Surfing the past: digital learners in the history class
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Chapter 3

Digitising the Cultural Heritage for History Education

The Netherlands is said to be among the top digitisers of cultural heritage collections in the world, as almost all Dutch cultural heritage institutions had websites by the year 2006 (De Haan et al., 2006: 5; see also Museumvereniging & DEN, 2008). My own survey, conducted in April–May 2010, showed that 97.1 percent [553] of the country’s 569 museums had a website, while 2.9 percent [16] did not.\(^{57}\) However, this digitisation fever did not reach the archival sector, where only 103 archives [38.8 percent] had a website, while the remaining 162 – mainly municipal archives – did not.\(^{58}\) In 2006, the public had access to 10 percent of all museum objects and there were digital surrogates for 15-35 percent of those museum objects. The biggest of all the Dutch museums, the Rijksmuseum, had digital surrogates for 400,000 of the one million objects in its collection, 50,000 of which could be accessed by the public (De Haan et al., 2006: 5, 13 & 44; see also SNK, 2009: 7). The efforts aimed at digitising cultural heritage collections started in the early 2000s and involved many fields of interest, including political, ideological, educational, commercial, etc. The aim of this chapter is to discuss some of the most important aspects of the digitisation process, in order to understand which objects make it to the Web and why,

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58 These figures are based on an April–May 2010 survey I conducted using the details provided by Archieven WO2, an initiative of the National Archives and the Dutch Institute for War Documentation. A list of archives’ websites is provided with respective URLs: [http://www.archievenwo2.nl/](http://www.archievenwo2.nl/) (Accessed 8 May 2010).
and where students of history can expect to come across them and hopefully use them in their learning activities. My focus is on museums and archives and does not include libraries, nor their ‘special collection’ departments, which also preserve a large amount of this country’s cultural heritage. This choice to leave libraries out was due mostly to time constraints.

In what follows, I first review the motives behind digitisation itself, focusing on its preservation and access-providing side, on its ideological and educational functions, and the commercial potential that hovers over each of these aspects. I then go on to review the most recurrent selection criteria that digitisers take into account when determining which objects to prioritise. I must remind readers that in some cases selection never takes place or it is defined in very broad terms. After this, I discuss hyperlinking as one important way of enhancing the pedagogical value of objects, not only by facilitating contextualisation, but also by optimising the findability of objects. Finally, this chapter takes a look at the latest Web 2.0-driven trends among cultural heritage institutions, including the use of Social Media and the gradual involvement of users as content creators.

3.1 Why Digitise? Motives and Policies

Every day the urge grows stronger to get hold of an object at close range in an image [Bild], or, better, in a facsimile [Abbild], a reproduction. And the reproduction [Reproduktion], as offered by illustrated magazines and newsreels, differs unmistakably from the image (Benjamin, [1936] 2008: 23).

The question I would like to explore in this section is: Why have huge numbers of cultural heritage objects been digitised and why have institutions gone online? Exploring the various answers to this question, either from scholarly or professional perspectives or from the standpoint of official policies, is important for this research, because cultural heritage collections have traditionally served as sources of information for history education. In this respect, understanding the ways that the different stakeholders have conceived for converting analogue objects to their digital surrogates is crucial for my enquiry into the use of digitised material in history education. In the next few paragraphs, I first consider ‘preservation’ and ‘access’ as the main reasons for digitisation, though they are often presented as two sides to the same coin. I then identify and review the motives behind digitisation, including education, ideology and the [re-]unification of objects, all potentially underlain by corporate and commercial interests. I provide examples of Dutch digitisation projects,
and, at certain points, make use of the international literature on
digitisation or other related fields.

In almost all cases, the digitisation of [parts of] cultural heritage
collections aims either to preserve objects, or to make them acces-
sible (Lazinger, 2001: 111), or both. Information studies and dig-
ital preservation scholar Paul Conway suggested that preserving ‘is
equivalent to maintaining access’ and vice versa, as ‘[P]roviding elec-
tronic access to information sources reduces wear and tear on paper
or film originals’ (Conway, 1994: 44-45 ; see also Smith, 1999: 6).
This equation between preservation and access is a very recent de-
velopment, as both concepts were initially mutually exclusive (Conway,
2010: 375). Conway distinguished three preservation-versus-access
paradigms in the cultural heritage sector: the Preservation OR Access
paradigm of the pre-World War II period, in which preservation
precluded access; the Preservation AND Access paradigm underlying
modern preservation plans and which posits that ‘preservation and
access are mutually reinforcing ideas’; and the Preservation IS Access
paradigm of the digital world, where ‘preservation is the action and
access the thing – the act of preserving access’ (Ibid.).

The Comité des Sages – a reflection group appointed in April
2010 by the European Commissioner for the Digital Agenda and
the Commissioner in charge of Education, Culture, Multilingualism
and Youth to make recommendations on the digitisation of cultural
heritage – is advocate of the Preservation IS Access view. On the one
hand, the three scholars stressed that ‘If one word should encompass
and summarise the vision of the Comité des Sages, it would be “ac-
cess”’, as ‘there is no more urgent question than to secure the access
current and future generations to this heritage’ (Lévy et al., 2011:
9). On the other hand, the Comité des Sages stipulated a condition
in relation to that access: ‘It must be understood that if access is the
final objective, a tall order, it can only be achieved through preserva-
tion’ (Ibid. Italicisation is mine).

The Beelden voor de toekomst [Images for the Future] project is
one illustration of that view. This project strives to digitise 137,200
hours of video material, 123,000 of audio recordings, and 2.9 mil-

59 The six partners are the Netherlands Institute for Sound and Vision, the Eye Film
Institute, the National Archives, the Union of Public Libraries, the Rotterdam
cess. Instead, as digital preservation scholar Susan Lazinger (2001: 260) noted, it is ‘both an access tool and a viable preservation technology for those important materials that are at the end of their analogue life-span’.

In the late 1990s, an important and ambitious project was launched in the Netherlands to preserve paper-based cultural heritage objects, especially those dating between 1840 and 1950, said to be most threatened by decay (Schouten, 2009a: 10-11). Known as Metamorfoze [Metamorphosis], the joint National Library–National Archives project initially aimed to restore books and other paper-based documents produced during the above-mentioned period and preserved in various heritage institutions. This was purely a preservation endeavour – including conservation and restoration – with the access issue solved through microfilming and within the limits of that analogue medium. Later, after realising that ‘[M]icrofilms are actually less suitable as access-medium’, it was decided that ‘from 2009 onwards no microfilming will take place’ (Schouten, 2008: 24). From then on, ‘[M]ost of the conservation projects will be conducted by digitising the originals’ (Ibid.). It was only in 2008 that Metamorfoze, with a yearly budget of 7 million euros, started using digitisation as a ‘mass conservation method’ (Ibid.: 13). The directors of the two institutions behind the project referred to this inevitable shift from preservation-only to a preservation-and-access approach as follows:

In recent years, one of the ways in which hundreds of thousands of books, newspapers, magazines, collections, and archives have been preserved was by transferring information to another medium [microfilm], in order to limit using the originals as far as possible. Although preservation is the most important function of Metamorfoze, a new development has been underway in the last years, whereby increasing emphasis is being placed on permanent access to the preserved material. Digitisation and Internet make this possible (Bossenbroek & Berendse, 2009: 7. Italicisation is mine).

Thus far, preservation and access appear to be two sides of the same digitisation coin and therefore as non-dissociable. However, other motives have been cited to justify why objects should be preserved and made accessible online. Scholars, heritage professionals, and politicians have all pointed out that education is a major target for digitisation projects. Digitisation presents an undreamed-of opportunity to make previously inaccessible materials available to teachers and students (Hazen et al., 1998; Smith, 1999: 8; Bryant et al., 2004; Hughes, 2004). While still in office as State-Secretary for Culture, Heritage and Media, Rick van der Ploeg announced
that Dutch cultural heritage institutions had ‘receive[d] new ways of reaching out to their public’ by making their collections accessible to the general public, to pupils and teachers as well as to researchers (Van der Ploeg, 2002b: 23). The public to which Van der Ploeg was mainly referring was 6- to 18-year-olds – the Digital Natives (see Chapter 2, Section 2.3) – who are known to be ICT-enthusiasts. This is also the school-going generation, whose curriculum contains many disciplines with considerable cultural contents, including, among others, history, civics, mankind and society [Mens en Maatschappij]. Van der Ploeg was convinced that ‘the use of multimedia can make the contents livelier’ (Van der Ploeg, 2002b: 30), an assumption that is explored on the basis of case studies in Chapters 5, 6 and 7.

Cognitively speaking, digitisation has ‘tremendous benefits for education’ and this explains why many institutions present educational modules on their websites, presenting packages of educational material based around their collections’ (Hughes, 2004: 15; also see Beetham, 2007: 31; Mayes & De Freitas, 2007: 22). For information sciences scholar Abby Smith (1999: 8 & 10), institutions undertaking digitisation could consider resources from the classroom perspective and digitise primary materials, offering teachers and students at all levels previously unheard-of opportunities and new raw materials from history. Table 3.1 shows figures of educational activities – either on-spot or online in the form of modules – as presented on the websites of Dutch museums and archives.

First of all, it is worth noting the considerable difference in the ‘Have website’ columns for both museums and archives: while 97.1 percent of museums had websites, only 38.8 percent of archives did. This difference could be interpreted as reflecting the differences be-

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<tr>
<th>Have website</th>
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<td>Have educ. progr.</td>
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<td>103</td>
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<tr>
<td>No educ. progr.</td>
<td>275</td>
<td>52</td>
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<td>41.5%</td>
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Table 3.1: Figures of educational programmes on museums’ and archives’ websites in May 2010.

