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# Between Commodification and Engagement: On the Double-Edged Impact of User-Generated Metadata within the Cultural Heritage Sector

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## ABSTRACT

This article challenges common assumptions and opinions regarding the use of the social web by cultural heritage institutions by framing the phenomenon of user-generated metadata within the larger context of the commodification and the engagement process of our cultural heritage. Theoretical reflections on both the negative and positive long-term outcomes of the social web for libraries, archives, and museums are presented and confronted with empirical observations regarding the use of social tagging and user comments. This combination of a theoretical and an empirical approach will provide original insights into the long-term implications of user-generated metadata for cultural heritage institutions.

## INTRODUCTION

*“But will we able to put the content on YouTube or Facebook?”* is the question professionals in most cultural heritage institutions are currently asking themselves when discussing their digitization and collections management strategy. Praised for their apparent democratizing character, Web 2.0 applications have, in a relatively short time-span, received an enormous amount of attention from libraries, archives, and museums. Numerous projects have demonstrated the benefits of soliciting help from laymen with, for example, describing historical photographic collections. As these practices evolve from small-scale experiments to permanently embedded features of collection registration databases and of collection catalogues, the time has come to reflect on the long-term consequences of the use of crowd-sourcing to enhance and complement the indexing and cataloging of cultural heritage collections.

Unfortunately, current research regarding the use of social web technologies for metadata creation and management is hampered by focusing too narrowly on comparing the quality of user-generated and professionally created metadata in the context of information retrieval. Comparative studies of the performance of user-generated and professionally created metadata are valuable and necessary, but information science theorists such as Geoffrey Bowker (2005) and Bernd Frohmann (2004) have demonstrated that an underestimated part of our memory practices allow us to manage and frame the present, without any immediate intention of using the created metadata to retrieve the documented objects. User-generated metadata should therefore not be studied solely within the context of information retrieval performance. We also need to determine how such metadata reflects our interaction with cultural heritage in a broader and a more indirect sense.

We chose to analyze the current relationship with cultural heritage of two distinct types of user-generated metadata—folksonomies and user comments. Other examples of Web 2.0 applications, such as wikis and blogs, are not analyzed in this paper because they focus on the production of user-generated content, even though the distinction between content and metadata can be blurry and context dependent. The first half of the article will focus on how social tagging practices are in line with a commodification process in cultural heritage. Folksonomies refer to the idea of self-regulating markets where demand directly influences supply as users/consumers are empowered to decide what information is useful. This raises important issues about long-term access and preservation of culture heritage for future users. The second half of the article will reflect on how user comments can increase the social relevance of cultural heritage collections by providing a valuable opportunity for users to connect with them.

The two-part structure of the article, which pinpoints the risky aspect of social tagging and highlights opportunities offered by user comments, offers few opportunities for nuance. Both the opening toward commodification and a process of coherence offered by user-generated metadata, however, have been underrepresented within the literature. The two-sided structure allows us to reflect on possible negative and positive long-term consequences, which we hope will stimulate the ongoing debate about user-generated metadata.

#### THE SOCIAL WEB AS A CATALYST FOR THE COMMODIFICATION OF OUR CULTURAL HERITAGE

Policy makers and the public increasingly regard libraries, archives, and museums as content and service providers who operate in the same market (and compete for the same customers) as the information providers created by the advent of the Internet. Some librarians, for example, feel

themselves gradually pushed into a corner by commercial moguls such as Google and Amazon. This situation is reflected in the adoption within the cultural heritage sector of the ISO definition of the “quality” of information systems and services. This focuses on the “fitness for purpose” (ISO, 2005). This interpretation of quality implies the idea of self-regulating markets where demand directly influences supply as users/consumers are empowered to decide what information is of use. This process is in line with the commodification of culture, the process of the transformation of cultural goods and services into marketable products. It is not a recent phenomenon: it was described shortly before and after the second World War in the works of Walter Benjamin, Theodor Adorno, and Max Horkheimer (O’Connor, 2007). Lowenthal (1998) described its roots in various socioeconomical evolutions, which took place over the course of the twentieth century. This evolution will now be positioned within the way digitization projects have been managed and financed since their inception.

