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Europeana Case Study

→ **The Minister's Selection**

Or what the oldest known depiction of a Dutchman can tell us about Europeana as a tool for Cultural Heritage Institutions

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Index

| | |
|--------------------------------------------------------------------------|-----------|
| Introduction | 3 |
| The Minister's choice according to <i>de Volkskrant</i> | 3 |
| Finding the Miniature on Europeana | 4 |
| Links to the miniature on the site of the Koninklijke Bibliotheek | 7 |
| europeana:isShownBy | 8 |
| europeana:isShownAt | 9 |
| dc:identifier | 10 |
| The Egmond Gospels on the website of the Koninklijke Bibliotheek | 11 |
| 100 Highlights of the Koninklijke Bibliotheek | 11 |
| Browse-book | 12 |
| Medieval Illuminated Manuscripts | 13 |
| Conclusions and recommendations | 15 |



Introduction

On 9 May, the Dutch morning paper *de Volkskrant* ran an article about Europeana on page two. The article¹ titled 'Digitale bibliotheek wordt nieuw leven ingeblazen' ('Digital library is being revived'), was accompanied by a reproduction of a page from the 10th century *Evangelium van Egmond* ('the Egmond Gospels'). This object had been selected by Halbe Zijlstra, the Dutch Minister of Culture, as his favourite object from the more than 23 million objects that were available via Europeana in May 2012.² Zijlstra's pick was one of a series: Culture Ministers of all EU countries revealed their top treasures on 9 May.

This case study uses the choice of Minister Zijlstra to examine how works are represented in Europeana and to outline how Europeana and the organisations providing data can improve the way works are represented. This case study is based on a single, somewhat randomly selected, object and as such it has obvious limitations. The following examination is not intended to criticise an individual institution or the individuals who have been involved in the activities described, but rather to highlight problems in the relationship between Europeana and its data providers.

1. The Minister's choice according to *de Volkskrant*



Figure 1: Online version of the *de Volkskrant* article from 9 May 2012

¹ Available online at: <http://www.volkskrant.nl/vk/nl/2664/Nieuws/article/detail/3252584/2012/05/09/Digitale-bibliotheek-wordt-nieuw-leven-ingeblazen.dhtml>

² On 31 May, the selection of the Minister was also featured in a post in the Europeana Blog: <http://blog.europeana.eu/2012/05/ministers-on-europeana-halbe-zijlstra/>. This blogpost contains a link to a search term on the Europeana website that returns all objects related to the manuscript that have been supplied by the Koninklijke Bibliotheek. While this takes away some of the issues described below, these issues remain real for anyone taking the *de Volkskrant* article as a point of departure.



The reader of the *de Volkskrant* article learns a number of things about the object that was selected by Minister Zijlstra: in the caption of the image it is explained (1) that the image represents an image from a book called *Evangeliarium van Egmond*, (2) that it dates from the 10th century and (3) that it is one of the masterpieces from the National Library of the Netherlands (Koninklijke Bibliotheek). The article further mentions that the *Evangeliarium van Egmond* is an illustrated manuscript that contains the text of the four gospels and that the book was obtained in 975 by Dirk II van Holland who donated the book to the Abbey in Egmond. At this time, two miniatures that depict the act of its donation were added to the book. The Minister selected one of these two miniatures because it is assumed to be the oldest depiction of a Dutch person that has been preserved until today.

2. Finding the Miniature on Europeana

Since the online article of *de Volkskrant* does not contain a link to the miniature on Europeana,³ we need to search for the object. On Europeana's portal, europeana.eu, the Miniature cannot be found by simple queries containing the facts as contained in the *de Volkskrant* article:

- A query for *Evangeliarium van Egmond* returns two search results – not including, however, the picture shown in *de Volkskrant*;⁴
- A query for *Egmond* returns 1,009 results, including the miniature (which shows up on the 18th page of search results – which means it will be invisible to the average user);
- A query for *Abdij van Egmond* returns 54 search results, the miniature not among them;
- A query for *Dirk II van Holland* returns 56 search results, the miniature not among them.

A Google query⁵ for 'Europeana Evangeliarium van Egmond' does not return the object on Europeana among the first ten results. The 15th result is one of the digital representations of the *Egmond Gospels* on Europeana that showed up in the first query above: a photo of the manuscript provided by the National Archive of the Netherlands.

Using English language search terms to query Europeana yields the desired results: a query for 'Egmond Gospels' returns the miniature as the only result, as does a Google search for 'Europeana Egmond Gospels'. A query on Europeana for 'Dirk II of Holland' returns 67 results with the miniature among the first 12 (and thus visible on the first page of results).

Based on the above we can conclude that on europeana.eu the miniature is pretty much invisible to users that only use the facts that have been conveyed by the *de Volkskrant* article when searching for the work.

Since the work can be found relatively easily when one uses literal translations into English of these search terms, it should be quite simple to make the miniature findable for users using

³ The article does include a generic link to the Europeana portal. The absence of the link to the object in question is rather illustrative of the fact that Dutch newspapers still do not know how to operate in the digital environment.

⁴ It appears that readers of the *de Volkskrant* article have found one of them. If you click through from <http://www.europeana.eu/portal/record/92106/3EA2775CE0CDCAC33A298A48FF4E16A03246484E.html> to the site of the National Archive you'll find a comment by a reader who asks the National Archive to also make the miniature available. In response, a member of National Archive staff has provided a link to the miniature on the website of the KB.

