. 26 February. 15 January 2008 <<http://youtube.com/watch?v=pQHx-SjgVvQ>>.

3. Prensky, Marc. "Digital Natives, Digital Immigrants". *Marc Prensky Home*. 2001. 15 January 2008 <<http://www.marcprensky.com/writing/Prensky%20%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>>.

4. "Internet". *Wikipedia, the free encyclopedia*. 16 January 2008 <<http://en.wikipedia.org/wiki/Internet>>: "10 Years That Changed the World". *Wired*. 16 January 2008 <<http://www.wired.com/wired/archive/13.08/intro.html>>.

5. *Netvibes*. 17 January 2008 <<http://www.netvibes.com/>>.



not only are the scholars scattered around the world; the same is true for what they are studying. The manuscripts, works of art, buildings, etc, are disseminated around an infinite number of individual locations, with access ranging from easy or difficult to impossible, with timetables, kilometres and language as a frontier. Until now, the library, the university, the museum and the archive have been the four tools that have allowed access to the valued goods, that have built bridges to reach these contents and thereby feed medieval studies. Now, all four use a new universal resource that links them together and means that the scholar, the researcher (including the amateur!) has a degree of access, unthinkable only 10 years ago, to objects, scientific articles and manuscripts from the medieval world. There is research for scientists, in-depth or general knowledge for researchers and amateurs, games and visual gadgets for all kinds of public, as well as what the Internet offers today to the enthusiasts about the medieval world.

## 2. A world of knowledge on your desk

**The great depositories.** The medieval legacy is held in an enormous range of institutions scattered all over the world. Museums, libraries and archives in Britain, the United States, France, Italy, Spain and Germany (and even New Zealand) have been storing the testimonies of an epoch for decades or centuries. Many of them have carried out the continuous and notable task of diffusion through research, publications, seminars or exhibitions. Now the most active and dynamic are using the field of on-line information to expand into this new environment. The old microfiches have progressively given way to digitalisation. The aim of preserving the fragile original and offering the researcher access to the information it contains thanks to a consultable copy has not changed. The potential of digital technology and the Internet have, however, made reproduction much easier and cheaper, and communication more powerful, thus shifting the centre of gravity of the operation progressively from conservation towards diffusion. Now digitalisation is not seen as a means in itself, but rather as the first step in a strategy of publication. Anyone who has already digitalised part of their collection now has to concentrate their efforts on communicating these contents.

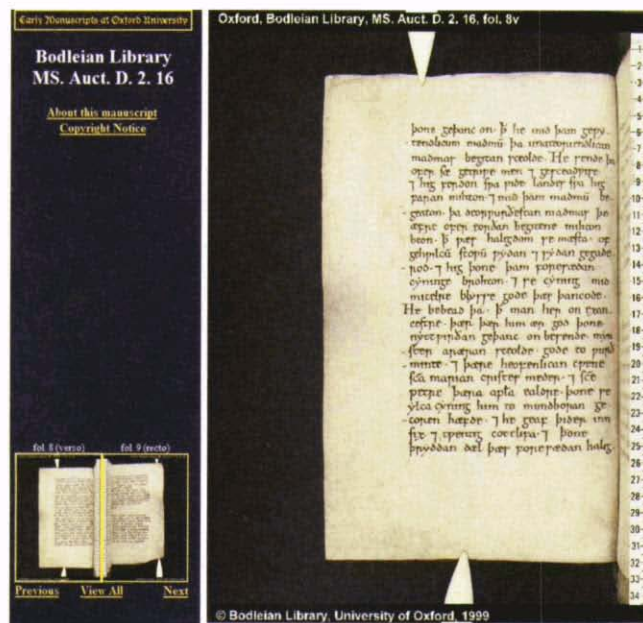


ILLUSTRATION 2. OXFORD UNIVERSITY.

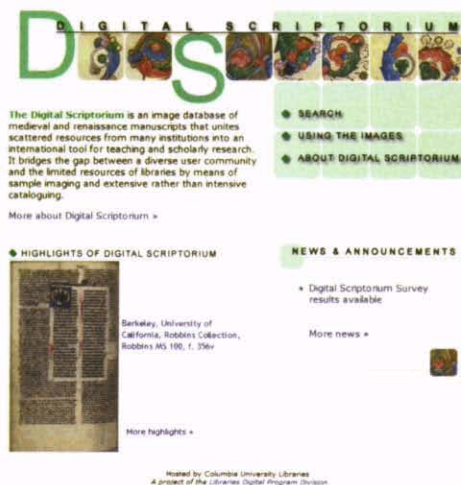


ILLUSTRATION 3. DIGITAL SCRIPTORIUM, COLUMBIA UNIVERSITY.



**Manuscripts.** In the world of access to medieval manuscripts, there are many examples of institutions that make their contents partially or fully available to the public. For example, Oxford University<sup>6</sup> offers access to 80 manuscripts via high quality, high-resolution images that allow us to see every detail of the pages. The monastery of St. Gall in Switzerland also offers us over a hundred manuscripts in its virtual library.<sup>7</sup> An outstanding aspect of its interface is the possibility to search inside the text of the manuscripts for different criteria, a step forward in the search that is mentioned in greater detail below. The Mandragore base of illuminated manuscripts in the Bibliothèque Nationale de France<sup>8</sup> is a very traditional but very powerful tool, while in Cologne, the diocesan library is also accessible<sup>9</sup> with an interface by now a little dated but which works efficiently and gives very high detail in the images. We can also find projects that gather material from different origins in a single location. For example, the German web, *Manuscripta Mediaevalia*,<sup>10</sup> offers us access to thousands of manuscripts in Germanic language. It has extraordinary possibilities for searching, including an iconography search. A similar project, but in this case in the field of the American universities, is the Digital Scriptorium<sup>11</sup> led by Columbia University. This holds medieval and Renaissance manuscripts from the universities of Berkeley, Columbia, etc. The British History Online<sup>12</sup> also holds a huge number of archival resources from various sources and stands out for the effectiveness of the interface and indexation that allow searches of a list of documentation by region and epoch.

A very special case is the Hill Museum & Manuscript Library.<sup>13</sup> They began their task of preserving their own and other manuscripts forty years ago with microfiches and nowadays have over a million images between microfilm and digital recordings. Their contents cover material of European origins but what makes them stand out is undoubtedly the project to conserve manuscripts from early Christian times, with examples from Syrian, Armenian and Lebanese collections among others.