#### *The Impact of Funding Precariousness*

To understand the interplay between digitization and the commodification process, we need to have a closer look at the way digitization projects within our libraries, archives, and museums have been funded over the last decade. Even though providing electronic access to resources and their metadata is currently considered a core responsibility of cultural heritage institutions, funding to enable electronic access has often come from nonstructural external funds such as government grants. In the late 1990s, the digitization of collections and the creation of collection metadata were regarded as one-off projects with clearly distinguishable start and end points. These projects were considered to be distinct from the ongoing provision of the institution’s services to users of its collection, and it seemed only logical to seek additional financial means outside regular institutional funding.

This view of digitization projects as one-off, discrete projects has now been superseded by reality as we have come to realize that: (1) the electronic access to resources stands high on the list of user needs and is currently considered a core responsibility of cultural heritage institutions; and (2) digitization projects involve important and permanent maintenance costs. Smith (2003) and Hamilton (2004), among others, have pointed out the precarious nature of digitization outcomes when they solely rely on one-off nonrecurrent funding.

Having found funding outside the regular budget to be unsustainable for digitization initiatives, cultural institutions responded by developing new business models for digitization. These models aim at a return on investment (or at least self-sufficiency) for ongoing maintenance costs through the marketing and monetization of digital cultural heritage.

Policy makers from public administrations have played a major role in the development of a discourse of commercialization of cultural heritage. One of the most emblematic reports that document this discourse is “*Technological Landscapes for Tomorrow’s Cultural Economy: Unlocking the Value of Cultural Heritage*,” published under the DigiCult program of the European Commission (Geser & Mulrenin, 2002).

*Reflections Regarding the “Fitness for Use” Metadata Quality Definition*

The project-based funding of digitization described above has coerced the cultural heritage sector into taking more direct notice of user reactions to collections and collections metadata. Government grant providers typically attach conditions to digitization grants that explicitly require grant recipients to provide proof of the short-term impact and uptake of digitization outcomes. However, the creation of metadata to facilitate the discovery of digitized resources is a notoriously slow and expensive process. Within the context of time-limited projects with evaluation dependent to a significant extent on user uptake and appreciation, the question of how institutions define quality standards for their metadata has inevitably come under review.

One of the definitions heavily referred to in the literature (see, e.g., Boydens, 1999; Bruce & Hillmann, 2004) is the ISO 9000 definition for quality as “The totality of features and characteristics of a product, process or service that bears on its ability to satisfy stated or implicit needs” (ISO, 2005). This definition is commonly abridged as the “fitness for use” quality definition. While this interpretation seems unproblematic at first sight, when interpreted literally, “fitness for purpose” as a criterion for metadata quality strongly implies the idea, as mentioned above, of self-regulating markets where demand directly influences supply. As Francois Matarasso points out in the context of the evaluation of performing arts, this approach can be problematic within the cultural domain:

The market is never as free as we might wish it to be. There is a strong commercial interest in a standardization of taste, whether in music, films or coffee, since it enlarges markets and reduces overheads. These forces are dangerous enough when it comes to ordinary commodities: they are all the more when it comes to the space where we shape, question and transit our values. . . . The views of audiences and participants in the arts are a component of evaluation. Only in the commercial sector do they act as a determinant measure of worth: and the point of having a public sector is precisely to introduce other values and safeguards to our cultural life. (Matarasso, 2002, p. 3)

We can apply the same observation to the cultural heritage domain. Peacock notes that a market vision turns on its head the traditional relationship of supply and demand for museums by inverting it into a dependency of the producer on the consumer (Peacock & Brownbill, 2007). Putting the user at the center of attention should clearly be considered as a key

concern for cultural heritage professionals, but the mission of our libraries, archives, and museums is not only to satisfy current needs: it is also to preserve and provide access to our heritage for future generations. These future generations may have different needs and thus different metadata requirements from current users.