60 These figures are based on surveys I conducted in April–May 2010 on the websites of museums and archives listed by, respectively, Stichting de Museumserver [http://www.museumserver.nl] and ArchievenWO2 [http://www.archievenwo2.nl].
tween the two types of heritage institution in terms of being public-oriented. Museums appear to target a wide audience, while most archives seem to be niche-oriented [academics, genealogists, etc.]. In other words, an object at a natural science museum or an art history museum will probably, though not definitely, have a wider appeal than a baptism card in a parochial archive or a birth certificate in a municipal archive. Having said that, Table 3.1 shows that a great number of websites belonging to heritage institutions have special pages dedicated to education. However, only a few – 8.6 percent for museums and 12.6 percent for archives – offer online educational packages (see Table 3.1). Many of those offering educational modules do so in a non-interactive way, generally by offering a Portable Document Format [PDF]\(^{61}\) containing some text and a few pictures from their collections. Others have more sophisticated, interactive modules, including audiovisual materials.\(^{62}\)

In addition to, and often in combination with, educational motives, ideological motives such as identity-shaping and citizenship education appear, explicitly or implicitly, as a major justification for digitisation. Similar to history education (see Chapter 1), cultural collections also provide identity-shaping, citizenship-training opportunities, especially for the Digital Generation. The same fears of multiculturalism, globalisation, the Web, and their implications in relation to collective identity could be seen in the policies surrounding digitisation. In its seminal report – *Alles uit de kast* [Pulling out all the stops] – in 1998, the Dutch Scientific Technical Council [WTR] noted that ICT in a multicultural and globalising world bring youths into contact with their culture, which, in its turn, plays a crucial role in determining their identity (WTR, 1998: 17). Pulling out all the stops, primarily so that young people know their culture, thereby influencing their identity, is what museum studies scholar Fiona Cameron (2008: 171) has called ‘the polarization of culture and the mobilization of cultural forms for ideological ends’.

Identity [and citizenship]-driven digitisation took a very explicit shape when the State-Secretary at the time, Van der Ploeg – who had placed digitisation at the top of his agenda (Van der Ploeg, 2002a: 1) – defended before the House of Representatives, the project known as *Boulevard van het actuele verleden* [Boulevard of the Current Past].

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Jointly set up by the Ministry of Education, Culture and Science and various national heritage institutions,

The Boulevard project provides an answer to questions about the changing Dutch identity in an integration-driven Europe; it is the venue [de plaats] to acquire knowledge about Dutch history; it offers new [naturalised] Dutch citizens an opportunity to get to know our country better; and it provides insight into the significance of democracy for Dutch society (Van der Ploeg, 2002a: 11-12. Italicisation and parentheses are mine).

The tone and the content of this letter to the House of Representatives bear a marked resemblance, almost verbatim, to official communications surrounding the Canon of the Netherlands four years later (see Chapter 1). The ‘Dutch identity’, ‘know our country’ and ‘our scientific and cultural riches’ approaches can also be seen with regard to the role political actors assign to history education.

The same ‘our’ approach reappears in the policies and politics underlying Metamorfoze, which later emerged as the biggest producer of digital cultural heritage contents in the Netherlands (Schouten, 2009a: 13). According to the directors of the National Library and National Archives, ‘the preservation of paper heritage is of great importance to our history and identity’ (Bossenbroek & Berendse, 2009: 7. Italicisation is mine). Cameron (2008: 174) noted that a similar policy is observed in Australia, where ‘digital heritage is central to building a national identity’. She further held that this ‘commodification of the past’ has turned out to be an attempt ‘to salvage a future from the ruins of the past’ [Italicisation is mine]. The use of a instead of the in front of future suggests that some other possible futures exist and could be salvaged as well.

Discussing the same subject – the commodification of the past – literary critic Andreas Huyssens (2003: 18-20) noted that ‘media do not transport public memory innocently’. He postulated that ‘[T]hey shape it in their very structure and form’. As the late 1990s and the early 2000s formed a period of political and cultural anxiety, marked by profound identity crises exacerbated in the West especially in the aftermath of the 9/11 attacks in the United

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States, it was quite likely that political actors would favour a certain digital structure and form of the past to project a certain future. Hence the ‘our’ approach being repeatedly stressed in official communications surrounding digitisation and policies relating thereto. Philosopher Jacques Derrida suggested that the presence of the state in the digitisation process presupposes the existence of a ‘politics of memory’ which mainly influences the choice of the materials to be preserved:

Isn’t it a state agency that is ultimately going to decide, when it increasingly represents this or that power in civil society, what the nation-state will have to preserve, always privileging, moreover, the national and the public? Why have we preserved what is French rather than what is German or Japanese? And what part of national history are we going to preserve? (Derrida & Stiegler, [1993] 2002: 62-63; see also Bowker, 2007: 34).

Another important motive cited, when justifying digitisation has been the [re-] unification of collections. In this respect, theoretically, heritage institutions strive to bring together all objects that were once preserved in the same place, or which cover the same subject. For instance, the National Archives has digitised maps that came from the Verenigde Oost-Indische Compagnie, the Dutch East India Company [VOC], explaining that

This programme provides information on the archival records to which the visual material originally belonged. This version of the Atlas of Mutual Heritage lists the archival records held in different archives of the Nationaal Archief from which the illustrations were removed in the 19th century.

In this Atlas of Mutual Heritage, the map showing ‘The foremost cities of the besieged Colombo in 1656’, physically located in Colombo, Sri-Lanka, is shown side-by-side with the ‘Map of the coast near Bantam’ (1598–1600), physically located in Bantam, in

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64 This anxiety should be placed in a much broader context that includes the fall of the Berlin Wall in 1989 and the European Integration that allowed the free movement of people [immigration] and goods, including those from former communist countries. According to some political discourses, these events constitute a threat to national identities and turn the nation-state into a relative concept.


Indonesia. Similarly, in its mass-digitisation of Dutch daily newspapers published between 1618 and 1995, the National Library digitised papers not only from its own collection, but also from over twenty local archives and libraries, as well as from institutions in the Vatican, Russia, Switzerland, Sweden, Belgium, Suriname, to name a few. The Library announced that the effort had made the especially hard-to-access 17th-century newspapers accessible online, primarily for researchers and scientists. By doing so, all issues of the same outlet were brought together in a single database — and were thus united —, as were all other outlets of that period.

Considered from an institutional point of view, certain corporate interests are often cited in justification of digitisation efforts. In this respect, the assumption that digitisation increases the prestige and image or visibility of institutions and contributes to their growth, with new staff being employed and new departments opened to manage the new digital collections. The Netherlands National Library is a good illustration of this, with its policies oriented towards enhancing its international position. In its 2009 Annual Report, the Library reported under the heading ‘Enhancing the international position’ that it ‘strives to maintain its leading position in the area of digital preservation’ (KB, 2009: 18).

Commercial interests could perhaps be added to these institutional interests. Preservation, access, education, ideology, and item [re-]unification often represent sources of income for institutions. In other words, institutions may be hoping to generate income and increase their prestige by making collections accessible, with or without some ideological agenda, for educational purposes, or with the aim of bringing [related] objects [back] together. The Van Gogh Letters project undertaken by the Van Gogh Museum is a good illustration of the commercial side of digitisation combined with some of the other motives. This project resulted in a six-volume edition in Dutch, English, and French, containing 902 letters [819 written by Van Gogh and 83 written to him] and 4,300 reproductions of drawings and paintings. The ISBNed edition costs 395

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Not only have the letters been preserved and made accessible [partly free, partly at a fee], but they have also been unified to a certain extent [for example, replies were brought closer to the letters to which they responded], which makes them of a greater interest to, for example, history education, as they ‘contain indications about Van Gogh’s place in the artistic and intellectual context of his time both in the Netherlands and in France’.  

As can been seen from Figure 3.1, the five motives mentioned above – preservation, access, education, ideology, and item [re-]unification – form a chain, with institutional, commercial, and economic motives potentially underlying each individual motive: they are both interconnected and interdependent. Access is provided to that which has been preserved, and preserving digitally often makes digital access easier; education implies access to preserved materials. Similarly, identity-shaping and citizenship education can only take place when and where there is access to the preserved material. Also, the reunification of items first requires them to go through the process of preservation and of being made accessible. Moreover, there

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are many ways in which it is extremely good at fostering education and shaping identity. On the other hand, decisions may be made to reunite collections for educational or ideological purposes. The last three processes – education, ideology, and reunification – can therefore be said to depend on the first two – preservation and access, as the former processes begin when the latter are in place.\footnote{Paul Harwood and Victor Asal (2007: 54) stressed that teachers must have access to digital technologies and, by extension, to digital contents: ‘Without access’, they maintained, ‘there is simply no device or conduit for teachers to apply for administrative or instructional purposes. Without access, obviously no change can occur’.

This section has identified preservation and access as the main reasons for digitising cultural heritage collections. Connected with one another in the digital era, these two concepts have turned around the idea that rescuing threatened and valuable objects would be of little significance if no access were provided to the digital surrogates. Apart from these two general reasons, other specific motives have also been pointed out. These include education, as digitisation is also meant to make previously hard-to-access, primary sources available to teachers and pupils. They also include ideological motives, such as identity-shaping and citizenship education, which are often placed at the heart of digitisation efforts, mostly by politicians and government institutions. The [re-] unification of collections or objects, which can also be cited as a motive, consists in digitally gathering related objects or previously united objects together in a single collection. Finally, corporate and commercial interests seem to underlie the entire digitisation process, as many of its stages and aspects could potentially contribute to the prestige and growth of institutions and help to generate income. The next section shows how, once one gets involved in the details in order to understand the various selection criteria, many of the above-mentioned motives actually benefit history education in one way or another.

### 3.2 Selection Criteria

\ldots we can and in fact do record almost anything: the volume is enormous. But because it is not possible to preserve everything, choices, and therefore interpretations, structurations, become necessary (Derrida & Stiegler, [1993] 2002: 62).

From the previous section, digitisation has emerged as aiming primarily at preserving cultural heritage objects and, by doing so, making them accessible online. This section goes a step further and reviews the main – and recurrent – criteria that heritage institutions implement when selecting collections or parts of them or in-
individual objects to undergo digitisation. Apart from reviewing these criteria in the light of the scholarly literature, both national and international, and policy documents as well as interviews and correspondence with heritage professionals, this section also strives to identify the implications of those criteria for history education. It is important at this stage to understand how heritage contents are filtered on their way to the Web, because, after all, the resulting digital collections are the ones that will hopefully make it onto the computer screens of history learners and into the history class that is the subject of this research. I should start by mentioning the fact that in some cases selection is either excluded or defined in broader terms, based on periods or on themes. I subsequently discuss the selection criteria that recur most frequently, namely the physical condition of objects, patron use, user demand, and the potential for theft. At the end, I consider the historical or intellectual value of objects as an umbrella criterion for weighing objects that are deemed unique, rare, or otherwise significant.