6. *Early Manuscripts at Oxford University*. January 2001. Oxford University. 17 January 2008 <<http://image.ox.ac.uk/>>; The Bodleian Library, that is part of this project, has however its own web also with access to its manuscripts: "Browse images of manuscripts". Bodleian Library. University of Oxford. 17 February 2008 <<http://www.bodleian.ox.ac.uk/dept/scwmss/wmss/medieval/browse.htm#intro>>.

7. "Codices Electronici Sangallenses (CESG)-Virtual Library Sangallenses". *Codices Electronici Sangallenses*. Universitas Friburgensis. 18 January 2008 <http://www.cesg.unifr.ch/en/index.htm>.

8. *Mandragore, base des manuscrits enluminés de la B.n.F.* Bibliothèque Nationale de France. 19 January 2008 <<http://mandragore.bnf.fr/html/accueil.html>>.

9. *Codices Electronici Ecclesiae Coloniensis (CEEC)*. Universität Zur Köln. 19 January 2008 <<http://www.ceec.uni-koeln.de/>>.

10. *Manuscripta Mediaevalia*. Deutsche Forschungsgemeinschaft. 20 January 2008 <<http://www.manuscripta-mediaevalia.de/>>.

11. Libraries Digital Program Division. *Digital Scriptorium*. Columbia University Libraries. 20 January 2008 <<http://scriptorium.columbia.edu/>>.

12. *British History Online*. University of London & History of Parliament Trust. 21 January 2008 <<http://www.british-history.ac.uk/period.aspx>>.

13. Hill Museum & Manuscript Library. "HML Research Center". *Hill Museum & Manuscript Library*. Saint John's University. 21 January 2008 <<http://www.hmml.org/research06/research.htm>>; Hill Museum & Manuscript Library. "Welcome to Vivarium". *Vivarium, The onl-line digital collections of Saint John's University and the College of Saint Benedict*. Saint John's University. 21 January 2008 <<http://www.hmml.org/vivarium/>>.



ILLUSTRATION 4. BRITISH HISTORY ONLINE.



ILLUSTRATION 5. HILL MUSEUM & MANUSCRIPT LIBRARY: VIVARIUM.



**Delocalisation.** The latter case exemplifies one of the most important characteristics of this new world of knowledge. Before the Internet, there was a high probability that a manuscript in the British Library or the Library of the University of Columbia would be studied and known by a small circle of competent scholars who were interested in it. Catalogues and specialised publications would allow it to be known to a greater or lesser degree in the scientific community. However, it would be difficult for a manuscript in a collection in Lebanon to have these opportunities of world renown. It would happen if an American, German or French scholar "discovered" it personally and published it in a recognised scientific journal. Nowadays, any researcher anywhere in the world can "discover" any manuscript that is on-line without stepping out of his or her office, however remote the original is. There are no longer any frontiers.

**Cultural imperialism.** Nevertheless, this same case also illustrates the other side of the same coin. The planetary diffusion of this unknown Lebanese manuscript does not depend on nearby institutions but rather on some of the most powerful ones in the first world. Those who held power in the academic world of paper are maintaining it in the world of the Internet. We may see new actors, modest but brilliant ones, from all corners of the world, but the large groups of the powerful, whether in communications or academia, will maintain their privileged position unless they do things very badly. Moreover, the most dynamic of these will take advantage of the new possibilities for planetary diffusion to extend their hegemony even further.<sup>14</sup>

**Closed spaces.** Although part of the knowledge created by the institutions is available freely and openly on the net, much of the scientific content generated historically is still difficult to find, or the existing search tools have very high access costs that can generally only be paid by libraries and even then, not all of these. Very clear examples are the excellent bibliographic resources of Brepolis,<sup>15</sup> the well-known Jstor<sup>16</sup> or the newer British Library Direct.<sup>17</sup> Google, the new giant of information, is questioning this economic model with two products, Google Scholar<sup>18</sup> and Google Book Search<sup>19</sup> that combined offer open access to very significant proportions of areas of research which, until recently, were only available through these paying resources.

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14. A clear example, outside medieval studies, is the Aluka project, a web with academic resources about Africa, where African institutions participate together with others from around the world, but which is really a project led and piloted from the United States: *Aluka*. June 2006. 21 January 2008 <<http://www.aluka.org/>>.

15. "Brepolis: the hometown of Brepols' online publications". *Brepols Publishers Online*. 22 January 2008 <[http://www.brepolis.net/info/info\\_en.html](http://www.brepolis.net/info/info_en.html)>.

16. *JSTOR. Trusted archives for scholarship*. 2000. 22 January 2008 <<http://www.jstor.org/>>.

17. The British Library has begun a similar project with British Library Direct: "British Library direct". 23 January 2008 <<http://direct.bl.uk/bld/Home.do>>.

18. "Google Scholar". Google. 24 January 2008 <<http://scholar.google.es/>>.

19. "Google Book Search". Google. 24 January 2008 <<http://books.google.es/>>.





ILLUSTRATION 6: BRITISH LIBRARY DIRECT.



ILLUSTRATION 7. DIAMM. DIGITAL IMAGE ARCHIVE OF MEDIEVAL MUSIC.



**Music.** Music also has its own space on the Internet with such resources as Cantus<sup>20</sup> or the Digital Image Archive of Medieval Music.<sup>21</sup> The latter is an interesting case given its truly ambitious aim of including all possible information about all manuscripts of medieval polyphonic music. The web includes information about “all known sources” and mentions that the database is under construction. This project is perfectly adapted to the current environment of the Internet, a resource that has everything (or aspires to do so) about a specific defined subject. It is not through multiple general websites which resemble each other that the Internet grows, but through a multitude of such tremendously focussed spaces that are never “finished” but are projects with permanence in time and are updated constantly. Not only is this a model project by definition, but also through the modernity of its interface for consulting the images, that allows you to zoom in very easily, compare the normal image with alternative views (with ultraviolet light or digitally improved), add transcriptions or comments. It is clearly a model to follow. Another example of this type of website about a specific theme is perhaps the one dedicated to the works of Ramon Llull,<sup>22</sup> an outstanding aspect of which is that, as well as the works themselves, it includes information about where the manuscripts are and, unusually, information about the followers of Llull’s work. This focus of including not only the work, but in a way, the repercussion it has generated and the scholars who revolve around it, is clearly one of the vectors for the expansion of this type of resource.