⁵ All Google queries mentioned in this case study were carried out in the last week of May 2012 from a browser running in incognito mode without being logged in to Google. Google results may change over time and may be personalised to logged-in users.



Dutch or another language. To achieve this, the metadata would need to contain translations of key facts (such as the title). This can either be achieved by the data providers who can add such data before supplying their data sets to Europeana, or through automatic enrichment by Europeana once the metadata has been supplied.

Finding the miniature on Europeana is, however, possible via a detour through the website of the Koninklijke Bibliotheek. The news section of the website contains a press release⁶ with a direct link to the object view of the miniature on Europeana:



Figure 2: The Miniature as displayed by Europeana

Looking at the miniature on Europeana we can make a number of observations. First of all the miniature is described in English (hence the inability to find it using Dutch search queries) and the image presented here is a cut-out of the miniature as it is depicted alongside the *de Volkskrant* article (interestingly, the cut-out only depicts the male figure, Dirk II of Holland, while the title of the object on Europeana refers to both Dirk II and his wife). Finally, all of the contextual information that was given in the *de Volkskrant* article is missing from the object presentation on Europeana. There is no direct reference to the fact that the image displayed here is taken from the *Egmond Gospels* and there is no information related to the fact that this image represents the oldest preserved depiction of a Dutchman.

The metadata that has been provided to Europeana looks rather sparse. Apart from the title of the object, the metadata primarily consists of information that seems to be taken from internal cataloguing systems of the data providers, that provides relatively little added information to the average end-user. Via the Europeana API, we can extract the full metadata related to the object that is held by Europeana:

⁶ See: <http://www.kb.nl/nieuws/2012/egmond-zijlstra-europeana.html>



```
"europeana:uri": "http://www.europeana.eu/resolve/record/9200122/863B863D0FF80E4947B62C44E2D8399DDF691881",
"europeana:country": "netherlands",
"europeana:provider": "The European Library",
"europeana:collectionName": "9200122_Ag_EU_TEL_a0031_KB",
"europeana:isShownAt": "http://www.kb.nl/manuscripts/show/images/+76+F+1",
"europeana:isShownBy": "http://resolver.kb.nl/resolve?urn=BYVANCKB:mimi_76f1:ns_214v_afb_links",
"europeana:object": "http://resolver.kb.nl/resolve?urn=BYVANCKB:mimi_76f1:ns_214v_afb_links",
"europeana:language": "nl",
"europeana:type": "IMAGE",
"europeana:rights": "http://creativecommons.org/publicdomain/zero/1.0",
"europeana:dataProvider": "Koninklijke Bibliotheek - The National Library of The Netherlands",
  "dcterms:extent": [
    "214v",
    "230x195"
  ],
  "dcterms:isPartOf": [
    "The Hague, KB, 76 F 1",
    "ByvanckB",
    "Middeleeuwse verluchte handschriften"
  ],
  "dcterms:spatial": [
    "0 France",
    "2 Southern Netherlands"
  ],
  "dc:date": [
    "900 (c.)",
    "975 (c.)",
    "850-900"
  ],
  "dc:identifier": "http://resolver.kb.nl/resolve?urn=BYVANCKB:mimi_76f1:ns_214v",
  "dc:relation": "1173",
  "dc:subject": [
    "11L13(+0)",
    "11P3151",
    "44B114(COUNT)",
    "44BB114(COUNTESS)",
    "48A7(+0)",
    "49L72",
    "61B2(DIRK II)21",
    "61BB2(HILDEGARD)21",
    "61D(HOLLAND)",
    "61F(ABBAY OF EGMOND)"
  ],
  "dc:title": "Dirk II of Holland and his wife Hildegard present the Gospels to Egmond Abbey",
  "dc:type": [
    "Image",
    "Manuscript",
    "full-page miniature"
  ],
  "europeana:completeness": "7"
```

The metadata above reveals very little additional information that is not visible in the object view. This makes clear that the type of metadata that was provided to Europeana is the primary reason that the object is difficult to find for a user searching in any language other than English.

It is also interesting to note that the way the object is displayed on Europeana brackets out most of the qualities of the underlying cultural artefact: the miniature is part of a 200+ page



tenth-century manuscript, yet the related metadata does not provide any user-readable⁷ information about this fact. Also, the object is missing links to other parts of the manuscript that are available on Europeana.⁸

3. Links to the miniature on the site of the Koninklijke Bibliotheek

Setting aside the fact that the miniature chosen by the Minister is difficult to find, let's examine how well the object functions at directing the user to more information about the object on the site of the original data provider. First and foremost, Europeana is a metadata aggregator that has the purpose to direct users to cultural heritage objects on the websites of the data providers where they should be able to learn more about the objects that they found on Europeana.

The metadata associated with the object contains three URLs that point to resources on the website of the Koninklijke Bibliotheek.⁹ These are stored in three different elements of the Europeana Data Model:

- **europaena:isShownBy:** This is a URL that will be active in the Europeana interface. It will lead users to the digital object on the provider's website where they can view or play it.
- **europaena:isShownAt:** This is a URL that will be active in the Europeana interface. It will lead users to the digital object displayed on the provider's website in its full information context.
- **dc:identifier:** This is an identifier for the original analogue (or born digital) object.

For the object in question, all three elements have been specified with unique values. These URLs can be accessed by the user by clicking on the thumbnail image (`europaena:isShownBy`), by clicking on the 'View item at' link under the thumbnail image (`europaena:isShownAt`) and by clicking on the 'Identifier' link at the bottom of the left-hand column (`dc:identifier`).