Despite the general digitisation principle that not everything can be digitised (see epigraph; Smith, 1999: 13), some digitising institutions decided not to become engaged in the selection process, either because their collections are relatively small, or because selection would be too expensive and time-consuming. Generally, it is the other way around. Selection is carried out in order ‘to stretch limited resources in as wise a fashion as possible’ (Conway, 2010: 372). While the Hague-based Mauritshuis has completely digitised its 800 paintings, 50 miniatures, 20 sculptures as well as a few drawings and prints,73 het Geheugen van Nederland [the Memory of the Netherlands] made selections at collection-level rather than at an individual level, and ‘conform[ed] with the [concerned] institution’s priorities’.74

The National Archives followed a similar policy when re-digitising its collection of 550,000 photographs within the framework of the 2007–2014 Beelden voor de toekomst project. These photographs were first digitised in 1995 but did no longer meet current quality standards. Another 1.2 million photographs, which originated from a private press photo company that went out of business in 2008, have also been digitised.75 Selection took place, but not the type of

74 Author interview with het Geheugen van Nederland’s project coordinator, Reinier van Deinum (The Hague, 11 November 2009).
selection to which reference is usually made: only redundant objects were discarded and it was estimated that the final collection would comprise 650,000 photographs. The intention was to digitise the entire collection, avoiding double digitisation. In the end, no picture was lost, though selection had taken place.76

In some cases, only parts of a collection are sampled out based on time or period, and no further selection takes place within the sample taken. For instance, in 1999 the Amsterdam-based Film Museum [recently renamed the Eye Film Institute Netherlands] digitised all films, without making any distinction whatsoever, produced between 1899 and 1940. The 1,000 hours of physically restored, digitally-preserved, and digitally-accessible [i.e., within the Institute and using the Institute’s devices] films were obtained thanks to a 2-million-euro donation from Floris Kolvenbach, a culture-loving Dutch businessman involved in the digital film industry. The sole selection criterion in this case, was the date of production.77 The Kolvenbach Collection, as it is called, is almost entirely copyright-free and has been integrated into a larger Web-based, cross-institutional, education-oriented project [LES 2.0] that will be discussed in Section 3.4. Similarly to the Eye Film Institute, the Breda City Archives systematically digitised all its Civil Status documents – baptism cards; birth, death, and marriage certificates – from the oldest [14th century] until 1909 for birth certificates, 1915 for baptism cards, 1935 for marriage certificates, and 1960 for death certificates. In this case, selection took place at two levels: the sub-collection level – documents with a civil and religious status – and within the sub-collection. In the latter case, selection was imposed by the legal restrictions relating to privacy.78

Similar projects were carried out both by local heritage institutions with regard to local newspapers79 and by the National Library, which undertook to digitise the most important daily newspapers

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76 Author interview with Judith Moortgat, Beelden voor de Toekomst project leader at the National Archives (The Hague, 11 November 2009).
77 Author interview with Hanneke Vroegindeweij, project manager at the Eye Film Institute (Amsterdam, 2 November 2009).
78 Author interview with Ynze Alkema, Head Back Office at Breda City Archives, together with digitisation consultant Erika Hokke (Breda, 26 April 2010).
from 1618 to 1995. In this project, selection took place at three levels. First, based on the time of publication: 1618–1995 was identified as the period to be considered. Second, within that period, all newspapers published between 1618 and 1800 were systematically digitised. Third, those published between 1800 and 1995 underwent a much stricter selection process, taking into account the criteria that I discuss later in this section.

In addition to selection based on time or period, some digitisation projects employed a theme-based selection policy (De Haan et al., 2006: 14). For instance, prior to the [September 2009] 400-year jubilee of the foundation by Dutch merchants of New Amsterdam, later [1664] re-named New York, the Breda City Archives, in partnership with Metamorfoze – which provided half of the funding –, systematically digitised all its documents on the Vrede van Breda, the 1667 Dutch-British-French-Danish Peace Treaty signed in that southern Netherlands city to end the Second Anglo-Dutch War. Among other things, the Treaty stipulated that the Dutch would exchange New Amsterdam for Suriname. Although the official documents are in the respective national archives, the ‘small details’ remained in Breda: restaurant bills, contracts with house-owners who rented out homes to accommodate delegations, butchers’ receipts, etc. The same occurred with documents relating to the 1624–1625 Breda Siege by Spanish troops during the 80-Year War.

The William of Orange Correspondence project carried out by the Huygens Institute of Netherlands History is another example of a theme-based selection approach. The project aims to present a complete survey of all the surviving correspondence associated with William of Orange (1533-1584) [italicisation is mine]. What is more, the project’s policy is to digitise even the copies – including

81 Author interview with Lammert Zwaagstra, project manager in charge of selection and copyright clearance at the National Library’s Historical Newspaper Project (The Hague 24 June 2010).
84 Author interview with Ynze Alkema, Head Back Office at Breda City Archives, together with his colleague Erika Hokke (Breda, 26 April 2010).
85 The project was initiated by the Institute of Netherlands History which merged on 1 January 2011 with the Huygens Institute to become the Huygens Institute of Netherlands History.
born-copy or original-copy letters [William of Orange used to write one letter many times] and those that were written much later. It is clear that the digitisers had no intention whatsoever of discarding a single item relating to William of Orange.

It should be stressed that the above-mentioned no-selection or time-/theme-based selection approaches are rather infrequent and that the majority of heritage institutions apply much stricter and narrow criteria when selecting objects eligible for digitisation. Fragility and age are among the most important selection criteria that guide digitisers, especially when they are dealing with special collections. Fragility implies that the physical object cannot be consulted for fear of causing irreparable damage (Hazen et al., 1998: 5), or that the object is deteriorating due to acid-burning or other ink-related chemical damages (Schouten, 2009a: 12-13). As for age, it is all a question of time and, in general, the older the object, the higher its value (Hughes, 2005: 16). This suggests that old age is more likely to imply high historical value and fragility. The equation between age and fragility is certainly true for the Dutch audio and audiovisual heritage, where about half of all films aged more than 60 years [made before 1950] have already been lost forever due to decay, fire or other forms of damages (SNK, 2009: 17). However, the equation does not hold for paper-based heritage, as books from the 15th or 16th centuries are in a relatively better physical state than those published between the mid-19th and mid-20th centuries (Schouten, 2004: 433-434). In the latter period, poor quality paper was produced and used on a mass scale in the book industry. Dennis Schouten, who was involved both in het Geheugen van Nederland and Metamorfoze, spoke of ‘gaten in de geschiedenis’ [lacunas in history], referring to the estimated 20 percent of books produced between mid-19th century and mid-20th century that have been lost forever.

A related criterion that also bridges preservation and access is ‘patron use’ (Conway, 1994: 43). Then State-Secretary Van der Ploeg (2002b: 23) spoke of the digitisation of ‘top objects’ [topstukken] from collections, which, in one sense, cold refer to the most popular or most frequently visited objects. In another sense, some of the ‘top objects’ may be so-called because of their historical or intellectual value, a concept that encapsulates many considerations that I shall discuss in the next few paragraphs. Digital preservation, therefore, ‘can mean reduced handling of the original’, thus ensuring its long-term survival (Bryant et al., 2004: 16; see also Conway, 1994: 43; Hazen et al., 1998: 5). In this respect, virtualisation, which is

87 Author interview with Ineke Huysman, ICT Coordinator in charge of digital resources disclosure at the Huygens Institute of Netherlands History (Amsterdam, 17 November 2009).

Some heritage institutions digitise on demand, that is, based on requests from their target-users or interested third parties. This demand-based criterion is at the heart of the Eye Film Institute’s digitisation within the Beelden voor de toekomst project, which primarily targets pupils and teachers, alongside the creative industry and the general public. The Institute selected secondary school teachers who dived into the collection and identified films that matched or illustrated course(s) they were teaching. Once that was done, the often ‘lengthy’ right-clearance process could begin, prior to initiating the digital conversion of selected films. The Netherlands Institute for Sound and Vision [NIBG], another Beelden voor de toekomst partner, adhered to a similar, teacher-centred selection policy. Teachers from 30 participating secondary schools spent about one year designing and testing ‘hundreds’ of lesson modules that were put online in June 2010.

Conway (1994: 43) added one more criterion: the potential for theft. It could be argued that every preserved cultural heritage material, ranging from a map in an incunabulum to a Rembrandt or a Christiaan Huygens’ telescope is a good target for thieves, since preserving it is recognition of the fact that it is actually of some value. Once again, this is a bridge-forming criterion relating to preservation-access, in the sense that an object classified as a potential target for thieves is more likely to require increased protection, including restricted access. Digitising something thus leads to the removal of restrictions without exposing it to the risk of theft.

A few paragraphs earlier I mentioned historical and/or intellectual value as an encapsulating criterion for digitisation. This umbrella criterion implies that there is a need to communicate an object’s value to a large audience. Although the October 2003 Charter on the

88 Emjay Rechsteiner [Eye Film Institute digitisation manager] and Frank Cardello, ‘Bringing assets online in public-private partnership’ (FLAT World Conference paper, Beijing, 22–26 October, 2009. Theme: ‘A New World – A New Deal for Archives’).
89 Author interview with Hanneke Vroegindeweij, project manager at the Eye Film Institute (Amsterdam, 02 November 2009).
90 LES 2.0, ‘Home-LES 2.0’. http://www.les20.nl/ (Accessed 2 July 2010). This name, which translates as ‘Lesson 2.0’, suggests an analogy with Web 2.0, implying that the project aims to be interactive and user-centred, like Web 2.0. However, unlike Web 2.0, where contents are generated, edited, and re-edited by users regardless of their credentials or expertise, LES 2.0’s contents undergo selection and packaging by people with the right credentials, namely teachers.
Preservation of Digital Heritage by the United Nations Educational, Scientific and Cultural Organization [UNESCO] does mention this criterion, it does nothing to reduce its vagueness:

As with all documentary heritage, selection principles may vary between countries, although the main criteria for deciding what digital materials to keep would be their significance and lasting cultural, scientific, evidential or other value (UNESCO, 2003: art.7).