**Communities of scholars.** Because the websites about medieval manuscripts or music are making a great effort to offer researchers direct access to documents, they do so on an individual basis. Each researcher enters the web from his or her office without contact with others. There is no place for exchanging opinions, or sharing research,<sup>23</sup> and, as we will see, this is becoming one of the defining traits of the actual web, namely the creation of virtual places where a geographically disperse community united by a field of study meets, discusses, exchanges information, findings, problems, etc., continuously, in an authentic non-stop congress. Those keen on skiing have their own platform, as do horror film fans. Perhaps these are not the examples closest to the community of medievalists. However, perhaps the medical community is a suitable model. Over 50,000 doctors connect to the Sermo website<sup>24</sup> in order to argue about medical cases, recommend treatments or find out about the latest publications on a specific subject. It is a resource which is becoming essential for anyone who uses it. Can we imagine such a web for medievalists all over the world? I believe so.

20. Debra Lacoste. *Cantus: a Database for Latin Ecclesiastical Chant*. The University of Western Ontario. 25 January 2008 <<http://publish.uwo.ca/~cantus/>>.

21. “Home”. *Digital Image Archive of Medieval Music*. University of London. 25 January 2008 <<http://www.diamm.ac.uk/>>.

22. Bonner, Anthony, dir. “Obres de Ramon Llull”. *Base de dades Ramon Llull-Llull DB*. Centre de documentació Ramon Llull. Juliol 2001. Universitat de Barcelona. 25 January 2008 <<http://orbita.bib.ub.es/llull/obres.asp>>.

23. As mentioned, the DIAMM web has the possibility of adding comments, by the editorial team or the users. It is a first form of exchange: *Digital Image Archive of Medieval Music*. 25 January 2008. <<http://www.diamm.ac.uk/diamm/apps/DisplayImage.jsp?imageKey=131>>.

24. *Sermo. Know more. Know earlier.* 2008. 26 January 2008 <<http://www.sermo.com/>>.



ILLUSTRATION 8. SERMO. MEDICAL COMMUNITY.

**Lists of resources.** In this “second era” of the Internet that we are experiencing, I think it is possible that someone could build this kind of network, because during the “first era” of the Internet, when websites had to be created to gather resources together, this was done in the medieval field. We already have the example of the ORB, the On-line Reference Book for Medieval Studies,<sup>25</sup> which has not been updated for years but is still a useful general resource. Others include the Internet Medieval Sourcebook,<sup>26</sup> Netserf<sup>27</sup> or The Labyrinth,<sup>28</sup> or, in a German context, the excellent Mediaevum.de (which is updated).<sup>29</sup> The latter example shows us that we are quite close to building a virtual community of this type: it already has a discussion forum,<sup>30</sup> which is especially frequented by students. It is only a step from here to a really structured community.

25. “Welcome to the new home of the ORB on the web”. The Orb: On-line Reference Book for Medieval Studies. April 2000. The College of Staten Island. 26 January 2008 <<http://the-orb.net/index.html>>.

26. Halsall, Paul, ed. *Internet Medieval Sourcebook*. December 2006. Fordham University. 27 January 2008 <<http://www.fordham.edu/halsall/sbook.html>>.

27. Harbin, Andrea R. *Netserf. The internet connection for Medieval Resources*. 2006. 27 January 2008 <<http://www.netserf.org/>>.

28. Irvine, Martin; Everhart, Deborah, dirs. *The Labyrinth. Resources for Medieval Studies*. 2002. Georgetown University. 28 January 2008 <<http://www8.georgetown.edu/departments/medieval/labyrinth/>>.

29. Glauch, Sonja; Hamm, Joachim; Rupp, Michael. “Welcome to the English Portal to the Pages of Mediaevum. De!”. *Medieval Studies on the Internet Mediaevum. De*. 2006. Wissenschaftliche Internetdienstleistungen Mediaevum. De GbR. 29 January 2008 <<http://english.mediaevum.de/>>.

30. Glauch, Sonja; Hamm, Joachim; Rupp, Michael. “Unser Forum hat eine neue Software”. *Mediävistik im Internet Mediaevum.de*. 2007. Wissenschaftliche Internetdienstleistungen Mediaevum. De GbR. 2





ILLUSTRATION 9. MEDIAEVUM.DE.

**And the amateurs?** We have mentioned research, researchers, being able to see manuscripts in detail, but what about the thousands of amateurs of medieval studies? What resources do they have available? If we remain in the field of manuscripts, an excellent idea is EyeWitness to History,<sup>31</sup> which puts forward the stories of the witnesses of history. Unfortunately, the number of stories it includes about medieval times is very limited, but it is a resource with a very high potential for communication with the less expert public. Letters, stories, even fragments of trials or other documentation adequately dealt with reflects the immediacy of daily life and human contact, and are authentic keys which open the doors to a journey through time.

February 2008 <<http://www.mediaevum.de/cgi-bin/ikonboard/ikonboard.cgi>>.

31. "The Middle Ages and Renaissance. EyeWitness to History. History through the eyes of those who lived it. Ibis communications, Inc. 2 February 2008 <<http://www.eyewitnesstohistory.com/mefrm.htm>>.



**Art.** While archives and research centres have traditionally offered their services first and foremost to researchers, museums have been directed mainly towards amateurs, art lovers. And in the new world of the Internet, this dynamic is no different. The most active museums, large and small, have a multitude of contents dedicated to the non-specialist public. The Metropolitan Museum in New York, for example, allows its extensive bases to be searched for all kinds of object: paintings, gold and silver work, sculptures, musical instruments, arms, etc, but perhaps the most interesting application in its website is the Timeline of Art History,<sup>32</sup> which gives geographical and historical access to a very extensive range of articles about medieval art, among others. The most relevant is not, however, the number of articles or their quality, but rather the adaptation of the contents to the ecosystem and the possibilities of the Internet. Each map lets the user choose a time, each time a geographical space, in each description there are different objects to choose, each object is accompanied by a list of concepts... This resource shows that the way to navigate the information on the Internet has nothing to do with the lineal route of the printed publication; the Internet is hypertextual, with multiple crossed links that lead from one concept to another, from the general to the specific, from this to an image, from this to a video and then to another general concept. Searching in the collection of the British Museum is another example of the sophistication of cross-linking and the depth of the contents<sup>33</sup> and it also offers the visualisation of its data (and from other partners) on a time line.<sup>34</sup>

**Virtual and monographic exhibitions.** Other websites have dedicated their efforts to more monographic themes, such as individual monumental buildings or the virtual version of certain exhibitions. In the case of architecture, many French monuments have websites of this kind, an example of which being the abbey of St. Germain in Auxerre,<sup>35</sup> with a much more traditional navigation system than the Anglo-Saxon museums, but with a remarkable depth of content. Others include those dedicated to the town of Saint Denis<sup>36</sup> or the city of Carcassonne,<sup>37</sup> which uses some multimedia tools. If we return to the manuscripts, Incunabula<sup>38</sup> is another example of an excellent virtual exhibition with a multitude of contents about a specific theme.