The following section describes where these links lead the user and if they provide additional information to the user that lets him/her identify the cultural significance of the miniature (that it is the first depiction of a Dutchman).

⁷ There is information in the metadata that allows you to make this conclusion: the values for `dcterms:extend` and `dcterms:ispartof` indicate that the object belongs to an item with the catalogue number 'KB, 76 F 1' that is held by the Koninklijke Bibliotheek and that the object is from page 214 of that item.

⁸ The only way to get the full overview is to use the internal classification number of the Koninklijke Bibliotheek (KB, 76 F 1) as a search term. This returns all 30 Europeana objects that represent parts of the manuscript.

⁹ Strictly speaking there are four URLs, with three unique values. Both `europaena:object` and `europaena:isshownby` point to the same object. However, Europeana uses the URL specified for `europaena:object` exclusively to generate the preview image and as a result it is not exposed in the user interface.



3.1. europeana:isShownBy

In line with the specification, a click on the thumbnail image (which triggers the `europeana:isShownBy` URL) sends the user to a copy of the digital object on the website of the data provider (see figure 3 below). In this case, it is a larger version of the same, cropped image that is displayed as a thumbnail on Europeana. As prescribed by the Europeana Data Model (EDM) specification, the user is presented with the image only and there is no additional information (other than the extra information carried by the higher resolution of the image) disclosed to the user. This means that this link does not enable the user to learn more about the cultural significance of the object on Europeana.

The use of the cropped image as the value of `europeana:isShownBy` is somewhat questionable. The metadata above makes clear (see `dc:title`, `dc:terms`) that the object in question is the full miniature as contained on page 214 of the *Egmond Gospels* manuscript. Given this, `europeana:isShownBy` should point to a uncropped image showing the entire miniature.¹⁰ In this context, it is interesting to note that the Europeana object, related to the miniature on the adjacent page of the manuscript, the `europeana:isShownBy` link, links to the photo of the full page while the `dc:identifier` link is pointed to a cropped image from the page.¹¹

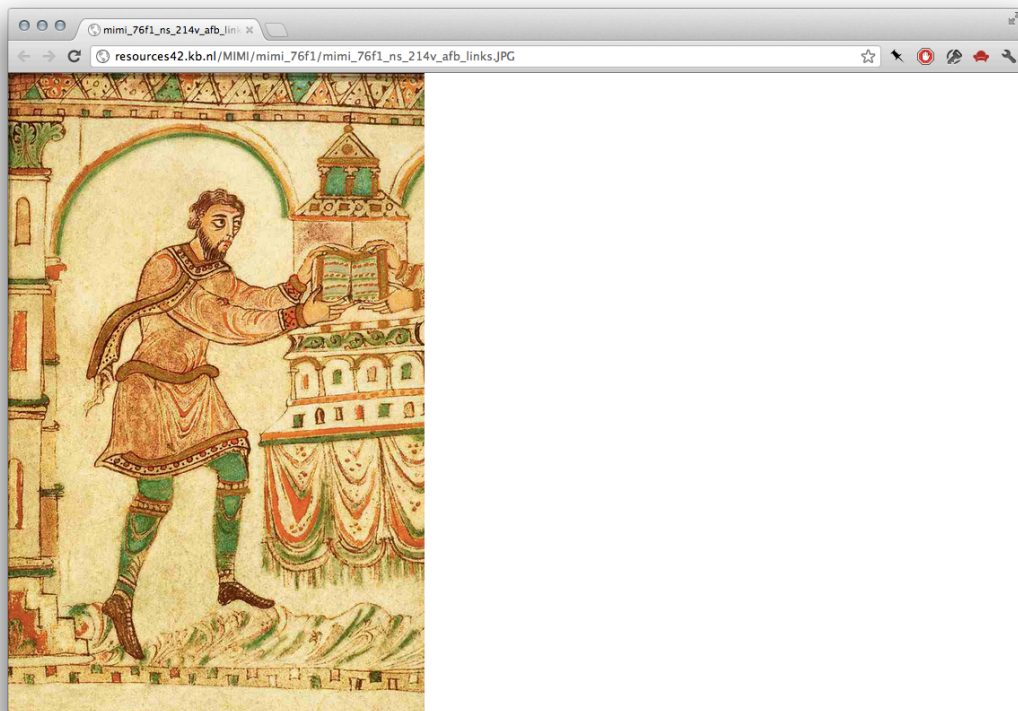


Figure 3: View of the miniature on the KB website after clicking on the thumbnail image

¹⁰ Since `europeana:object` and `Europeana:isshownby` can have different values it is technically possible to use a preview image that is cropped to reveal an important detail of the digital object that links to the full digital object.

¹¹ This also reveals another shortcoming of the presentation of the miniature on Europeana. Neither on the page representing the miniature selected by the Minister, nor on the object representing the miniature on the adjacent page are there any links between those two pages. In both cases the 'similar content' links on the bottom of the page do not contain the object representing the adjacent page. Neither of the two pages include links to the object representing the image of the book cover that has been supplied to Europeana by the national Archive of the Netherlands (see footnote 3).