Admitting that selection is a complicated process, the six partners in the Beelden voor de toekomst project mainly used three criteria: the importance of the material, its physical condition and patron use (SNK, 2009: 18). The importance of material is yet another term relating to value so it does nothing to help reduce the vagueness of the concept either. The Advisory Commission, which was comprised of historians and heritage professionals and was responsible for proposing the selection policy of the National Library’s Historical Newspaper Project, also used this umbrella criterion – importance – for the daily newspapers dating from the 19th and 20th centuries. For each of the sub-periods [colonial period; 1813–1869; 1869–1914; 1914–1965; 1965–1995] the selected titles had to be of political, cultural, social, regional, and journalistic significance or importance.91 Assessing the significance of the *Vlissingse Courant* in the 1813-1869 period, for instance, the Advisory Commission argued:

The outlet is especially interesting for the period when Frederik van Sorge (1839 -1843) was editor, as well as for the earlier period because of the Belgian revolt which was extensively covered by the newspaper. The *Vlissingse Courant* was therefore added to the selection list for 1831–1843.92

A set of sub-criteria falling under this value/importance/significance umbrella-criterion can be distinguished based on the existing research and on digitisation experience. From an educational point of view, it could be interpreted as referring to educational or pedagogical potential. Nonetheless, the educational or pedagogical potential of heritage objects is an extremely relative concept, since ‘All recorded information … has value, even if temporary, or it would

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not have been recorded …’ (Smith, 1999: 3). Heritage digitisation scholars agree that ‘even the most marginal materials can support kinds of research’ (Hazen et al., 1998: 3), which turns this criterion into an institution-limited assessment.

Uniqueness is one sub-criterion that serves to measure value. Uniqueness is used here within the context of its double meaning, both as ‘the only one in existence’ (Feldman, 1997) and as ‘the sediment of a specific and unique activity or transaction’ (Ketelaar, 1997: 334). In the former sense, president Abraham Lincoln’s hand-written draft of the 1863 Proclamation of Emancipation in the United States is a unique object, because it is the only one ever to have ever existed. The final, printed version is unique in the other sense – since print implies multiplicity and reproducibility –, because it embodies and is reminiscent of a unique historical event, namely the abolition of slavery in the United States. Along the same vein, Christiaan Huygens’ telescope is unique not because it has no duplicate, but because it is the one through which the Dutch scientist was scrutinising the skies when he discovered Saturn’s satellite Titan in 1665.

Rarity is another important criterion that has often been cited. Rare objects are those ‘rarely seen or special format materials such as maps or recordings’ that are physically not easy to handle (Hughes, 2005: 32). The fact that they are rare makes them unique in the sense that they are [one of] the last surviving copy[ies]. This is the case in respect of the 1568-1572 Biblia Polyglotta, also known as Biblia Regia, which the Antwerp-based Plantin-Moretus Museum described as ‘the most monumental work ever accomplished by one printer [Christopher Plantin] from the Netherlands’. 1,100 copies of this eight-volume, five-language Bible were printed, which means that it was not the only copy in existence. However, few have survived, which gives this masterpiece the status of rare [unique] object.

In short, the above shows how the digitised cultural heritage objects that the history learners are likely to encounter while surfing the Web are mostly the result of a selection made by heritage institutions. The decision to make a selection is not made without reason,
but because it would be an insurmountable task both practically and financially to make digital surrogates for all cultural heritage objects. However, a few institutions, either due to the small size of their collections, or for some other practical reasons, employ no-selection policies or select based on wide-open criteria. Many institutions prefer criteria such as uniqueness, rarity, patron use, user-demand, potential for theft, and intellectual or historical value in order to make narrower selections. Each of these criteria represents a potential for history education but, as the next section shows, if that potential is to be translated into reality, certain essential post-digitisation steps will need to be taken.

3.3 Beyond Scanning: Enhancing Objects’ Pedagogical Value

To grasp the meaning of a thing, an event or a situation is to see it in its relations to other things: to note how it operates or functions, what consequences follow from it, what causes it, what uses it can be put to … Since all knowing, including all scientific inquiry, aims at clothing things and events with meaning – at understanding them – it always proceeds by taking the thing inquired into out of its isolation. Search is continued until the thing is discovered to be a related part in some larger whole (Dewey, [1909] 1933: 137-138).

The two previous sections discussed two of the main steps in the digitisation process, namely the motives and policies underlying the process (Section 3.1) and the selection of objects to be digitised (Section 3.2). At this stage a few other steps follow, including the scanning and presentation or display of objects on a website. After these stages, objects begin a new life in cyberspace where, unlike their analogue counterparts, they can be accessed without the intermediation of heritage professionals. If they are to compete with the other contents of cyberspace and earn the attention of the Digital Generation that is surfing the Web in search of historical information, they will have to undergo some pedagogical value enhancement. In this section I want to review post-digitisation practices among mainly Dutch heritage institutions in order to understand if, and how, these organisations have striven to enhance the pedagogical value of digitised material. Using the scholarly and technical literature as well as interviews with heritage professionals and concrete examples, I shall focus on hyperlinking as one of the most important ways to make digitised material profitable for Digital Natives who are learning history. In the first place, I shall discuss hyperlinking as a contextualisation mechanism that is characteristic of the Web.
Then, based on how search engines bring online contents onto users’ screens, I shall discuss hyperlinking as a method of optimising the visibility and findability of cultural heritage contents for potential students of history.

To begin with, History itself as a discipline has always been regarded as being link-based. Historians and philosophers of history alike – both classical and more recent ones – have all converged in reaching the same belief: that physical objects, events and processes all have invisible links connecting them to one another, thereby allowing one to make sense of them (Ranke [1821] 1973: 6, 10, 16; Gallie, 1964: 53-54; Nora, 1984: XVL; Lowenthal, 1985: 218). For these thinkers and scholars, ‘The past is a vast chain, every link of which must be kept in good repair’ (Howard, 1991: 16). In this respect, Caesar’s crossing of the Rubicon is interesting only within the context of its relation to Republican law, and the spilling of his blood makes sense only when linked to the constitutional conflict that caused it (Collingwood, [1946] 1994: 213). Similarly, the history of the printing press makes little sense if it is not linked to ‘a whole range of basic changes which were taking place at the time’, including, for example, ‘the invention of gunpowder and portable firearms’ and the ‘great sea voyages’ (Fèbvre & Martin, [1958] 1984: 10). Other thinkers, including sociologist Bruno Latour ([1991] 1993: 79-80), argued that cross-disciplinary linking is essential for a better understanding of events or phenomena. Thus, a physicist interested in the vacuum pump should link it not only to its inventor, Robert Boyle [1627–1691], but also to the history of 17th-century England.

The Web, the backbone of which is hyperlinking (Hindman, 2009: 40), aims at making these links concrete and visible. This feature has prompted new habits and expectations among the users of digital/digitised cultural heritage collections (Van Mensch, 2009: 5), whether they are archival (Cox, 2004: 20; Van Diepen-Oost, 2000: 18), or museum collections (Cameron, 2010: 80). Beside being the backbone of the Web’s architecture, hyperlinking, similarly to the linking process described in the previous paragraph, is, or should be, the cornerstone of historical contents in the cyberworld. For example, the British Museum’s website presents the Table Clock by Henry Jones with an explanatory, three-paragraph, no-link text that begins as follows:
Following the introduction of the pendulum by Christiaan Huygens in 1657, table or bracket-mounted, spring-driven clocks became a popular furniture item for those who could afford them.\(^{97}\)

This sentence establishes the link between two historical inventions – the Table Clock and the Pendulum Clock – though it does not make that link digitally concrete. The Table Clock could have been hyperlinked to the Pendulum Clock page on the Leiden-based Boerhaave Museum’s website.\(^{98}\) In other words, the British Museum’s website informs the user that the object has a context, an origin, but does not go on to provide that context or origin. Since understanding is reached when objects are viewed, not in isolation, but in relation to other objects (see epigraph), one can deduce that the meaning and implications of the Table Clock will not be fully grasped, especially not by digital history learners who expect the two inventions to be hyperlinked.\(^{99}\) The result of this isolation could be considered anti-pedagogical in the digital age, because, as suggested by Cameron (2007: 58), objects need to be connected to their origins, to their past, to a chain of events. In other words, as argued by Rushkoff ([1996] 2006: 115), ‘for objects to take on magical significance [for the screenagers] they must be connected to history and lineage’.

While the case mentioned above could be explained by the fact that the two institutions are physically located in different countries and therefore may not be aware of what is published on each other’s website, in other cases institutions have failed to establish links within their own digital collections, thereby missing opportunities to enhance the pedagogical value of those collections. The Comité des Sages noted that, within the Hague-based pan-European digital cultural heritage portal Europeana, ‘there should be a clear link between works that go back to the same original’ (Lévy et al.: 2011: 23). They were referring to ‘translations, adaptations or different

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\(^{99}\) Considered from the historiographical perspective, the lack of a hyperlink between two closely related objects would be interpreted as half of the task a historian is supposed to complete in his or her investigation. According to 19th-century German historian Leopold von Ranke ([1821] 1973: 7), a historian must not only investigate events in a way that is as exact, impartial and critical as possible, but also connect the events explored: ‘To follow only the first path [investigation] is to miss the essence of truth itself; to neglect this path, however, by overemphasizing the second [connecting] one is to risk falsification of truth in its details’.
editions of the same work’ (Ibid.). The suggestion is that a translation, an adaptation or a new edition – one might even add an improvement or extension – makes more sense when considered alongside – or in comparison with – the original work, which applies perfectly in the case of the Table Clock and the Pendulum Clock.