32. Montebello, Philippe de. "Europe, 1000-1400 A.D.". *Timeline of Art History*. Metropolitan Museum of Art. 2 February 2008 <<http://www.metmuseum.org/toah/hm/07/eu/hm07eu.htm>>.

33. "Introduction: Explore". *The British Museum*. 2 February 2008 <<http://www.britishmuseum.org/explore/introduction.aspx>>.

34. *World Timelines.org.uk. World cultures in British museums*. 2005. The British Museum. 2 February 2008 <<http://www.worldtimelines.org.uk/>>.

35. Sapin, Christian, dir. *L'abbaye de Saint-Germain d'Auxerre*. Ministère de la Culture et la Communication. 2 February 2008 <<http://www.auxerre.culture.gouv.fr/>>.

36. Wyss, Michaël; Meyer Rodrigues, Nicole. *Saint-Denis, une ville au Moyen Âge*. Ministère de la Culture et la Communication. 2 February 2008 <<http://www.saint-denis.culture.fr/fr/index.html>>.

37. Rousset, Valérie; Amiel Christiane; Piniès, Jean Pierre. *La Cité de Carcassonne*. Ministère de la Culture et de la Communication. 2 February 2008 <<http://www.carcassonne.culture.fr/>>.

38. *Dawn of Western Printing. Incunabula (Japanese)*. August 4, 2005. National Diet Library, Japan. 3 February 2008 <<http://www.ndl.go.jp/incunabula/e/index.html>>.



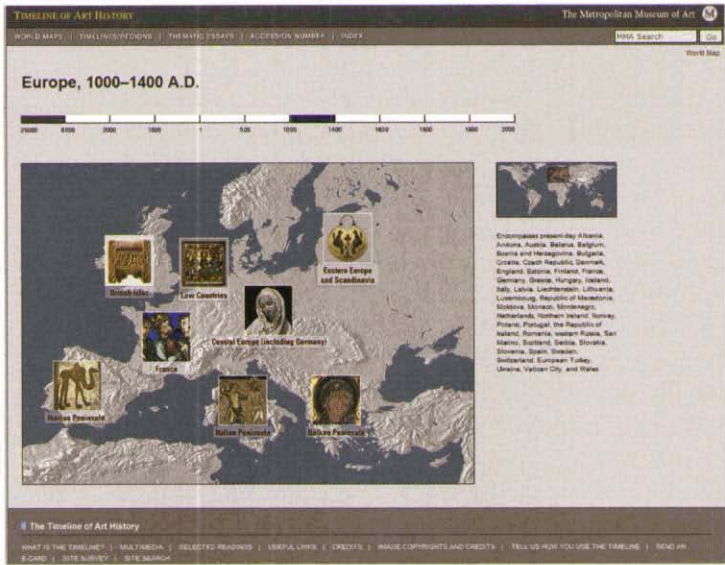


ILLUSTRATION 10. METROPOLITAN MUSEUM OF ART. TIMELINE OF ART HISTORY.

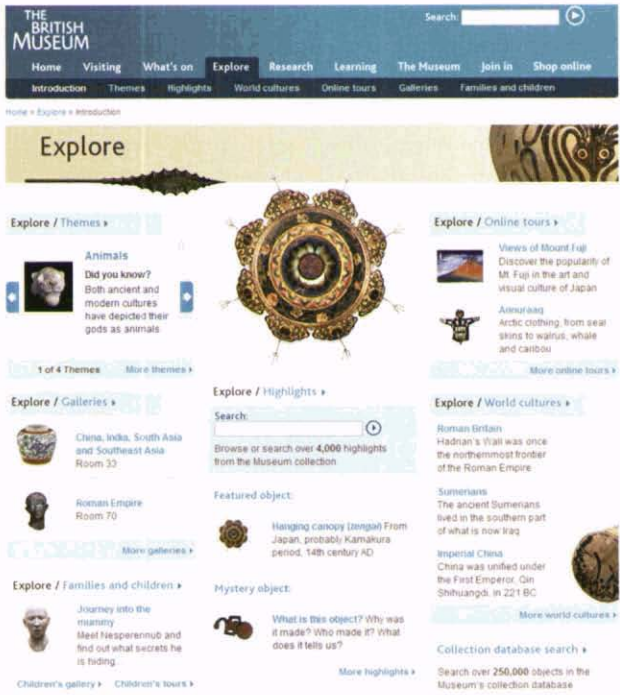


ILLUSTRATION 11. BRITISH MUSEUM. EXPLORE.



**The transversal search.** A new typology is appearing above these monographic websites, namely that of the global aggregators of projects. These are especially important in the European case, given the diversity of nations, languages and standards found on the continent. The current effort is to promote effective intercommunication between systems, so that the reader can access the resources of all the institutions involved simultaneously from any point in the world and in different languages on a single screen.<sup>39</sup> The European Library<sup>40</sup> or the Michael project<sup>41</sup> are working on the difficult task of establishing intelligent searches of the different catalogues. The search engine in Michael, for example, allows us to link to over 500 digital collections around Europe. It is a first step, with a minimum of integration between collections, but it is extremely useful as a tool for discovery and interconnection.<sup>42</sup> The highest expression of this aim can be found in the Europeana project,<sup>43</sup> which has started to work at the end of 2008 on the base of the European Library.

### 3. New life, second life

**Living.** Thus far, we have seen a long list of websites for learning about the medieval world, some more scientifically, others more or less pleasurably, but always in the context of study. However, there is another way of approaching the medieval world. To live it. And here, we find a series of proposals that now use audiovisual media intensively to take us into the medieval world through feelings and emotions.

If we start again with the manuscript sources, the British Library has the honour of being the institution that has managed to get closest to making us feel that the books we consult on-line are effectively in front of us. Its "Turning the Pages" software<sup>44</sup> manages to make us turn the pages almost naturally, and it even offers us a magnifying glass to look at the details. It is an authentic, almost tactile, pleasure to follow the Golden Haggadah or, even more so, the Arburthnot Missal, in the version 2.0 of this software.

39. "Information Society Activities> Overview". *Digital Libraries Initiative Homepage*. Europe's Information Society. 7 February 2008. <[http://ec.europa.eu/information\\_society/activities/digital\\_libraries/index\\_en.htm](http://ec.europa.eu/information_society/activities/digital_libraries/index_en.htm)>; "Welcome to Europe's digital library, museum and archive". *Europeana connecting cultural heritage*. Koninklijke Bibliotheek. 10 February 2008 <<http://www.digitallibrary.eu/edinet/>>.