3.2. europeana:isShownAt

If implemented as specified, a click on the 'View item at Koninklijke Bibliotheek - The National Library of The Netherlands' link under the thumbnail would take the user to a website that shows the digital object displayed in its full information context. This should be a page that shows the object (in this case the miniature) alongside metadata that provides extra context (such as the fact that it is taken from a manuscript, the name of the manuscript and a description of either the manuscript or the miniature or both). Instead, a click on the link takes the user to a website that does not appear to be related to the object as it is presented on Europeana at first sight (see figure 4 below). The linked webpage, which is titled 'Medieval Illuminated Manuscripts', shows ten pages with illustrations from a manuscript, not including the miniature of Dirk II of Holland donating the manuscript to the Abbey of Egmond. Nowhere on the page is there any reference to the *Egmond Gospels* and, as a result, this page will look to most users like an erroneous link.

Closer inspection reveals that the pictures on the page are the first ten illustrations taken from the *Egmond Gospels* and that by clicking on the 'next' button on the right-hand side, the user can navigate (in two steps) to a page that does contain a thumbnail image of page 214 of the *Egmond Gospels*, a thumbnail image of the open book also showing the adjacent page, a thumbnail of the cropped image that is used as a thumbnail on Europeana and a thumbnail of another crop from the miniature showing Hildegard van Vlaanderen.¹² However, the website does not provide any additional descriptive information related to the object and as such does not help the user understand the cultural significance of the object he or she has encountered on Europeana.

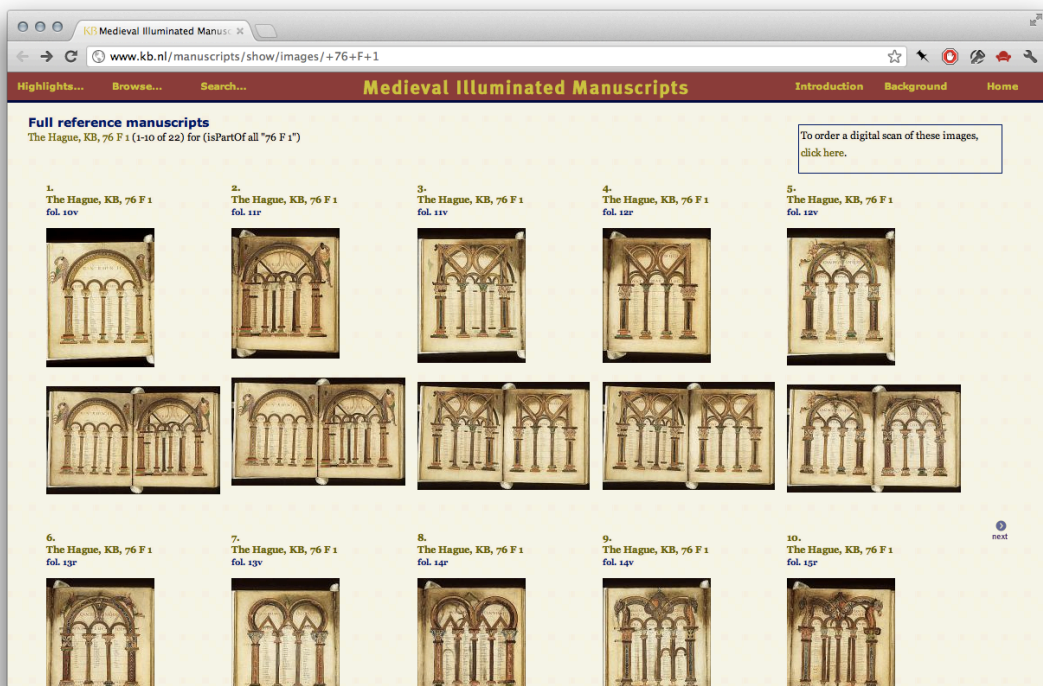


Figure 4: Miniatures on the website that is linked to from the 'View this image at' link

¹² Clicking on the thumbnails gets you to a page showing these images in an interface that allows zooming in on them as well as downloading them or printing them in relatively good quality.



3.3. dc:identifier

Clicking on the identifier link at the bottom of the right column takes the user to a photographic reproduction of page 214 of the manuscript that shows the entire miniature (see figure 5 below). As with the link specified via `europaana:isShownBy` the user is presented with the image only and there is no additional information (other than the extra information carried by the higher resolution of the image) disclosed to the user.¹³ As is the case with the two previous links, this link does not provide more information about the cultural significance of the object.