In a recent essay Conway (2010: 369-370) explained that beyond preservation, remediation, and access, digitisers must also transcend originals in a way in which analogue media do not permit. In the same vein, new media theorists Jay Bolter and Richard Grusin (2000: 60) contended that each new medium justifies itself by filling a lacuna or repairing a fault in its predecessor. The Web does this by means of its ‘intelligent tools and agents’ which make it possible and easy to deliver contents not as raw information, but rather as ‘information and knowledge fragments in a structured format’ (Rincho, 2009: 398). Bolter and Grusin (2000: 56 & 59) conceptualised remediation – digitisation being remediation par excellence – as aiming to ‘refashion’, ‘reform’ or improve other media. Due especially to its numerical representation, its modularity, its automation, its variability, and its transcoding, this digital refashioning turns objects into computer data that can complete a variety of operations through various algorithms (Manovich, 2001: 27-48).

Despite being among the top digitisers in the world, Dutch cultural heritage institutions have not done much to appropriate these ‘intelligent tools’ that permit the presentation not only of objects but also of their contexts. In 2009 a few Dutch cultural heritage scholars and professionals completed a pilot project dubbed Cultuur in Context [Culture in Context] in which they wanted to test and subsequently propose a new model for presenting digital cultural heritage.100 Between 2007 and 2008, nine institutions, including cultural heritage institutions, schools of heritage professionals, and university departments attempted to create an integrated, ontology-driven virtual public entertainment collection (Van Mensch, 2009: 5; Van Asseldonk, 2009a: 12; Brandsma, 2009: 56-57). The resulting database101 presents, for each object, a web of related information that was obtained from the participating institutions.

A number of initiatives are emerging that are trying to reverse the situation on a large scale. For instance, 27 museums in the province of Gelderland have brought their digital collections together under the name ‘Gelderland Collection’.102 40,000 objects can be

100 Nancy van Asseldonk et al. (eds.) Cultuur in Context: Erfgoeddata in nieuwe samenhang (Amsterdam: Reinwardt Academie, 2009).
accessed through simple browsing, searching, or via a timeline or map. Timelines and maps function as contextualisers, as objects and stories behind them are grouped and connected depending on the periods or places with which they are associated. The result is that objects are not viewed or considered in isolation, but in relation to others. In all probability, this emerging trend is what inspired the March 2010 advisory report of the Council for Culture entitled Netwerken van betekenis: Netwerktenaken in digitale cultuur en media [Networks of meanings: Networking tasks in digital culture and media]. Intended for the Ministry of Education, Culture and Science, the report estimated that the time was ripe for ‘new strategies on the part of both the government and [heritage] institutions’ (Raad voor Cultuur, 2010: 3). More specifically, the Council gave a number of hints about those strategies: ‘digitisation makes new forms of relations possible and changes existing links’; ‘the digital culture requires reorientation of the actors [including users] in the cultural sense-making chain’ (Ibid.).

Apart from its contextualising, pedagogical function for historical or heritage contents, hyperlinking fulfils another equally important function in terms of making contents easy to find, especially for Digital Natives. According to theorists, Digital Natives’ research begins not with a trip [virtual or physical] to a library or any other heritage institution, but with ‘a Google search … They simply open a browser, punch in a search term, and dive away until they find what they want – what they thought they wanted’ (Palfrey & Gasser, 2008: 6). The technical literature on how search engines work suggests that hyperlinks play a much bigger role than traditional metadata systems. Search engine experts Sarah Milstein and Rael Dornfest (2004: 3 & 218), in their book Google, claimed that Google ranks Web pages first by looking at links (see also Rushkoff, [1996] 2006: 131; Batelle, 2005: 21; Hindman, 2009: 40 & 42; Van Dijck, 2010: 577), which is also true for Yahoo!, Lycos and other search engines (Introna & Nissenbaum, 2000a: 55-57).

Journalist and author John Batelle (2005: 20-21) – whose book The Search extensively details how search engines work – summarised the process that Google’s search engines go through in order to index contents as follows: the search engine’s crawler or robot ‘takes note of any links it has found on the page, and queues those links in its request file – sending out yet more requests to the newly found links, which find more links … and so on, ad infinitum’ [italicisation is mine]. Based on the returned and analysed links, Google’s PageRank algorithm orders websites and pages in such a way that those deemed more important or popular rise to the top, while less
popular ones are pushed down toward the bottom.\textsuperscript{103} Therefore, a webpage without a single hyperlink referring to it would be unlikely to be found by search engines,\textsuperscript{104} which was the conclusion the \textit{Comité des Sages} reached, as to why it remained difficult to find \textit{Europeana} objects online:

… the Comité notes that currently the websites of many cultural institutions which contribute content to Europeana \textit{do not link to the site}. Such a link from the homepage of the website of cultural institutions is a minimum that can be expected. The Comité notes that currently \textit{Europeana search results do not show up in searches in main search engines}. Europeana should continue its talks with the search engines in order to rapidly overcome the barriers that are at the origin of this issue, since accessibility through the search engines will generate considerable supplementary traffic (Lévy et al.: 2011: 24-25. Italicisation is mine).

From the perspective of carrying out a Web search, thus, hyperlinks serve as the entrance into a website’s database – \textit{i.e.}, without them the site’s contents remain ‘invisible’ or not easy to find (see Introna & Nissenbaum, 2000a: 58) in the cyberworld –, while metadata, which traditionally facilitated search operations, tell Google or any other search engine what the found object is about. The assumption here is that the crawlers first enter the site via hyperlinks before checking what metadata have to say about the objects. One can then deduce that the link between the lack of hyperlinking and the poor search results has been established, and that heritage institutions still have a long way to go if their digital contents are to make it onto the computer screens of Digital Natives.

Thus far, hyperlinking has been presented as a pedagogical tool both in terms of object contextualisation and findability. As such, it appears to be an essential post-digitisation step that could make heritage contents more competitive on the computer screens of Digital Natives. The question worth asking at this stage relates to the rea-

\textsuperscript{103} Named after Larry Page, the co-founder of Google together with Sergey Brin, PageRank takes into account not only ‘the number of links into a particular website’, but also ‘the number of links into each of the linking site’ (Batelle, 2005: 75). In other words, a website is deemed ‘important’ or ‘popular’ when the sites that link into it are, in their turn, also intensely linked into.

\textsuperscript{104} In his analysis of political site visibility in the United States, political scientist Matthew Hindman (2009: 55; see also Van Dijck, 2010: 577) introduced the concept of \textit{Googlearchy} to refer to ‘the rule of the most heavily linked’. The main principle underlying this rule is that ‘the number of links pointing to a site is the \textit{most important} determinant of a site visibility’ [Italicisation is mine], which implies that the more the links to a site, the greater its visibility and reversely: non-linked sites require time and skills to discover.
sons why heritage institutions have not embraced hyperlinking. The first reason has to do with the nature of collection-managing activities, which seem to have remained static even after collections went online. The tasks of curators and other heritage professionals have traditionally included selecting and preserving objects, as well as making the preserved objects available. Seen from this perspective, it is clearly up to the exhibition organisers, historians, and any other users or visitors to form their own interpretations and connections in relation to objects that have been made available by heritage professionals.

In the digital era, the above-described vision has consequences for the digitisation budgeting, which does not include hyperlinking in the post-scanning process. Hyperlinking is engaging with contents and interpreting objects, which was not traditionally a task of heritage professionals. For this reason, no budget has been requested or designated for this task, which seems not to have been allocated as anyone’s responsibility or field of activity. For example, in the early 2000s, the National Library of the Netherlands, one of the most important digitisers, invested a great deal in making objects available on a large scale but refrained from delving in-depth into the contents of objects (Velthausz & Bruinsma, 2002: 32-33), and thus lacked knowledge as to which parts of the contents needed contextualising or provided a context for other objects. The institution spent 30 percent of the digitisation budget on actual digitisation [scanning, photographing, etc.], 25 percent on metadata, 30 percent on making objects available and 15 percent on their management (Ibid.: 48). Clearly, the budgeting had not explicitly taken into account the pedagogical organisation of contents, by for instance including cross-linking. Film historian Karel Dibbets maintained that during the digitisation fever, millions of euros were ‘blindly spent for the short term’, because placing quantities of pictures on the Web did not mean necessarily ‘opening up the collection’. To open up collections, digitisers would have to do more than simply provide ‘primitive’ metadata based on images. They would have to provide contexts based on text.105

The second reason relates to the notion of the unique identity of institutions. In one sense, hyperlinking is a form of renouncing to one’s identity and uniqueness, since linking to someone else’s contents means permitting external stories to become intermingled with the in-house narratives behind individual objects. The case of the ‘Gelderland Collection’ cited above is a clear instance of how

hyperlinking means an end to the monopolistic approach to interpretation. According to the Council for Culture, the identity-related policies of institutions needed to be rethought and redefined in order to take into account the now inescapable networking aspect:

Institutions are being asked to formulate their core tasks in direct relation with their networking tasks, so that meaning-making can take place both ‘in-house’ and within social cultural networks of which they are a part. For instance, one archive may have no ambition to present itself to a [given] public, but in that case, it should keep its collections open for parties that want to do this with their own collection (Raad voor Cultuur, 2010: 4-5).

In the digital era, the identity of an institution forms a substantial obstacle to its full participation in networked environments as advocated by the Council and other voices. Networking means, among other things, that collections and objects would have to be networked, and that will happen only through trans-institutional hyperlinking. Dibbets (2006: 190-191) blamed the lack of collaboration and the fear of cross-fertilisation that would result from it on the ‘government’s contradictory policy’. On the one hand, institutions were being urged to collaborate and crosslink their collections, while on the other hand, they were being assessed and subsidised on the basis of individually achieved results. Dibbets wondered: ‘Why would you invest in collaboration when you are only judged on your own achievements?’ The consequence is that institutions’ websites strive to get as many visitors as possible and do all they can to keep them inside that restricted environment.