40. "The european library searches the content of European national libraries". *The European Library*. Koninklijke Bibliotheek. 21 February 2008 <<http://www.theeuropeanlibrary.org/portal/index.html>>.

41. "Project Consortium". *Michael Multilingual inventory of Cultural Heritage in Europe*. European Commission. 21 February 2008. <<http://www.michael-culture.org/en/about/project/consortium>>.

42. "A modern pilgrimage through art". *Michael Multilingual inventory of Cultural Heritage in Europe*. European Commission. 21 February 2008 <<http://www.michael-culture.org/en/user-stories/lucia>>.

43. Cousins, Jill. *Europeana. Connecting cultural heritage*. The Koninklijke Bibliotheek. 22 february 2008 <<http://www.europeana.eu/>>.

44. "Turning the pages". *Online Gallery. Turning the pages, leaf through our great books and magnify the details*. The British Library. 22 February 2008 <<http://www.bl.uk/onlinegallery/ttp/ttpbooks.html>>.







ILLUSTRATION 12. EUROPEANA.



ILLUSTRATION 13. BRITISH LIBRARY. TURNING THE PAGES 2.0.



**Video.** Talking about audiovisuals, the documentaries produced for television have a new life on the Internet. Battles, ways of life, the crusades, practically any of the leading documentaries that have been produced by general or thematic English language channels can nowadays be found in some of the macro-containers of videos.<sup>45</sup> If we are talking about living the medieval world, an inevitable (and very funny) reference is "Medieval Lives"<sup>46</sup> produced by Terry Jones for the BBC. Jones, as well as being one of the members of the comedy group Monty Python, is a history enthusiast and his recreations of the medieval lives of knights, monks and peasants are full of anecdotes and surprises as well as treating us to some animations of entirely naïve, but charming, medieval miniatures. Another series that recreates an aspect of medieval life in an especially vivid manner is "Weapons that made Britain".<sup>47</sup> Presented by the charismatic Mike Loades, it goes through the arms that were important to the history of Great Britain, such as the shield, the bow, the lance, the sword and armour. Loades's way of approaching the past is extraordinary. He does not study the history of these objects or the historical episodes from an academic point of view. On the contrary, he faces these arms as an active user (he is a combat instructor!) and he closely studies their usefulness. He wants to know the materials of which they were made, and how, the virtues and defects that these conferred on them, and how they were used on the battlefield according to the old treatises. Loades fires arrows, destroys shields with axe blows, he fights and rides. However, it is not only an action series, this being only the first step towards understanding the tool and, by extension, a historical event determined by the technology of war. He experiments with real weapons in order to understand the real conditions under which these historical events took place. What is the effect of an arrow on armour at 50 metres? A little dent. And at 15 metres? A hole and perhaps the death of a knight. It is fascinating to see his recreation of the battle of Cressy, with the English archers facing the entire French nobility on horseback. How long did the French charge last? He rides across the historical field: only 40 seconds. How many arrows

45. Currently very few television channels have begun to transmit via the Internet to the entire world. Those that have started up sophisticated reproduction websites, for example NBC and BBC, only allow national coverage. The reason is that the actual structure for negotiating the rights for television programmes is exclusively envisaged from the point of view of broadcasts by traditional channels, by countries, and there is no adequate legal coverage for worldwide broadcasts. This situation is unsustainable because the users already ignore these norms by downloading programmes and offering them to the global community freely on websites like the defunct Stage6, Veoh or Miro, or P2P networks (eMule, etc). Any European user can use these websites to download the latest episode of a hit series (Lost, Heroes, House, etc.) just after it has been shown in the USA even though they theoretically would not appear in his or her country for months or even years. The worldwide legal distribution of series and films on-line is simply an unstoppable process that will be working within a couple of years.

46. These could be found on Stage6 but that portal closed. They can now be seen on Veoh. Terry Jones' Medieval Lives: "Search results for: 'medieval lies'". *Veoh*. 23 February 2008 <<http://www.veoh.com/search.html?type=&search=medieval+lives&advSearch=-ingestSourceName%3A%28pixsy+crawldb%29>>.

47. "Weapons that made Britain". *Channel4.com*. 23 February 2008 <<http://www.channel4.com/history/microsites/W/weapons/>>; Es poden veure a Veoh: "Search results for: 'weapons that made Britain'". *Veoh*. 23 February 2008 <<http://www.veoh.com/search.html?type=&advSearch=-contentSourceName%3A%28YouTube.com%29&search=weapons+that+made+britain>>.



could the archers fire in that time? 12 each: 90,000. How many of these would have killed knights? Very few, only those fired in the last 10 seconds. But the first hundreds of horses were vulnerable and, probably, by falling in the last few metres, they formed a barrier of fallen bodies which hindered the charge and caused the massacre of thousands of French nobles at the hands of the English archers. 40 seconds. Only 40 seconds, and then a massacre. The reconstruction Loades creates with the company of only one historian, his horse and a few archers literally places history in front of our eyes and takes us to the battlefield.

**Spaces.** We have seen lives and actions recreated by the documentaries now accessible on the Internet, but one of the legacies that brings the past closest to us is architecture and its space. Strolling in the cloister of a Romanesque monastery in the "real world", or walking around a Gothic cathedral often enables us to travel in time. There are many examples of the transmission of these sensations, of the popularisation of architectural spaces on the Internet. We have already mentioned some French monuments, and the French ministry of culture also has databases with scientific and technical information about their architecture,<sup>48</sup> but if we are talking about experiencing, or living these places, one of the best methods is panoramic photography. Different websites offer this immersive vision in all kinds of buildings, obviously including medieval ones. Arounder,<sup>49</sup> 360 Cities,<sup>50</sup> Viewat<sup>51</sup> and Panoramas.dk<sup>52</sup> are the most outstanding among these websites. These immersive visits can also be more complex and not merely photographic, digitally generating three-dimensional reconstructions that can be visited. ArsVirtual<sup>53</sup>, promoted by the Fundación Telefónica, is a very good example. It has over a dozen virtual visits, many to medieval buildings. We can literally fly around inside or outside these buildings and the views are accompanied in all cases by texts and images.