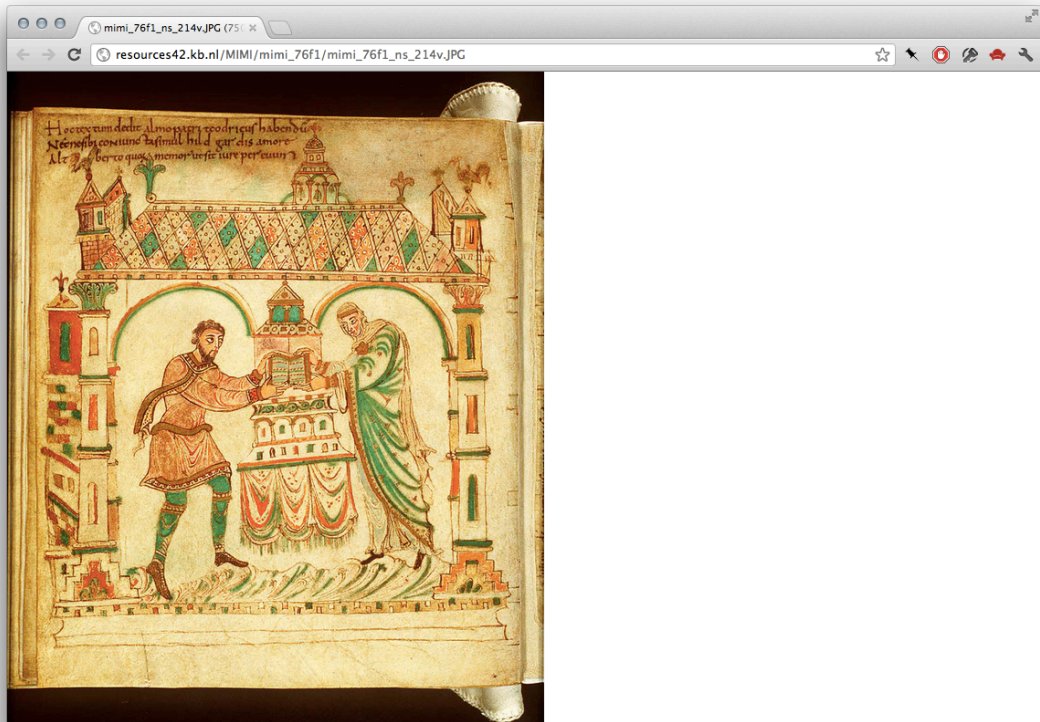


Figure 5: Photo of page 214 of the *Egmond Gospels* as linked from Europeana

Based on the analysis of the three links from the object page on Europeana leading to various parts of the data provider's website, we have to conclude that a user who encounters the *Egmond Gospels* on Europeana will not be able to grasp the cultural significance of the object selected by the Minister. Neither the descriptive information on Europeana, nor the websites of the data provider that Europeana links to, provide contextual information that would allow the user to realise that the person depicted in the thumbnail represents the first-known depiction of a Dutchman.

This bit of contextual information, which was the main reason for the Minister to select the miniature as his favourite object in Europeana, is completely invisible in Europeana and on those parts of the Koninklijke Bibliotheek's website that Europeana directs its users to. However, this does not mean that this information is not present on the website of the Koninklijke Bibliotheek.

¹³ This use of `dc:identifier` is most likely not in line with the specification as it does not identify the original (analogue object). The URL specified here would make much more sense as a link target for `europaana:isShownBy`.



4. The Egmond Gospels on the website of the Koninklijke Bibliotheek

Spending some more time on the website of the Koninklijke Bibliotheek (KB) reveals that there are at least three additional parts of the website that contain the miniature in question together with contextual information about it. These parts of the website are not directly linked to the object on Europeana and there are only rudimentary links between the sections of the KB website dealing with the *Egmond Gospels*.

4.1. 100 Highlights of the Koninklijke Bibliotheek

The *Egmond Gospels* are the first in a list of 100 highlights compiled from the collections held by the KB. Each highlight is presented on its own webpage that contains a description of the object and an explanation on why it has been selected as a highlight. The *page of the Egmond Gospels* mentions the fact that the book contains the first depiction of a Dutchman in the second sentence:



Figure 6: The *Egmond Gospels* as one of the 100 highlights from the collection of the KB

In addition to the descriptive text, the highlight page contains a link to yet another photo of page 214 of the manuscript. This image is stored separately from all other image files that have been discussed above. Also the colour reproduction differs quite substantially from all the other images that have been discussed above:

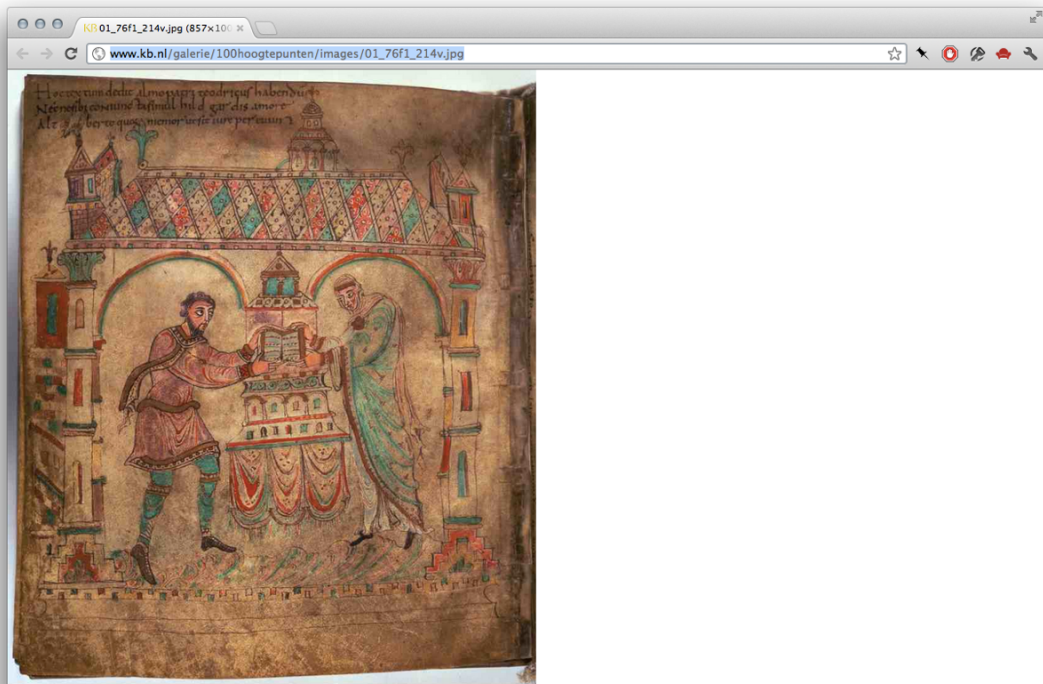


Figure 7: Photo of page 214 of the *Egmond Gospels* as linked to from the 100 highlights page

4.2. Browse-book

On the same day that *de Volkskrant* published the article about Europeana, the KB also made the *Egmond Gospels* available as a browse-book.¹⁴ This browse-book contains a page with an extensive description of the book and its historical context and an annotated table of content for the manuscript. Via the browse-book, the user can access images of the individual pages of the book.