A related question could be: why would one ‘chase’ visitors away from one’s website by showing them the exit, i.e., a hyperlink to another website? This reasoning is part of what Web epistemologist Richard Rogers (2004: 9-14) termed ‘front-end information politics’, which can be defined as the conscious decisions taken by website owners to prevent certain actions and practices – usually basic ones like adding in- or outlinks – or to orient them in one particular

106 Researching the ‘politics of association’ implemented by climate change websites in the run-up to the 1997 Kyoto meeting, researchers perceived ‘linking as a form of networking’ and distinguished five sorts of networking: 1- social networking: linking to friends and acquaintances; 2- reputational networking: linking to authoritative bodies; 3- self-referential networking: linking to their own kind only; 4- aspirational networking: linking to potential funders; and 5- critical networking: linking to targets (Rogers, 2004: vii). None of these networking sorts has been fully implemented at the level of collections (as opposed to the personal level, via social media [see Section 3.4]) of heritage institutions.
Experts in search engines suggest that cyberspace works differently. The more a website links to external websites, the more visibility it gets on search engines and the more visitors it attracts.\textsuperscript{108} 

… provide new links whenever you can. While some Web sites believe that every link provided to other Web sites offers another reason for visitors to leave, in practice the opposite is true. If your site is a rich resource for what’s happening on the Web, your readers will come to see you as a trusted friend, putting you on their virtual speed-dial and visiting you more frequently (Milstein & Dornfest, 2004: 227).

These identity-preservation attitudes are much more the result of institutions’ management, whose corporate interests reside in striving to remain unique as long as possible. Although heritage professionals at various levels of the leadership or management ladder may have different visions, in the last analysis, it is from top managers, policy-makers, and subsidy-givers at government level that change is to be expected.

The third reason for avoiding hyperlinking is a dilemma, an impasse between on the one hand using new ways of structuring and presenting knowledge and, on the other hand, using tax-payer’s money. Cor den Ridder of the educational department of the Geheugen van Nederland, said, for instance, that he could not link to relevant sources on third parties’ websites, because, by doing so, he would be misusing tax-payers’ money to help those parties generate traffic for their website along with all the financial profits [e.g., through advertisement] that this involves.\textsuperscript{109} Linking to another site contributes to improving its ranking with Google, which crawling robots determine after checking the number of pages pointing to the site or any of its pages (Milstein & Dornfest, 2004: 226). In this sense, then, hyperlinking is a profit-generating business and it would be wrong to use tax-payers’ money in this way.

\textsuperscript{107} Richards Rogers (2004: 3-9) further conceptualised ‘information politics’ from the ‘back-end’ perspective. ‘Back-end information politics’ consists of the forces and factors or the ‘maneuverings’ that come into play on the part of search companies to rank and display some sources as more authoritative and trustworthy than others, without any editorial process.

\textsuperscript{108} In Part Two, I consider, among other things, the sources pupils use for their history class assignments. Pupils use Web resources en masse, though seldom those of cultural memory websites. This may be attributed to, among other things, the no-linking policy, which makes these websites ‘invisible’ or uninteresting for Google. Those responsible for opening up digitised collections need to understand that traffic on the Web is heavily directed by search engines (Hindman, 2009: 68) and that cultural heritage collections should not form an exception.

\textsuperscript{109} Author interview with Cor den Ridder, het Geheugen van Nederland’s education coordinator (11 November 2009).
to this way of reasoning, it would even be impossible for two government-funded educational projects, with two different [business] plans, to include links to one another. For instance, Den Ridder could not link to LES 2.0, because the latter project has to generate income in order to earn back part of the government’s initial investment.110

If this kind of multi-directional, cross-institutional linking is not easy among heritage institutions – because of the budgeting and identity issues as well as the tax-money impasse – then it would be even more impossible to envisage large-scale cross-linking with openly commercial sites such as news organisations, which also have relevant context-enriching archives that could be helpful to digital learners of history. News outlets are even more interesting because their role involves reporting news and certain aspects of new discoveries are sometimes related to old objects. Such relationships also often provide a way of reinterpreting and rejuvenating those objects by taking present-day developments into account. For instance, the website of the Marechaussee Museum in Buren, which presents pictures and text about its forensic youth laboratory,111 could have included a link to the ‘latest’ invention [April 2010] of the museum’s partner, the Dutch Forensic Institute, that was reported by a commercial TV channel.112 The Institute invented the so-called CSI The Hague, a sensor-equipped helmet that can digitally scan crime scenes, which, if connected to the Marechaussee Museum’s laboratory, could trigger new interpretations and a new understanding of preserved objects. It should be pointed out, however, that some heritage institutions have been linking to external resources, including news outlets’ websites. For instance, the website of the Kranenburgh Museum113 in Bergen contains links to reports from RTV-NH [North-Holland provincial radio and television channel], while the Letterkundig Museum [Literature Museum] in The Hague includes

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110 Author interview with Paul Vermeulen, Coordinator of Beelden voor de toekomst’s educational section [LES 2.0] (Hilversum, 10 November 2009).
111 Marechaussee Museum’s Jeugdlaboratorium:
112 RTL4, ‘Het NFI presenteert: CSI The Hague’ (4 April 2010),
113 Museum Kranenburgh, ‘Educatie’,
Hyperlinking emerges from this section as a pedagogical tool that neither the heritage sector nor its educational counterpart could have dreamed of in the pre-Web era. It is thanks to hyperlinking that linking of historical figures, events, and processes, which used to take place verbally via only narrative, now takes place [or should take place] both verbally and digitally. This way of presenting heritage objects and their contexts simultaneously regardless of their location on the globe has huge implications for digital learners of history. On the one hand, they are empowered to find out for themselves, without any intermediary, the meaning of the various heritage objects and, on the other hand, they have an opportunity to encounter valuable heritage objects on the Web easily, since hyperlinking increases visibility in cyberspace. However, it seems that Digital Natives are being denied the chance of enjoying digitised cultural objects to the full while learning history. In the first place, it is not easy to find these objects because poor hyperlinking renders them invisible in search engines: and even if objects are found, they are isolated from their contexts. All this has largely been attributed to budgeting policies, to the policies of institutions and what they define as core corporate interests, but also to the much more complex issue of public money and its use in a networked knowledge society.

3.4 Taking Digital Heritage Into Web 2.0

We've all had teachers who made a difference in our lives. But when teachers do great work and give wonderful lessons, they are only helping their 20 or 30 students. In the future, teachers will share their work with other schools across the country and around the world (Gates, [1995] 2008: 24).

The digitisation of cultural heritage collections in the Netherlands has witnessed two major phases in terms of intensity: the digitisation fever that started in the late-1990s and a phase that might be referred to as the ‘What next?’ phase which started around 2009. The decade of digitisation fever focused on getting digital surrogates for as many objects as possible, often to the detriment of quality and the efficient internal organisation of digitised objects (Dibbets, 2006: 197). Halfway through that decade, the Web entered a new era in its history, the Web 2.0 era, by integrating advanced interactive features...
that, among other things, made it possible for previously passive users to create and share online contents. Since the Digital Generation has been described as wanting to have more choices and more control over contents, it has proven worthwhile to look into the ways in which cultural heritage institutions have created room for direct interaction with digitised materials. Informed mainly by the Web 2.0 and digital heritage literature, as well as interviews and institutions’ documents and communications, this section focuses on what I call the ‘What next?’ period, first by considering the gradual integration of social networking media into the digital heritage environments. It is important to understand this, because this is the place where Digital Natives, who are important users of these media, are likely to come across digitised heritage objects or information about them. I shall then look into attempts that have been made to empower users – mainly teachers and pupils – to become content-generators by using digitised heritage objects as raw materials. At the end, I review the fears and uncertainties that mark this period.

Towards the end of the first decade of the 21st century, Social Media [SM] had already proven to be an efficient means of communication for getting large numbers of people together online and forming communities. Heritage institutions gradually joined the process not only by communicating via that channel, but also by making parts of their collections available there. The National Archives, for instance, has an account on the Yahoo!-owned photo-sharing website Flickr, where over a thousand pictures had been posted by May 2010. A similar number of pictures from the same institution could be found on Wikimedia Commons, a volunteer-steered website serving as ‘a media file repository making available public domain and freely-licensed educational media content (images, sound, and video clips) to everyone’, and using ‘the same wiki-technology as Wikipedia’. According to the National Archives’ director, Martin Berendse, putting as many pictures as possible on Flickr [and similar sites] is a way of promoting the institution and its collection. Between October 2008 and October 2010, the [then] 1,300 National Archives’ pictures on Flickr attracted 3 million visi-

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118 Author conversation with Martin Berendse, director of the Netherlands’ National Archives (The Hague, 31 August 2010).
tors and, partly as a result of that, the National Archives’ website recorded a considerable increase in traffic.119

Other institutions, such as the Nederlands Vestingmuseum in Naarden, or the Openluchtmuseum in Arnhem,120 have accounts on Twitter – a short-messaging or micro-blogging SM – where they communicate with users about the collections and activities around them. Yet others, like the Museum for Communication in The Hague or the Natuurmuseum Fryslân in Leeuwarden, have YouTube accounts to show moving images of, or about, their collections and to trigger reactions from users.121 Many others have accounts on Facebook, LinkedIn, Hyves, Ning or other networking websites. The table below provides a picture of SM use among museums and archives:122

Table 3.2: Uses of Social Media by museums and archives in May 2010.

<table>
<thead>
<tr>
<th>MUSEUMS</th>
<th>ARCHIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have website</td>
<td>Have SM account(s)</td>
</tr>
<tr>
<td>Have website</td>
<td>Have SM account(s)</td>
</tr>
<tr>
<td>553 (out of 569)</td>
<td>58</td>
</tr>
<tr>
<td>97.1%</td>
<td>10.4%</td>
</tr>
</tbody>
</table>

In Table 3.2, the ‘Have SM account(s)’ columns list those institutions that have their own accounts or channels on one or more of the Social Media platforms, while the ‘Link to SM’ columns list institutions that do not have an account of their own but imbed, or provide links to, materials from Social Media platforms.123 The

119 The National Archives’ Tim de Haan announced this during the 12 November 2010 ‘MuseumFuture! Connect’ conference in Zeist, the Netherlands. He clarified the relationship between the Flickr venture and the traffic on the website in a short talk we had after a workshop hosted by the National Archives.