Another very interesting project are the galleries of buildings in 3D on Google Earth.<sup>54</sup> A community of individual and institutional creators has grown up around Google's popular geographic navigation programme. They add data of all kinds, in this case 3D reconstructions of medieval buildings from all over Europe. This is a perfect example of what the new Internet, the web 2.0, means. Google does not create a gallery of 3D buildings, but simply makes a relatively simple creation tool available to the public free of charge, and it is users from all over the world<sup>55</sup> who

48. "Présentation des bases Architecture et Patrimoine". *Architecture & Patrimoine*. Ministère de la Culture et de la communication. 23 February 2008 <<http://www.culture.gouv.fr/culture/inventai/patrimoine/>>.

49. Arounder. 23 February 2008 <<http://www.arounder.com/>>.

50. 360 cities. *The world in virtual reality*. 23 February 2008 <<http://www.360cities.net/>>.

51. Borràs Serret, Iban; Izquierdo Garay, Joan Carles, dirs. *ViewAt.org. El mundo en panorámicas*. 23 February 2008 <<http://viewat.org/>>.

52. Nyberg, Hans. *Panoramas.dk*. 23 February 2008 <<http://www.panoramas.dk>>.

53. "Portada". *ArsVirtual, espacio virtual para la difusión del patrimonio cultural*. 2006. Fundación telefónica. 24 February 2008 <<http://www.arsvirtual.com/index.jsp>>.

54. "Resultados de la Galería 3D". *Google Galería 3D*. Google. 24 February 2008 <<http://sketchup.google.es/3dwarehouse/search?tags=medieval>>.

55. If what we are looking for is content generated by users, we can take a look at Flickr or YouTube and search with "medieval". There are hundreds of thousands of proposals, many of them surprising.

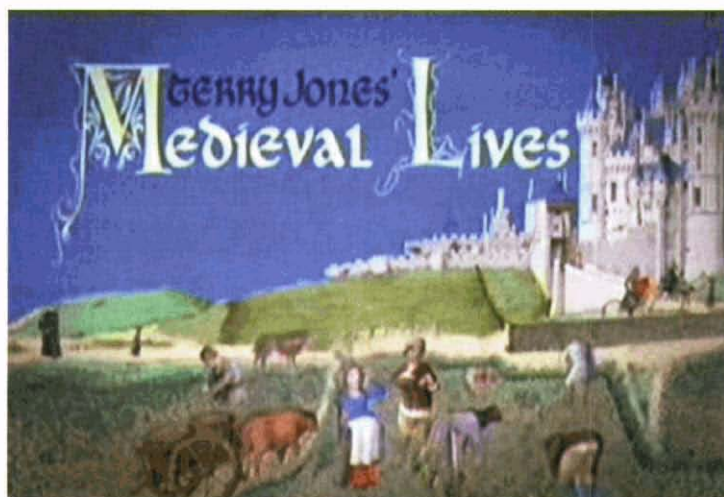


ILLUSTRATION 14. TERRY JONES' MEDIEVAL LIVES.

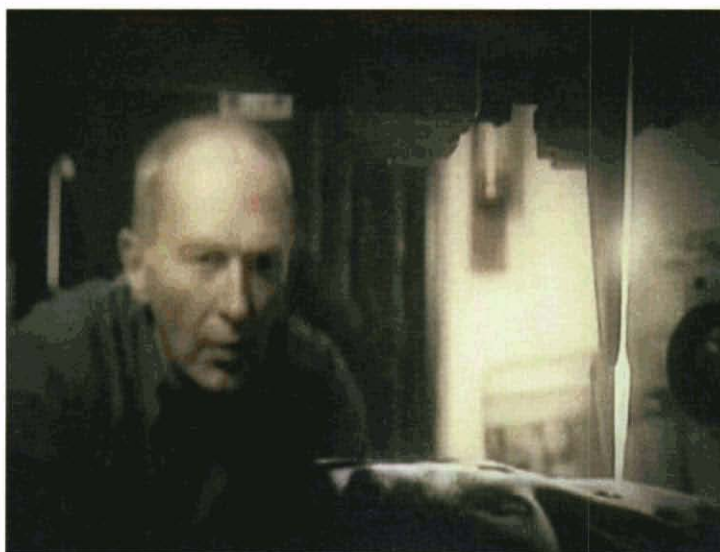


ILLUSTRATION 15. WEAPONS THAT MADE BRITAIN.



ILLUSTRATION 16. AROUND.



ILLUSTRATION 17. ARS VIRTUAL.





generously fill the web with their three-dimensional reconstructions of cathedrals, castles and monasteries, sometimes of incredibly high quality<sup>56</sup>.

**Play, play and play.** Not everything is dedicated to knowledge and new experiences. Straightforward play also has its own place. The Internet is a huge playground of all kinds, from games of chance to games of skill, via complex role-play games. Some are the heirs of board games, while others have developed autonomously on the net. There are hundreds of proposals, from the most juvenile, like those on the British "ShowMe" website,<sup>57</sup> which shows productions by British museums, to the most complex strategy and battles. If we are talking about war games, the most popular nowadays is undoubtedly *Total War Medieval II*, a game that has unwonted life on the Internet including even a Facebook group and developers who offer their own additions with new scenarios, warriors and battles.<sup>58</sup> *Total War* has some very interesting aspects, such as its desire for accuracy. The historical rigor with which it is built is remarkable if we bear in mind that it is a game (there are no dragons or witches here...) and a result of this wager on realism. It is not only that there are battles, but the struggle for power also extends to diplomacy, alliances, and the relations between nobles and the church. It is not an educational game but its players have surely learnt a lot more about the medieval world than they expected.<sup>59</sup>

**Virtual worlds.** Over the last two years, Second Life<sup>60</sup> has been much talked about as a virtual world where we will all soon have our double life. Effectively many users have decided what their new profile in this new world is. Museums, governments and companies have opened virtual environments where they have held conferences, meetings and even exhibitions. Like so many proposals on the Internet, after being on everyone's lips for a time, its evolution seems now to have stagnated. Are there also medieval places on Second Life? Well, there is something, some place for self-named medieval "tribes" but which are really little more than

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YouTube: "results for medieval search". *YouTube-broadcast Yourself*. 24 February 2008 <[http://www.youtube.com/results?search\\_query=medieval&search\\_type=](http://www.youtube.com/results?search_query=medieval&search_type=)>; "Flickr: búsqueda: medieval". *Flickr*. Yahoo company. 24 February 2008 <<http://www.flickr.com/search/?q=medieval>>.

56. A new catalan web Patrimoni.gencat uses all these visual and 2.0 resources (video, panoramic views, 3D reconstructions, etc.) showing the catalan cultural heritage. Patrimoni.gencat. Generalitat de Catalunya. 25 March 2008 <<http://www20.gencat.cat/postal/site/patrimoni>>.