The pages of the manuscript (including page 214, see figure 8 below) are depicted as slightly cropped photos of the individual pages. Judging by the colour reproduction, these photos are from a third, different set of photographic reproductions. As with all previous reproductions on the KB website, the individual pages are presented without additional descriptive information that would allow users to understand what is depicted on the individual pages.

¹⁴ In the terminology of the Koninklijke Bibliotheek a browse-book is a flash application that lets users browse through the individual pages of a digitised book. Alongside the flash application, a browse-book also contains individual images of each page in the book.

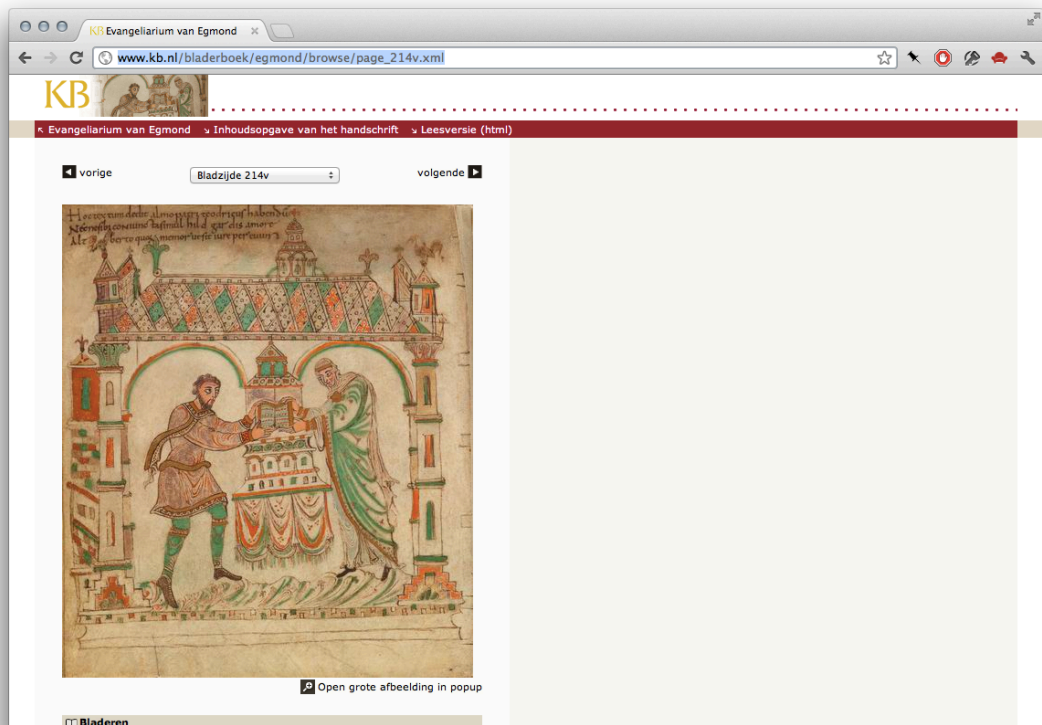


Figure 8: Photo of page 214 of the *Egmond Gospels* as linked to from the browse-book

4.3. Medieval Illuminated Manuscripts

As described in the 'europeana:isShownAt' section above, the Europeana object page contains a link that directs the user to a seemingly random page within the 'Medieval Illuminated Manuscripts' section of the KB website (see figure 4 above). A close inspection of the landing page reveals a hidden link to another section that contains additional metadata related to the manuscript as well as to individual illustrated pages from these manuscripts.

Hovering over the first words of the second line of text on the page (see figure 4 above - 'The Hague, KB, 76 F 1') reveals a hyperlink. Clicking on this link takes the user to a page that contains relatively concise descriptive metadata related to the manuscript (see figure 9 below). This information does not mention that the manuscript contains the first-known depiction of a Dutchman, but it places the manuscript into its historic content.

Displayed underneath the metadata are three links ('images only', 'images' and 'description', description only) that lead the user to an overview page showing thumbnails of all pages that contain illustrations. The 'images only' link leads to the same page as depicted in figure 4 above (also the target of the europeana:isShownAt link).

The 'images and descriptions' link leads the user to a page that, in addition to the thumbnails, shows descriptive metadata related to the individual pages next to it. Looking at page 214 we find the same metadata that has been provided to Europeana alongside with the thumbnails (see figure 10 below). This is the most information-rich representation of the individual page



from the manuscript that is available on the KB website – and therefore makes a better link target for the europeana:isShownAt link than the current link.