120 Nederlands Vestingmuseum’s Twitter account: http://twitter.com/Vestingmuseum; Openluchtmuseum’s Twitter account: http://twitter.com/Openluchtmuseum (Both accessed 4 May 2010).

121 Museum for Communication’s YouTube account: YouTube: http://www.youtube.com/museumcommunicatie; Natuurmuseum Fryslân’s YouTube account: http://www.youtube.com/user/NatuurmuseumFryslan (Both accessed 4 May 2010).

122 These figures are based on surveys I conducted in April–May 2010 on the websites of museums and archives listed by the Stichting de Museumserver, http://www.museumserver.nl and ArchievenWO2, http://www.archievenwo2.nl, respectively.

advantage of this new communication approach between heritage institutions and their audiences is revealing in at least four respects. Firstly, these institutions have understood that their mission has undergone a shift: they are moving from their previous position of passive object-keepers who patiently wait for equally passive users, to a more offensive position that takes them to the most popular venues in cyberspace.

Secondly, they have understood that the user is no longer a passive viewer of objects, but a partner in assigning meanings to objects. This happens on photo-sharing sites like Flickr, on video-sharing sites like YouTube and Vimeo, whose tagging or key word-assigning systems are open to any logged-in user. On its Flickr account, for instance, the National Archives, which takes current events into account when updating its homepage, invites users in a text below each picture, to become active in the meaning-assigning process:

You can help us enrich the knowledge about photo collections by adding your tags and comments. If you recognise people or locations or if you have a special story to tell about one of the pictures, please write a comment [if you are logged in onto Flickr] or send us an e-mail: flickrthecommons@nationaalarchief.nl.

This approach has at least two immediate implications: [1] By adding tags, users help create automatic links between all related pictures with the same tag, both within the same collection and within the Flickr database. As a result, one particular picture will call up a related one, regardless of its origin (see Bruns, 2009: 178; Shirky, 2008: 32-33; O’Reilly, 2005). In other words, calling upon users to tag and comment on pictures is gaining recourse to the Web 2.0 phenomenon known as ‘distributed intelligence’ (Anderson, 2006: 108), as crowds act as taggers. Users are therefore engaged in what

124 For instance, prior to the 4th and 5th May [2010] celebrations – tribute to the World War II dead and Liberation Day – the homepage showed the pictures relating to the Liberation 65 years ago, including people celebrating in the streets, soldiers triumphantly returning home, Allied war planes, etc.

new media scholar Axel Bruns (2009: 173) called ‘produsage’, as they both use objects and produce new ‘knowledge structures’ by, for example, assigning them with descriptive key words or tags. Users are likely to form photo communities, as often happens with pictures on Flickr (e.g.: Shirky, 2008: 36; see also Van Dijck, 2009: 45). The Council for Culture commented that this way of producing meaning through user-participation adds considerable value to collections (Raad voor Cultuur, 2010: 11). In the end, then, the task is shared between users and heritage professionals and the absolute distinction between the two ceases to exist (Lévy, 2010:109; see also Anderson, 2006: 78; Buckingham, 2007: 170; Deuze, 2007: 77; Raad voor Cultuur, 2010: 4).

The above could also be viewed from the perspective of what author and journalist Jeff Howe (2009) has termed crowdsourcing. Originating from the open-source movement, crowdsourcing is usually used by commercial companies that take advantage of Web 2.0 technologies by inviting the public ‘to perform tasks, usually for little or no money, that were once the sole province of employees’ (Howe, 2009: 8). The central idea behind the concept is two-fold: on the one hand, it is believed that ‘the crowd will almost always outperform any number of employees’, if given the right conditions (Ibid.: 11); on the other hand, collaboration, rather than financial incentive, becomes ‘its own reward’ (Ibid.: 15). Since indexing and writing object-related accounts, which were previously the sole province of heritage professionals, are now gradually being done by the crowd, one could even conclude that heritage institutions are actually integrating crowdsourcing by placing objects on SM sites.

Thirdly, institutions are increasing the chance of being ‘discovered’ by the Digital Generation – who highly figure as users of SM sites (Harwood & Asal, 2007: 162-163; Keen, 2007: 157; boyd, 2008; Palfrey & Gasser, 2008: 21-23) –, as these SM sites are generally better ranked by Google and other search engines [used by pupils] than the institutions’ websites. Fourthly, through social media, institutions are fostering polysemy, multiple/hyper-narrativism and multi-layering around their objects. On the Twitter page of

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José van Dijck (2009: 46-47) has criticised theories on ‘produsage’ and other hybrid terms such as ‘co-creation’ and ‘prosumption’, for only stressing the opposition between consumption and production of media contents and failing to take into account the powerful market forces [advertising for instance] underlying the process. Van Dijck argued that before a user can make any contribution [tagging, ranking, commenting, forwarding via social networking sites, etc.], he or she has first to open an account whereby a profile with many private details, including consumption habits, are provided to platform owners. The latter (can) use these details for niche or targeted marketing or advertisement. Therefore, Van Dijck (2009: 49) concluded, ‘the user’s role as data provider is infinitely more important than his role as content provider’.
the Leeuwarden-based Tresoar – the Frisian Historical and Literary Centre – for instance, three postings dated 22 April 2010 came in during a 7-minute interval in relation to a single news event, namely the handing over of a 200-year-old manuscript of *Voyage pittoresque dans la Frise* (1837) by P.J. Gauthier-Stirum [1784–1851], a French civil servant in Friesland [1810–1813] during the French annexation of the Low Countries (see Figure 3.2).

One posting came from user ‘@GPTVfriesland’ [TV station] who announced in English: ‘I uploaded a YouTube video’ on the manuscript with a YouTube link to the video. It was a report showing the handing-over ceremony, with excerpts from speeches, shots of the manuscript itself and an interview with the museum director announcing the speedy digitisation of the manuscript, all accompanied by some background information. The second user, ‘@omrop_fryslan’ [TV-radio station], offered a link to a short article in the Frisian language which linked back to the museum. The third, ‘@wijdenzijd’, [a local weekly], provided a link to a longer article that focused much more on the contents of the manuscript.

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130 This is a good illustration of cross-sectorial hyperlinking.
than on the ceremony. The journalist pointed out that the manuscript contains ten drawings that were left out in the published version and informed readers that the text is not a travelogue but rather a work on popular culture of Friesland, its clothing habits, its mores and so on.

Each user – in this case, each journalist – came in with a different narrative, constructed from a different perspective, with different sources and interviews. It could be said that in this case, Tresoar’s Twitter account served as a meeting point for the heritage institution and TV stations and Web-based newspapers, each providing inputs and new layers to the cultural heritage object in question. Digital Natives who come across this exchange – provided that there is a link to the digitised object’s page – will have access to the multiple choices and perspectives towards which they are claimed to be inclined: they could choose to quote from the news articles, or to imbed the YouTube clip, or to download and edit it, or to use it in a remix, to name a few of the many possibilities. This trend is likely to increase as it involves no substantial financial investment and costs little effort, while it generates more visibility and publicity for collections and favours new ways of approaching cultural heritage objects (see Bakker & Bakker, 2011: 19).

Beside messaging, photo-sharing and video-sharing SM, some heritage institutions have devised others ways to integrate users’ narratives. While the Hermitage Museum in Amsterdam was still [by April 2010] inviting users to send in their own stories by e-mail, the Historical Museum in Ede was offering a reaction field under the picture of each object, where users could write their story, send pictures and suggest links to other resources. The heritage professional’s account and those of users find themselves side by side in a database and form what Manovich (2010: 69-70; see also Cameron & Robinson, 2007: 168) has termed ‘hyper-narratives’, which implies that ‘a number of database records [are] linked together so that more than one trajectory is possible’. In this perspective, this implies that since heritage institutions – through their websites – have become computer databases (Manovich, 2001: 214), the heritage professional’s narrative on the website of the Historical Museum in Ede is one record in the database, linked to the users’ narratives – which form other fully-fledged database records on their own. Once again,

133 See for instance this page on the website of the Historical Museum Ede: http://www.historischmuseumede.nl/?q=comment/reply/147#comment-form (Accessed 30 April 2010).
the multiple-choice Digital Native is being offered a chance to explore more than one narrative.

Web 2.0 has also prompted a few heritage institutions to get users more involved in content-generation based on digitised materials and in sharing them online. In 2009 the Geheugen van Nederland, which in the early 2000s had unsuccessfully developed more than 30 educational modules that later proved to be disconnected from the curricular key targets,134 came up with a Web-lesson-making tool that could be used by interested teachers and other education professionals to produce more flexible, editable educational modules.135 A similar but much larger undertaking started in 2009 within the framework of the above-mentioned Beelden voor de toekomst project. The project described itself as a ‘monster operation’ (SNK, 2009:

134 Author interview with Cor den Riddel, het Geheugen van Nederland’s Education Coordinator (The Hague, 10 March 2009).
135 Het Geheugen van Nederland, ‘Weblessen’:
http://weblessentool.geheugenvannederland.nl/index.php/home/ (Accessed 3 May 2010). 30 lessons were accessible at the time the page was last accessed.
14) because of the ‘dizzying numbers’ of materials it had to produce between 2007 and 2014 (Ibid.: 11). As mentioned above, six institutions entered into a partnership in order to achieve this.

Under the working name of LES 2.0 [Lesson 2.0] – a name that suggests an analogy with Web 2.0 and the user-centred, interactive features that go with it – the educational part of the project had two aims: firstly, to recruit and train 50 teachers, 15 of whom would be history teachers, whose task would then be to select relevant audio/visual materials, and arrange them, once they have been digitised, into curriculum-tailored Web-lessons. Launched in the summer 2009, the educational project started piloting completed modules in schools later that year.  