For an example of how user needs can shift through time and negatively impact the future use and retrieval of resources, we can go back to the very starting point of the professionalization of cultural heritage institutions in the second half of the nineteenth century. One of the pillars of metadata quality in contemporary archival science is the notion of “respect des fonds,” or provenance, which refers to the crucial importance of keeping documents in their original context. It is not so much the content of a single document, but the context in which it was created that guides the interpretation of archival documents. This approach to archival management was only developed and put into practice at the end of the nineteenth century. It was preceded by a century of classifying archives based upon their form or content (Duranti, 1993). Louis Prosper Gachard, who was the head archivist of the newly founded national archives of Belgium from the period from 1831 to 1885, arranged archival items according to their content or formal characteristics. This led to the separation of paper from parchment-based documents and to sorting documents into chronological order. Organizing and describing archival holdings in this way was intended to facilitate the historical work of legitimizing the recently founded Belgian state, but it completely ruined the original archival context of the documents (Aerts & De Mecheleer, 2003). This example illustrates the danger of a short-term vision of user needs in the context of classification and resource description. The work of Vesa Suominen can be consulted for a larger view of the problem and limits of “userism” within the context of libraries (2007).

#### *Opportunities Offered by Social Tagging for Engagement*

The previous sections of this article allow us to position the recent uptake of social tagging in the cultural heritage sector within a broadened context and to bring a different perspective to the current evaluation of the long-term impact of social tagging. The Steve.museum project offers a state-of-the-art example of the use of social tagging in museums and also presents the results of a two year experiment with social tagging in the real-life setting of several U.S. art museums (Trant, 2009). Here we focus on a comparison of the retrieval effectiveness of social tagging in the Steve.museum with expert metadata by investigating how social tagging illustrates our current memory practices in museums, libraries, and archives.

The use of social tagging seems to provide a perfect solution to the problems presented by time-limited funding for digitization projects and

the time-consuming character of professional metadata creation. The inclusion of social tagging features on the website of a library, archive, or museum offers a means of empowering users in their use of the website and it is completely in line with the “fitness for purpose” thinking of funding agencies. The metadata are created by users and are therefore considered to meet their needs. The Steve.museum report indicates that 86 percent of the tags were not found in existing formal museum metadata. This suggests that the tags offered additional access points to the collection. We note that 88 percent of the tags were assessed as “useful.” Usefulness was determined by positive response by museum professionals to the question “*if you found this work using this term in a query, would you be surprised?*” (Trant, 2009, p. 55).

Instead of debating the usefulness of the tags for retrieval, we pick up the discussion where the report ends. The last paragraph of the conclusions of the Steve.museum report describes tagging as an “engaging activity” (Trant, 2009, p. 97). Bowker (2005) points out that an underestimated part of our memory practices simply allow us to manage and frame the present without any intention of creating an archive to access the past. Or as Frohman has put it more bluntly: “many practices with documents have little, if anything, to do with informing anyone about anything” (Frohmann, 2004, p.405).

If this is so, catalyzing an engagement can be a valid objective of social tagging, but engagement with whom or what? Srinivasan (Srinivasan, Boast, & Fumer, 2009) stresses the importance of engagement of users with objects as an essential condition for the generation of knowledge. Does social tagging provide a real opportunity for engagement of this kind? The results from Steve.museum show that the large majority of registered users contributed tags in only one session (repetition of the sessions of the anonymous users cannot be tracked) (Trant, 2009, p. 23–24). Moreover, the most common user-contributed terms in the data set were “woman” (assigned 276 times), followed by “portrait” (272), “landscape” (235), “sculpture” (223), “blue” (223), and “gold” (215) (Trant, 2009, p. 32). All of these keywords represent low level semantics and could have been retrieved by using content-based image retrieval (CBIR) software. Confronted with these examples of the limited possibilities offered by social tagging to express an engagement with cultural heritage objects, we turn to an analysis of another type of user-generated metadata: user comments.

### INCREASING THE SOCIAL RELEVANCE OF CULTURAL HERITAGE THROUGH USER-GENERATED METADATA

Although provision for user comments on museum websites antedates the advent of social tagging tools, little research has been performed on the use and relevance of such comments. In this section of the article we illustrate how user comments can enhance the social relevance of cultural

heritage collections by engaging them in a process of coherence.