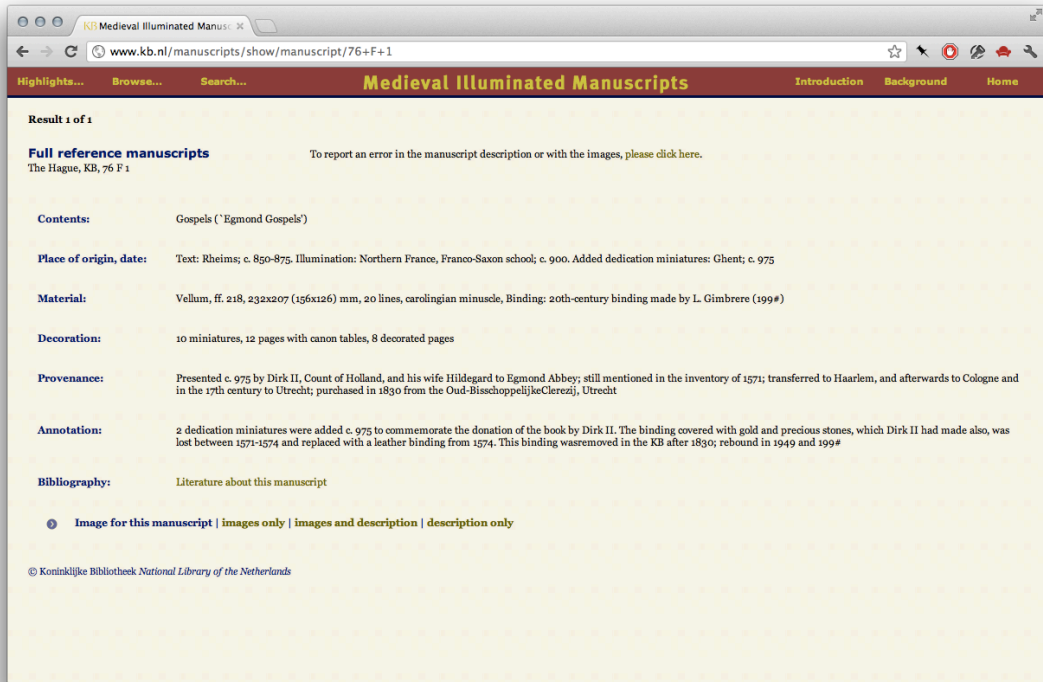


Figure 9: Metadata describing the *Egmond Gospels* manuscript on the website of the Koninklijke Bibliotheek

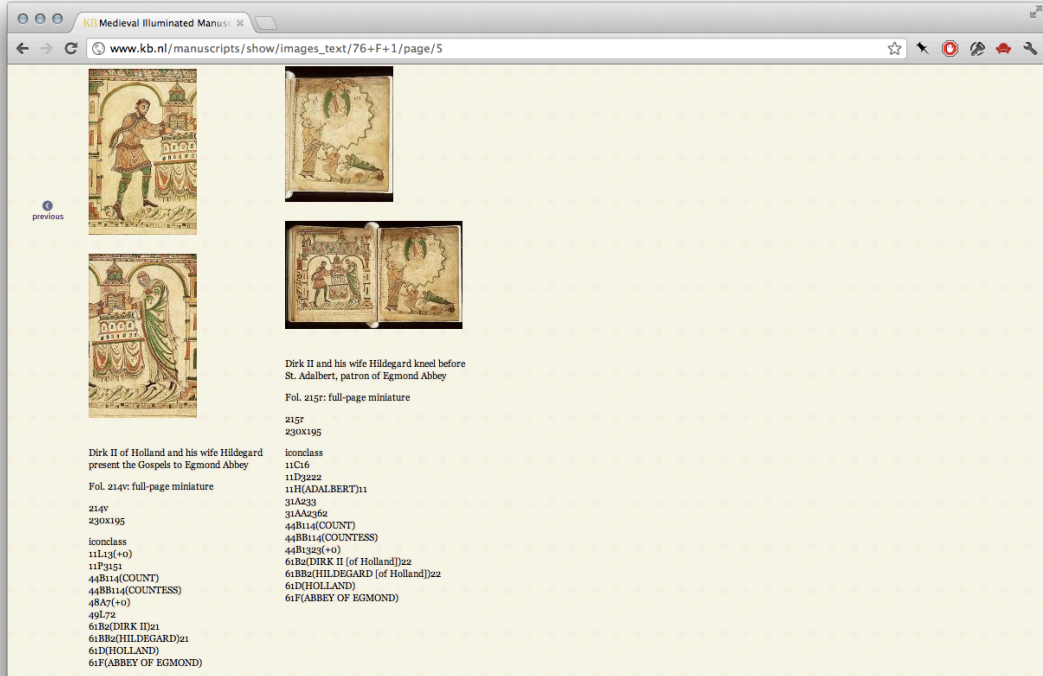


Figure 10: thumbnails of and metadata about page 214 of the Egmond Gospels on the website of the KB (left column)



If we regard the interlinked pages in the 'Medieval Illuminated Manuscripts' section of the KB website as one location, there are at least three¹⁵ different locations that deal with *Egmond Gospels*: the listing of the 100 highlights, the record in the 'Medieval Illuminated Manuscripts' section and the browse-book. All three locations contain unique metadata related to the manuscript but there are no links between these locations on the KB website.

From a user perspective, it would be desirable if these three locations could either be integrated or at least linked to each other. This would enable a user coming from Europeana to have access to the full extent of the information that the Koninklijke Bibliotheek makes available online. In the current setup, information that goes further than the relatively sparse metadata that has been provided to Europeana is effectively hidden from users coming from Europeana.

5. Conclusions and recommendations

While this case study has obvious limitations as it is based on only one object from a total of 23 million objects, it still reveals a number of problems that are symptomatic for the current status of Europeana and the data provided by its contributing organisations.