Secondly, unlike the Geheugen van Nederland project, which provided only a Web-lesson-making tool, LES 2.0 presents an entire environment or platform that serves to retrieve, edit, remix, and display materials. Known as ED*IT (see Figure 3.3), this environment also provides access to the collections of other institutions outside the six above-mentioned partners, and make it possible for users to import materials from photo-sharing and video-sharing sites and any other websites. The resulting lesson packages or personal works are saved within the ED*IT environment, which has been made accessible to all schools since September 2009, though schools are first required to subscribe (SNK, 2009: 25-26).

While this approach undoubtedly greatly empowers both teachers and pupils and encourages them to be creative, the platform itself presents one major disadvantage: Nothing is possible with a computer that is not connected to the Web, or outside the ED*IT environment. All works, in progress or finished, can only be saved on LES 2.0 servers, not on a hard drive, nor on any other portable devices. The everyday experience of teachers reveals that they become very frustrated whenever the Internet connection fails during lesson. Moreover, pupils are unable to display their finished works on their own websites or share them on their SM profile pages. In other words, though the project enables pupils to be ‘cultural pro-

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136 Author interview with Paul Vermeulen, Coördinator of Beelden voor de toekomst’s educational section [LES 2.0] (Hilversum, 10 November 2009).
137 The project’s April 2011 newsletter announced, for instance, that about 55,000 sources from the Amsterdam Museum, formerly called the Amsterdam Historical Museum, were going to be accessible within the ED*IT environment, beside those from the institutions partner to the Image for the Future project.
138 History teacher Antheun Janse [Baarnsch Lyceum in Baarn] frequently used video material from the Canon of the Netherlands, but was often interrupted by disruptions due to poor connections during classes. While observing his class [January–June 2010], he once asked me which software he could use to download and save streaming media from the Web. He wanted to be able to play those clips offline [More in Chapter 5].
ducers’, it prevents them from being ‘communicators’ (Buckingham, 2007: 178).

Another user-centred educational project kicked off in mid-December 2009 under the name of Wikiwijs [wikiwise]. Funded by the Ministry of Education, Culture and Science, Wikiwijs is described as a sort of Wikipedia ‘primarily of, for and by the teachers’ (Mulder, 2009: 26). According to the project-planners, Wikiwijs aims to be a platform of teacher-generated, open-source educational contents, to generate overviews of individual item compilations, to create links between those compilations, and even between the latter and collections external to the project, whether open, closed, or commercial. As such, the project aims to be not only a ‘repository’, but also a ‘referatory’ (Ibid.: 25). The website is a self-publishing, open environment, which, like all other wiki-driven sites, requires no special tools or technical knowledge. Although Wikiwijs has the ambition to be an open platform for open materials (Ibid.: 2 & 21), it is not clear how the project intends to handle copyright issues. The intention is even to combine this ‘open’ and ‘free’ material with other material, for example, from within ED*IT and from publishers (Ibid.: 25), which, by definition are almost always copyrighted.

Unlike many other sites, Wikiwijs offers unequalled cross-institutional, cross-sectorial hyperlinking freedom, which is likely to result in a platform with a rich variety of contextualised information. This openness, this freedom, however, is also likely to raise the issue of ‘misuse’ of tax-payers’ money, based on the argument that a government-funded project is offering commercial publishers and other private parties an undreamed of opportunity to ‘divert’ a maximum number of users to their own sites and [educational] products which, as discussed in the previous section, has considerable commercial implications.

While all the above seems promising and innovative, there is a constant cloud of anxiety hovering over all these undertakings that could hamper their embrace by teachers and pupils. No one can be certain how long these projects will last and whether the material they contain will be accessible in the future. In a newsletter dated February 2009, Teleblik, the pilot version and predecessor of LES 2.0 and ED*IT, expressed relief about its future as follows: Goed nieuws! Teleblik blijft bestaan [underlining is mine], [transla-

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tion: ‘Good news! Teleblik is to remain in the ether’].\textsuperscript{141} Another article from that same issue added: Teleblik blijft gratis [underlining is mine], [i.e., ‘Teleblik still free of charge’]. The April 2009 issue informed its readers that Teleblik blijft (groei) [underlining is mine], [i.e., ‘Teleblik keeps on (growing)’]. These words provoke more worries than reassurance regarding the future in the minds of teachers and pupils – the targeted audience: How long will the situation remain so? Teachers traditionally rely on previous years’ preparations and notes for their current and future classes. Where there is any doubt created about future access to digitised material, teachers will be more likely to revert to more lasting and stable sources, which textbooks have so far proven to be.

Furthermore, the words ‘Teleblik still free of charge’ suggest that the future might bring surprises. Indeed, the successor of Teleblik, ED*IT, is meant to be a paid-service, because the government’s funding was tied to the condition that it must eventually generate income for its own continuity and that this must be the case before the Beeld voor de toekomst project ends in 2014.\textsuperscript{142} Nobody knows what might happen if the project fails to generate enough money to pay back part of the initial investment. The same uncertainty surrounds the Geheugen van Nederland and its lesson packages, as the project is not certain of its future after 2010. There is no way of knowing whether the resources already integrated into individual teachers’ lessons will remain accessible at the same Universal Resources Locators [URLs]. The same applies to Wikiwijs, whose funding will last until 2015. The hope is that by that time the project will have gathered substantial quantities of educational materials (Mulder, 2009: 31).

The aim of this section was to explore the implementation of Web 2.0 features by heritage institutions. It seems that in the second half of the last decade, an increasing number of institutions were embracing Social Media as a way of reaching out to a wider public, not only for communication purposes but also for object-exhibition. The latter aspect had another important function, namely, getting users involved in the task of meaning-assignation. This practice, which corresponds to one of the most important new media habits of the Digital Generation, is likely to bring heritage objects closer to that generation, especially within the framework of history education. Beside SM, the end of the last decade witnessed the emergence of user-centred projects designed specifically with educa-


\textsuperscript{142} Author interview with Paul Vermeulen, LES 2.0 Coordinator (Hilversum, 10 November 2009).
tion in mind. All these projects not only put digitised objects at the disposal of the Digital Generation and teachers, but also empowered them to engage with them in creative ways for learning or teaching purposes. However, this trend is still only being observed on a very small scale and it does not have the air of long-term certainty.

3.5 Summary

In this chapter I pointed out how multiple motivations triggered the digitisation of cultural heritage collections. Preservation was an initial factor, one on which access and all other subsequent uses depend. Once access is provided to preserved materials, other uses emerge, mainly of an educational and ideological nature. Digitisation has often been cited not only as a means of providing sources for pupils and teachers, but also as providing identity-shaping and citizenship-fostering material. Another motive was the desire to bring formerly united collections back together and to unite objects that are related to the same theme. This [re-]unification has the advantage of forming new collections that transcend geographical distances and boundaries. I indicated how each motive has a potential to present income-generating possibilities.

This chapter also discussed the different methods and levels of selection within digitisation projects, ranging from non-selection and time-based or theme-based projects to projects involving stricter selection criteria. There are financial and practical reasons why selection is an essential stage prior to digitisation, though in some cases, selection itself can become an expensive and time-consuming task. In other cases, collections are too small to necessitate selection. In yet other cases, decisions are made to select a theme or a period within which no further selection is made. As I mentioned, however, in most cases, stricter selections are made. The most frequently used selection criteria are the fragility and old age of objects, their uniqueness, their rarity, and their historical or intellectual significance. I pointed out that this latter criterion is extremely broad, as the importance of objects depends on who is considering them and with what purpose in mind.

While discussing the post-digitisation organisation of contents and the enhancement of their pedagogical value, this chapter presented hyperlinking as an effective way of placing objects within their historical context. I drew a parallel between hyperlinking and the links that historians make between related historical events and processes in order to understand them. This chapter has shown that most heritage institutions have underused hyperlinks, thereby limiting the pedagogical use of heritage objects in at least two ways: Firstly, Digital Natives, who assume and expect related objects to
be interconnected, probably think that the objects with which they are presented have no history or context, as none is provided; secondly, the same Digital Natives whose research almost always begins with online search operations, will rarely encounter the poorly indexed and ranked heritage sites. The reason for this poor indexing and ranking is related to the lack of hyperlinking, because the more hyperlinks to and from a site, the better its ranking and the more visible and findable the site will be. I have identified three reasons to explain this poor hyperlinking, namely the rather conservative vision of heritage professionals – in selecting, preserving, and making collections available, while never concerning themselves with the interpretation and organisation of contents – and related fund allocation policies; institutions’ policies regarding the preservation of their identity and their corporate interests; and the impasse surrounding the use of public funds in a networked knowledge landscape, where there has been a proliferation in the most unpredictable ways of making money.

Finally, this chapter reviewed the trends among heritage institutions following the coming of Web 2.0. I have signalled the increasing presence of these institutions on Social Media sites, where they both communicate with audiences and present parts of their collections. This practice has brought digitised objects closer to the users who, in the process, have taken up some tasks that were previously entrusted to heritage professionals. One of these is assigning meanings to objects. In addition, Social Media allow institutions to collect exchanges made about their objects, which eventually results in multiple narratives about objects. I also reviewed a few educational projects centred on contents generated by users – mostly teachers and pupils – based on digitised heritage objects. These projects increase the control of teachers and pupils over contents, while facilitating their creativity. This chapter has shown, however, that these projects have an air of uncertainty with regard to their future, due in particular to funding issues.

What the reviews presented so far have shown is that history education (Chapter 1), the Web and the Internet Generation (Chapter 2), and the digitisation of the cultural heritage (Chapter 3), are all enmeshed together within a web, where they are exposed to influences from various actors and factors. As time has passed, the most important influence seems to have come from politicians and policy-makers who determine the direction history education must follow, who lay down ICT plans for schools and provide orientations and directives for the digitisation of this country’s cultural heritage. These reviews have considered the main themes separately, while most of the actors and stakes involved in history education are also
involved in digitising the cultural heritage and the uses of the Web. The aim of the second part of this book is to go beyond these reviews and empirically explore, in a more integrated fashion, how some of the various points reviewed in part one intermingle in real-life history classes. The next part of this book presents empirical findings on two history classes (Chapter 5 & Chapter 6) and their analysis (Chapter 7). However, before embarking on this presentation and analysis, I shall first explain my methodological approach (Chapter 4).