57. *Show Me*. *We show you wild/ cool/ crazy/fun/scary stuff from the UK's museums and galleries*. 24 hour museum. 25 February 2008 <<http://www.show.me.uk/>>.

58. *Medieval II Total War*. Sega. 25 February 2008 <<http://www.totalwar.com/>>; "Medieval II: Total War". *Facebook*. 25 February 2008 <<http://www.facebook.com/pages/Medieval-II-Total-War/9577436340?ref=s>>; "Released: Gods & Fighting Men-Total War". *Total War center forums*. 25 February 2008 <<http://www.twcenter.net/forums/showthread.php?t=148651>>.

59. A small sample of the field diary extracted from its web, "It seems the prolonged siege of York had paid off, and the Rebels have crumbled to the might of my Army. With the village under my control, I am presented with options to occupy the settlement, sack it, or exterminate the entire populace. Occupying the settlement offers the most long-term financial gain, so seems ultimately like the most beneficial option. With the village captured, I now turn my attentions to Scotland and send a spy up to investigate." O'Connell, Mark. "Campaign Journal-Part 1". *TotalWar*. Sega. 25 February 2008 <<http://www.totalwar.com/index.html?page=en/medieval2/gameinfo/campaignjournal.html&nav=en/medieval2/114/>>.

60. *Second Life*. 27 February 2008 <<http://secondlife.com/>>.

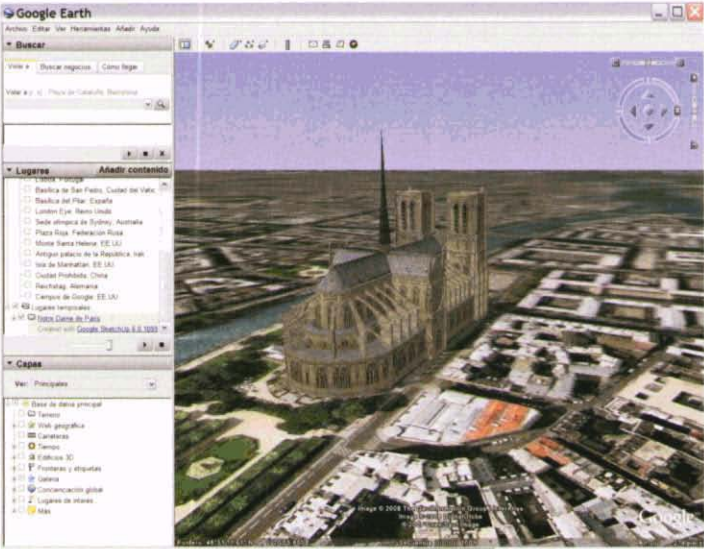


ILLUSTRATION 18. GOOGLE EARTH 3D. NOTRE DAME IN PARIS.



ILLUSTRATION 19. TOTAL WAR MEDIEVAL II.





a few entertaining disguises. If we return to the world of games, we can find various virtual worlds that reconstruct the medieval world in some way or another. Among these, RuneScape<sup>61</sup> undoubtedly deserves a special mention. Presented as a role-playing game, each participant chooses a character and controls its actions in a world full of castles, battles and revolts, which is common for everyone. The game develops on-line simultaneously for all the participants and communication and co-operation between the players is essential to "survive". And when I mention players, I do not mean a few thousand. As I write this article there are over 180,000 people playing!

Utopia<sup>62</sup> is another of these virtual worlds where you can lose yourself, and the development of this game honours its name: "Welcome to Utopia, a world where reality and dreams come together, a world where the lowliest of peasants can become the world's greatest heroes". The player, converted into a knight, has to rule his kingdom. A curious detail in this game is that its time is continuous, as if it were real, not depending on whether the player is there or not. When you go back to this virtual world after some days without playing, you have to ask your counsellors what has happened during your absence from the kingdom.

**Weekends in 1300.** However, if we are talking about having a second life, the reference is not restricted to Second Life, but also to the alternative lives that can be created in our own world. The 30,000 members of the Society for Creative Anachronism<sup>63</sup> do not hold medieval markets. Instead, they recreate battles, villages, tournaments, etc. You have to see the photos and videos<sup>64</sup> to believe it. It is an authentic human community that travels around the USA every weekend to live in a time that is different from their own.

#### 4. New system, new society

Up to this point, we have seen a brief summary of the resources that the Internet offers with regard to the medieval world, from the most scientific to the most leisure-based. However, the Internet is much more than that, it is the tool that is transforming communication and, as a result, society itself.

**Community, new actors and new rulers.** The barriers to publication have disappeared and now everyone can contribute contents, whether texts, photographs or comments about a film. The new protagonists are now the millions of creators who have joined up in these years. From the programmer who offers a "mod" for

61. *Runescape*. 27 February 2008 <<http://www.runescape.com/>>.

62. *Utopia*. 27 February 2008 <<http://games.swirve.com/utopia/>>.

63. *Society for Creative Anachronism*. 28 February 2008 <<http://www.sca.org/>>; Schmid, Kendra. "Arts and Sciences Links for the society for creative anachronism". *Kingdom of Atlantia Arts and Sciences*. 28 February 2008 <<http://moas.atlantia.sca.org/wsnlinks/>>.

64. Arguscaradoc. "SCA tv spot". *YouTube Broadcast Yourself*. June 05, 2006. 28 February 2008 <<http://www.youtube.com/watch?v=8vljdsfphks&feature=related>>.





ILLUSTRATION 20. RUNESCAPE.



ILLUSTRATION 21. SCA. SOCIETY FOR CREATIVE ANACHRONISM.

Total War,<sup>65</sup> to the 26-year-old animator who does a little work of art about the Bayeux tapestry.<sup>66</sup> If the creators are now individuals and mainly work without being paid, who then dominates this world? The new giants are those who own the platforms so that all of this can exist. Like Google. The company that began as a search engine is now one of the key actors in this new world.

**Search and Tag.** This was because Google began an absolutely revolutionary way of searching.<sup>67</sup> Nowadays we do not search for general, and increasingly specified themes one by one until we get to the contents, but rather than this, we search for specific concepts, by key words, in the entire text on the Internet and we arrive at the specific fragments without intermediation. How will we search when all the books and articles we are interested in are in the Google Book Search programme?<sup>68</sup> We will no longer search for books on specific themes. Instead, we will search for these themes directly inside all the books. The way of researching will be completely different, perhaps not in our case, but certainly in that of future generations.