This case study of the representation of the miniature depicting Dirk II of Holland and Hildegard van Vlaanderen donating the *Egmond Gospels* to the Abbey of Egmond on Europeana and the website of the Koninklijke Bibliotheek of the Netherlands reveals three problems (reasoning from the perspective of users that are looking for information related to cultural heritage objects):

1. It is very difficult to find the work on Europeana in any language other than English
2. A user who has found the work on Europeana and is looking for more information about the work on the Koninklijke Bibliotheek's website is not provided with additional information – even though it is readily available on the website
3. The information about the work available on the Koninklijke Bibliotheek's website is scattered across multiple locations that are not integrated or linked to each other.

According to the Europeana Strategic Plan 2011 – 2015, the number one priority of Europeana is to aggregate ('to build the open trusted source for European cultural Heritage content'). The three problems identified above illustrate a number of challenges that need to be overcome in the coming years.

Almost all of these challenges have to do with the selection, organisation and enrichment of metadata. In this context, it is important to recall that while Europeana strives to become a trusted source for European cultural heritage content, Europeana itself does not control the content that is accessible through its services. The Europeana 'Collections and Data Analysis, Strategy and Plan' from July 2012 notes that..

The Europeana Office has, for example, little influence over the content and collections that are made available through the partner institutions (either qualitatively or quantitatively), although recommendations can be made to steer in certain directions. The Europeana Office does, however, have a more direct responsibility to improve the quality of the Europeana repository through the improvement of the metadata, previews and links.

Based on the example discussed in this case study, it is possible to identify a number of areas that such improvements should focus on:



1. **Europeana needs to improve the multilingual search functionality.** One of the main purposes of Europeana is to open up cultural heritage resources held by individual data providers to interested users from across Europe (and the rest of the world). This requires that items in Europeana can be found via search queries in multiple languages.

If this is executed well, Europeana provides a very valuable service to the participating data providers, who often lack the resources (and, in many cases, the mission) to invest in multilingual search themselves. Improving multilingual search can be achieved through two principal mechanisms: encourage data providers to provide multilingual metadata or enrich metadata so that it becomes multilingual. As a service provider for its data providers, the second approach seems to be more in line with Europeana's role within the Europeana Network.

Looking at the example of this case study, it should be relatively straightforward to ensure that a query for 'Dirk II van Holland' returns the same results as a query for 'Dirk II of Holland'.

2. **Data providers need to provide more meaningful metadata to Europeana.** While the discussed example is an extreme case, it illustrates a problem that is relatively widespread. Most of the metadata that is supplied to Europeana consists of internal classifications and factual information that is of relatively little interest to users (and consequently relatively useless when it comes to search and discovery).

Data providers who intend to make use of Europeana in order to increase the reach and discoverability of their collections will need to select metadata that helps end users understand why objects are important and/or interesting. In practical terms, that means that data providers (and Europeana) should focus on textual descriptions, and accurate metadata related to the history and geographical location of the objects.

For the same reasons, data providers are well-advised to provide meaningful previews to Europeana. Without previews, objects in Europeana are much less likely to generate traffic to the website of the data providers

3. **Europeana and data providers need to work together on representing complex objects.** The Europeana Data Model (EDM) allows the representation of complex cultural heritage objects by multiple digital objects. While this capability of the data model has not yet been implemented in the Europeana portal, it will be implemented in the future.

For the example discussed in this case study, this means that the entire manuscript could be represented by multiple digital objects (the individual miniatures/pages of the manuscript). The EDM is capable of modelling a relationship between the different digital objects that represent the original object by specifying the sequence of individual pages and describing hierarchical relations (is part of / has parts).

While these capabilities of the EDM are not fully implemented yet, data providers that want to share knowledge about their collections are advised to make use of these capabilities now, especially when it comes to collection highlights like the *Egmond Gospels*. With the upcoming release of the Europeana API, such rich modelling of information will also become available for third-party applications that can make use of this data even though the portal does not do this yet.

4. **Data providers need to ensure that links from Europeana take users to pages that provide additional information.** When users click through to a data provider's website they do so because they are looking for something that is not provided on Europeana. This can be a higher-quality version of the digital object, additional metadata, more extensive descriptions and/or additional context. When providing links



to Europeana, data providers should strive to ensure that these user expectations are met.

In this context, **data providers should also ensure that all information about individual cultural heritage objects on their websites is interlinked or integrated.** Users who find information about a cultural heritage object on the website of a data provider cannot be expected to search for additional information about that object on the site of the same provider.

In order to fully benefit from the traffic generated by Europeana search results, data providers' landing pages should also offer links to related content on the website of the data provider. This allows users to explore their collections, taking an individual Europeana search result as a point of departure.

In essence, all of these recommendations come down to one main observation: for Europeana to realise its ambition to become the trusted source of information for European cultural heritage content, Europeana, together with its data providers, needs to work on improving the relevance of the metadata that it receives. It is this metadata that enables users to find the cultural heritage objects and it is this metadata that allows users to understand the relevance of objects and to decide to dive deeper into the context by going to the sites of the data providers.

Given this, data providers and Europeana should start looking at Europeana as a service provider for Europe's cultural heritage institutions whose main service is **to increase the reach and discoverability of the collections across national and linguistic borders.** This requires a shift of focus away from quantity (as expressed in the Commission's limited focus on number of objects in Europeana as the most important KPI) to the quality of the metadata and links that are being provided to Europeana.