*User Comments: New Phenomenon or Continuum of Practices?*

Throughout history, users have annotated and commented on resources. The transcribers of manuscripts frequently added glosses to the original works they were transcribing. The introduction of the printing press facilitated the interaction of an increasing body of readers with printed sources. As Eisenstein indicates in her study of the impact of the printed media, it was a common practice for sixteenth-century publishers and editors to reach out for user-feedback and criticism (1979). Verschaffel also points out that seventeenth- and eighteenth-century historiographers relied on the feedback of their readers to correct their work (Verschaffel, 1998).

Even if the concept of user feedback is not as revolutionary as some Web 2.0 evangelists claim, the use of information and communication technologies (ICTs), especially the Internet, has enormously facilitated the interaction between users and producers or providers of information as represented by user comments. Compared to folksonomies, insufficient research has been undertaken to examine the possibilities offered by these comments for information retrieval and the interpretation of cultural heritage materials. Howard (Howard, Pratty, & Stapleton, 2005) presents an interesting case study on the use of stories told by users to improve the description of historical images, but the main focus of this article was the documentation of an authoring tool to manage user-generated comments. The Taskforce Archives from the Netherlands in their book presenting an overview of Web 2.0 applications available for archives do not provide any analysis of user comments (de Lusenet, 2008). One of the most interesting publications regarding user comments is the booklet published by the library of the University of North Carolina at Chapel Hill, "*Documenting the American South*" (Hewitt & Panitch, 2002). This work contains the most interesting and striking comments the library received on this project in a number of reader and institutional categories such as the general public, colleges and universities, school grades K-12, and an international audience. Apart from the identification of these categories of users, no other analysis is provided.

*Analysis of User Comments from the Image Database of the National Archives in the Netherlands*

In this section we present a case study developed by van Hooland (van Hooland, 2006) that examines the content of user comments and develops a typology that gives us a deeper understanding of the nature of user comments than has been offered by the projects mentioned above.

The image database of the National Archives of the Netherlands (<http://beeldbank.nationaalarchief.nl/>) was launched in 2004 and contains approximately 500,000 images. The collection of the former press



agency, Anefo, constitutes the backbone of the database. Photographs in this collection illustrate almost every aspect of Dutch life in the spheres of politics, sports, culture, economy, and daily life from 1945 until 1989. In this respect, the database represents a huge source for the contemporary history of the Netherlands.

The online catalog for the collection provides users with metadata about each image and offers them an opportunity to leave comments on the image. The metadata for the collection provided by the National Archives is traditional in nature, comprising description, date, keywords, collection, photographer, press agency, and catalog number. When users click on the “comment” button, they are directed to a form where free-text comments can be inserted. The comment itself may not exceed 1,000 characters, but no other guidelines or restrictions about the content or style of the comments are given.

As the basis for analysis, 4,647 comments were exported from the administrative back-end database. These comments had been submitted by users between the April 5, 2004, and the March 1, 2006. Each comment was accompanied by the name of its contributor and the date it was received. Based upon a confidence interval of 5 percent and a confidence level of 95 percent, a sample population of 355 comments was extracted from the export file. As some users sent the same type of comment about a series of photographs and the population of comments analyzed was sorted chronologically, a systematic sampling method was performed, ensuring an even spreading of the sample over the population.

In the original case study, a mapping of user queries with user comments was performed in order to determine the overlap and hence how the comments related to the user needs (van Hooland, 2006). This mapping used the faceted classification of Shatford as a framework for the categorization of both queries and comments (1986). In parallel with the mapping of the comments to the Shatford classification, the different types of comments were clustered. At the end of the process, which was very much iterative, the following typology emerged:

- Correction of the displayed metadata (such as spelling, identification of persons, event/action, and geographical and temporal location): 46 percent
- Addition of narrative details relevant to the image: 31percent
- Sharing the user’s personal history regarding the image: 9 percent
- Mentioning a wrong or inadequate display of the image: 3 percent
- Stating an opinion or judgment: 3 percent
- Engaging in a dialog with the institution or other users in the form of a question: 1 percent

These categories are neither exclusive nor inclusive, meaning that a comment can belong to more than one category. This process of categorizing



is inherently subjective, but allows a deepened understanding of the nature of user comments and their relevance to the public.