**New ecosystem, new ecosystem.** And also the economic systems of publication. Around the year 2000, multimillion dollar projects were generated, based on the old scheme of money in exchange for information in an environment that was radically different, and the failures were spectacular. Fathom,<sup>69</sup> an on-line university mainly financed by Columbia University<sup>70</sup> cost over 17 million dollars a year while its income was 700,000 dollars in 2001. Many other on-line education projects

65. "Released: Gods & Fighting Men-Total War". *Total War center forums*. 3 March 2008 <<http://www.tw-center.net/forums/showthread.php?t=148651>>.

66. Aviddavid. "YouTube- Bayeux Tapestry". *YouTube Broadcast Yourself*. March 05, 2007. 4 March 2008 <<http://www.youtube.com/watch?v=bDaB-NNyM8o>>.

67. Imagine that ten years ago we had asked for an international documentation service that searched for a specific item of news in all the world's newspapers. Not in 100 newspapers around the world, but in 10,000 newspapers from all over the world. If it had responded within a month, it would have been a success. But how much would that search have cost? Nowadays, we do a search like that dozens of times a day and we get the answer in less than a second and for free. It is so easy to ask a question through a search engine on the Internet that we do not realise the gigantic task that answering it represents. If we write "New Zealand Medieval Studies" in Google, its search engine will browse all the web pages that have been written in the world to find those that contain these concepts, and it will find over 90,000 and will list and order them by importance so that the most relevant and used are at the beginning. All that in 0.31 seconds. And we discover the existence of ANZAMEMS and learn that they have a notable collection of medieval manuscripts in New Zealand.

68. Google Book Search. 8 March 2008. <<http://books.google.com/books>>.

69. "Welcome to the fathom archive". *Fathom: The Source for Online Learning*. Fathom Knowledge Network. 9 March 2008. <<http://www.fathom.com/index.html>>.

70. "Ann Kirschner on Marketing and Distribution of Online Learning". *Ubiquity*. Association for Computing Machinery. 9 March 2008 <[http://www.acm.org/ubiquity/interviews/v5i17\\_kirschner.html](http://www.acm.org/ubiquity/interviews/v5i17_kirschner.html)>; Arnone, Michael. "Report from Columbia University's Senate Sharply Criticizes Spending for Online Venture". *The Chronicle of Higher Education*. Distance education. April 25, 2002. 26 February 2008. <<http://chronicle.com/free/2002/04/2002042501u.htm>>; Anderson, Karen W. "Columbia's Internet Concern Will Soon Go Out of Business". *New York Times*. January 7, 2006. 10 March 2008. <<http://query.nytimes.com/gst/fullpage.html?res=9806EED7143EF934A35752C0A9659C8B63>>.



(or for the distribution of photographs from museums, the Amico project<sup>71</sup>) closed with similar losses.<sup>72</sup> The new systems simply implied new economic models.<sup>73</sup> As we have mentioned above, Google Scholar and Google Book Search represent imminent threats for the paying repositories, such as Jstor. If, for example, we search for the article "Grund to Hrof: Aspects of the Old English Semantics of Building and Architecture" in Google, we will find its entry in Jstor, but we will have to pay for a licence to access it. In the British Library Direct we will also find it and it will request a minimum of 13 pounds to download the article. But, if we go to Google Scholar, we will be able to read 17 pages **directly**, while the other 7 are hidden by agreement with the publisher. If I was the author of the article and could choose, I would undoubtedly want my article to be available on Google Scholar from the first day of publication, and without restrictions. If there is one thing an author can demand, it is visibility. That is why more and more researchers are opening their own personal pages where they publish the electronic versions of their articles, either in the final version, or, to avoid possible conflicts with the traditional journals that have the publishing rights, publishing "draft" versions that predictably differ little from the final version.

**The Internet in your hand.** And the next revolution we will see is the switch in the Internet from the computer screen to the screens of telephones. It will be a fast and radical change that has already begun with the Iphone,<sup>74</sup> the first device that really puts the Internet in your hand. This device<sup>75</sup> is only the imagination of a brilliant Japanese designer, but close to becoming reality, surely in less than 10 years. This is what "digital natives" will use.

**They are digital natives.** This article began by mentioning that the author and many of those who will read this article are digital immigrants. In contrast, the pupils in schools nowadays are not; they are already digital natives,<sup>76</sup> they have been born into this world and learn, talk and behave in different ways from us. For them, the normal narrative is not lineal, but multi-lineal and interwoven. For them,

71. Amico. *Art Museum Image Consortium enabling educational use of museum multimedia*. 2005. Art Museum Network. 10 March 2008. <<http://www.amico.org/>>.

72. Carlson, Scott; Carnevale, Dan. "Debating the Demise of NYUonline" *The Chronicle of Higher Education Distance education*. December 14, 2001. 12 March 2008 <<http://chronicle.com/free/v48/i16/16a03101.htm>>; Jokivirta, Lisa. "Wath Went Wrong with Alllearn?". *University Business*. 14 June 2006. Professional Media Group All Rights Reserved. 15 March 2008 <<http://www2.universitybusiness.com/viewarticle.aspx?articleid=57>>; Hafner, Katie. "Lessons Learned At Dot-Com U". *The New York Times*. May 2, 2002. 15 March 2008 <<http://query.nytimes.com/gst/fullpage.html?res=9E01E5DA1531F931A35756C0A9649C8B636&sec=6&spoon=6&pagewanted=all>>.

73. The associated publicity is only the best known. For the rest: "Better than free". Kevin Kelly. *The Technium*. January 31, 2008. 15 March 2008 <[http://www.kk.org/thetechnium/archives/2008/01/better\\_than\\_fre.php](http://www.kk.org/thetechnium/archives/2008/01/better_than_fre.php)>.

74. "Iphone 3G". *Apple*. 15 March 2008 <<http://www.apple.com/iphone/>>.

75. Funamizu, Mac. "Future of Internet Search: mobile version". *PetitInvention*. February 10, 2008. 15 March 2008 <<http://petitinvention.wordpress.com/2008/02/10/future-of-internet-search-mobile-version/>>.

76. Prensky, Marc. "Digital Natives, Digital Immigrants". *Marc Prensky Home*. 2001. 15 January 2008 <<http://www.marcprensky.com/writing/Prensky%20%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>>.

audiovisual expression is the norm. For them, tasks are simultaneous and not consecutive. For them, the Internet is carried around in their lives, like the telephone. But for them, the medieval world can be a subject of fascination as strong as it is for us, or more so.