*Critical Comments.* The most frequent motivation for users to submit comments was to express their disapproval of the published metadata on the website. Forty-six percent of all comments criticized the existing metadata and proposed a correction. Of these comments, 40 percent related to an incorrect spelling in the metadata (mainly of names of persons and/or locations), 11 percent to the identification of persons, 24 percent to the identification of an object, 16 percent to geographical location, and 8 percent temporal specifications.

*Addition of Narrative Details Relevant to the Image.* Another recurrent feature of the comments was their narrative character. More than 30 percent of the comments told a story related to the image that enhanced understanding of the image. The sequence of metadata fields related to the identification of persons/objects depicted, location, date, etc., that are published by the National Archives on the site simply represents a list. User comments can introduce narrative aspects into the database by making connections between events, persons, locations, and temporal specifications.

The tension between the discrete, atomized, unordered, disconnected nature of official metadata fields compared with the continuous, ordered, organically connected, nature of narrative has been pointed out by Lev Manovich. He noted the rise of the database as a cultural form and its tension with narratives:

As a cultural form, the database represents the world as a list of items, and it refuses to order this list. In contrast, a narrative creates a cause-and-effect trajectory of seemingly unordered items (events). Therefore, database and narratives are natural enemies. Competing for the same territory of human culture, each claims an exclusive right to make meaning out of the world. (Manovich, 2001, p. 225)

It is not so much the content of the information but rather its form that is of interest here. For our purposes in this paper, it is enough to mention the emergence of a new research area that studies the impact and possible benefits of narrativity and storytelling within the domain of information representation (see, e.g., Giaccardi, 2006; Duff & Harris, 2002).

*Linking the User's Personal History to an Image.* A small number of comments (9 percent) were provided by users who disclosed a personal relation to the image content, for example, "I met my wife in the café displayed on this picture in Amsterdam in 1959." In discovering themselves, family, friends, their old hometown, or simply a familiar scene in historical photographs, users were motivated to communicate their personal experiences. We do not know to what extent these personal comments are meaningful to other users, and further research has to be conducted in order to evaluate the long-term quality and pertinence of this kind of personal information.

*Stating an Opinion or Judgment.* Surprisingly few comments (3 percent) offered explicit opinions or judgments of users. In one example of this type of comment, a user took the image of an old football field as a point of departure to complain about the actual presence of an unappealing block of houses where the football field used to be located.

*Engagement in a Dialogue with the Institution or Other Users.* A tiny fraction of the comments (1 percent) contained questions or invitations directed at the institution or other users to obtain more information about a specific image. Sometimes dialogues between users took place, which transformed the comments page into a type of forum where users could interact with one another. Although the technology for implementing a forum within a website is widely available at a low cost, there are currently very few heritage institutes that offer such a feature (Bowen, Houghton, & Bernier, 2003).

*Mentioning a False or Inadequate Display of the Image.* A last category of comments consisted of users mentioning an incorrect display of images (3 percent). A recurrent problem with high-volume scanning projects of photo negatives is the appearance of mirrored images, which are almost impossible to detect in an automated manner. When no text is displayed on the image, one has to personally know the scene or object depicted in order to detect the mirrored view.

#### *Functional and Factual Memory*

This analysis of a sample of user comments demonstrates that a large majority of the comments, mainly consisting of corrections of the existing metadata and inclusion of narrative elements, are the result of a reflexive process. They display a genuine interaction or engagement between users and collection items. The comments add an extra level of description to the database, a level that could be seen as in critical confrontation with the official metadata developed by the institution.

Any apparent tension between metadata produced by experts and laymen does not need to be problematic. By referring to the work of Friedrich Nietzsche, Maurice Halbwachs, and Pierre Nora, Assmann (1995) suggests that the apparent dichotomy between “functional” and “factual” memory is artificial in the sense that they depend on one another. Functional memory corresponds to the symbolic or emotive interpretation of a historical fact in which the past is relived by incorporating it into the present. Factual memory refers to the historicism represented by the ideas of the German nineteenth-century historian, Leopold von Ranke, who sought only to show what actually happened (“wie es eigentlich gewesen ist”). Assmann explains that the apparent opposition of the two types of memory practices is in fact an interdependency in that they keep one another in balance. Purely functional memory can distort the past by altering or even inventing historic events so that they conform to

a glorious nationalist past, for example. Strictly factual memory on the other hand can lose its relevance by being unable to connect to a public:

Their interdependence has a positive effect for both approaches. Without factual memory, the functional memory drifts away into phantasms, and factual memory without functional memory ends up in a collection of meaningless data. Just like the factual memory can check, back up and correct the functional memory, the functional memory can orient and motivate the factual memory. (Assmann, 1995, p. 179)

The characteristics of digitized cultural heritage collections, such as their adaptability and ease of access, have greatly contributed to placing cultural heritage within the sphere of functional memory. The possibility for a heritage institution to interact with its public through user comments and embedding these comments alongside professionally created metadata is an excellent illustration of how both factual and functional memory can coexist and mutually support each other.

## CONCLUSIONS

This article has presented new ideas regarding the potential long-term impact of the social web for cultural heritage institutions. The available literature about the use of user-generated metadata tends to either support or downplay the phenomenon. It also tends to neglect its larger socioeconomic and historical context. We have tried to fill that gap by presenting both critical and supportive ideas about user-generated metadata, supported by the works of European and American thinkers and a concrete case study. Furthermore, we have reflected on the engagement and coherence process in which users are involved when they are creating metadata.

One of the recurring issues throughout our article has been the rising conflict between the two different missions of our cultural heritage institutions: preserving the most significant resources for future generations and disclosing them to the current user audience. The political theorist Benjamin Barber has discussed the problem of the fluctuating character of libraries, archives, and museums that are currently balancing between "*temples of preservation or public squares of democracy*" (Barber, 2003, p. 83). In order to reconcile these two apparently opposite missions, Barber elaborates a broad view of democracy that takes into account previous and future generations. By referring to the concept of the "social pact" of Edmund Burke, Barber points out that democracy is a partnership not only between the members of the current generation but also those of the past and those who will come after us. In his essay, Barber refers to the demolition of the almost 2,000-year-old Buddha statues in Afghanistan by the Taliban as an aggressive act against the generation who built the monuments but also against future generations. The two contexts are of

an entirely different order, but Barber warns us against placing too much attention on the “fitness for purpose” principle when applied to the needs of current users: “the commodification of culture is the tyranny of the present over past and future alike” (Barber, 2003, p. 84).

In conclusion, we need to acknowledge that the current debate about the utility and impact of the social web on our cultural heritage institutions is currently more theoretical than based on large scale empirical observations. The phenomenon is still fairly recent, and the next decade will deliver valuable insights about actual shifts and long-term impacts. Nevertheless, it is important for cultural heritage professionals to be aware that technology is continuously evolving with continuing impact on our memory practices. From the nineteenth-century paper catalog card to the latest Web-based collection management databases, our tools have always affected and will continue to affect our dealings with the past.

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Eva Méndez Rodríguez is an associate professor at the Carlos III University of Madrid, where she has been teaching and conducting research since 1997. She holds a PhD in information science from the same university, awarded as the outstanding thesis of the year in her field for the academic year 2001–2. She is a member of the Dublin Core Metadata Initiative (DCMI) Advisory Board and co-chair of the DCMI Social Tagging Community. Her research focuses on Semantic Web technologies applied to digital information systems and services, with an emphasis on metadata standards and vocabularies. She co-edited “Knitting the Semantic Web” (Haworth Press, 2007) with Jane Greenberg. In addition to the DCMI, Méndez has served on many conference and workshop program committees worldwide. She has also

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