Original scientific paper

Story Sharing – Model of Collective Collaboration in Online Museum Environment

Željka Miklošević
Department of Information Sciences
Faculty of Humanities and Social Sciences, University of Zagreb
Ivana Lučića 3, Zagreb, Croatia
zmiklose@ffzg.hr

Goran Zlodi
Department of Information Sciences
Faculty of Humanities and Social Sciences, University of Zagreb
Ivana Lučića 3, Zagreb, Croatia
gzlodi@ffzg.hr

Darko Babić
Department of Information Sciences
Faculty of Humanities and Social Sciences, University of Zagreb
Ivana Lučića 3, Zagreb, Croatia
dbabic@ffzg.hr

Summary

The need for a more pronounced role of museums in today's democratic and heterogeneous society has led to a change of the institutional framework which have now come to include voices of all those who have been underrepresented in museums. The new museum needs to pluralize the range of possible meanings by accepting views and interpretation not only of curators but museums users as well. However, museums have been reluctant to adopt new approaches in their work. The paper therefore suggests a more acceptable, on-line model which allows for multivocal interpretations of museum material by connecting the museum data base and web 2.0 applications. The usual repository of actions facilitated by on-line social networks is mostly reserved for web sites outside the direct museum's digital realm. Conversely, the web service presented in this paper supports participative activities on the very museum web site by allowing users to engage with museums' collection. The collection in the form of a digital catalogue can thus serve either as a source or inspiration for individual interpretation. Both choosing museum objects from the on-line catalogue and publishing extra-museum material in different media in order to contextualize the

object and create stories builds a two- way communication between curators and actively participating users which is presented to all other types of online users. User-generated content is here seen as a possible influence on the actual institutional policies, namely, collecting, research, exhibiting practices, giving relevance to certain topics etc. By allowing active participation in the creation of meaning, de-authorizing the museum, and at the same time creating a massive depository of heritage information, this model contributes to the paradigmatic shift that has been indicated in the museum world in the last ten years.

Keywords: online database, meaning-production, museum communication, participatory model

Introduction

More than a decade ago, Weil stressed the importance of David Pilbeam's statement that "we see things not as they are but 'as we are'".[1] Indeed, things are meaningful because we assign them meaning, and make these things material culture by investing them with our emotional and intellectual characteristics. Objects created or modified by man "reflect, consciously or unconsciously, directly or indirectly, the beliefs of individuals who made, commissioned, purchased, or used them and by extension the beliefs of the larger society to which they belonged".[2] Material culture has been at the heart of the largest numbers of museums throughout its long history and the shaping of knowledge through material culture, varying in the principles of studies and presentation, has over the last 200 years formed the core of the museum functions as we know them today.[3] Following Foucault's historical nomenclature, Hooper-Greenhill differentiates several modes of knowledge formation in museums, stating that the classical episteme brought a new systematization in the collection according to scientific taxonomies.[4] This positivist age (in the early 17th century) marked an epistemic break with the Renaissance structures of knowing and introduced practices of classification that continued to be followed to the present day. Greenhill's outlook on museum's historical development has a somewhat modified version in Perry's claim that the "age of classification" in museums re-

[1] Weil, Stephen E. Rethinking the Museum and other mediations. Washington: London, Smithsonian Institution Press, 1990, 48

[2] Prown, Jules David. An Introduction to Material Culture Theory and Method. // *Winterthur Portfolio*/ 17(1982) 1; 2

[3] Hooper-Greenhill, Eilean. Museums and the Shaping of Knowledge. London: New York, Routledge, 1992.

[4] Ibid

placed curators' individual rationale as late as the 1970s with the introduction of computer based standardization. The late-twenty century ordering and documenting of collections were, according to Perry, shaped by the computer logic rather than just supported by it. "It was perhaps here, therefore, rather than two hundred years before that the culture of the creative 'cabinet' was finally superseded".[5] In other words, computers, or more specifically databases, have become not only the main organizing principle of the modern museum but also a system of thought. This statement is today more valid than ever before since both professional and everyday life of people have been dominated by computer technology, especially in the last decade due to a rapid development of the Internet and web based services. Museums have not only incorporated technology into their work but have also been influenced and modified by it. This paper presents an online generic model adding to a trend towards a changing paradigm of the museum which can be applied as a particular module to the museum's web site and can cover functions that range from the creation of topics to the creation of users' online exhibitions. For the purposes of this paper the authors have chosen to present a specific level of implementation of the model called Story Sharing which enables online users to create their own individual stories and comment those of others.

On a theoretical level, the model includes several major contemporary issues relevant for the discourse on museums, the most significant of which concerns meanings which are construed from objects in museum collections and the parties involved in the construction and distribution of the meanings. The model therefore suggests reconstitution of relationships in the museum, between curators as traditional creators of museum messages (constituting shaped knowledge) and museum users as their receivers. It aims to redefine the (conventional) museum communication process by realizing the potential of the web environment which allows for individual use of the museum collection from the online database and presentation of personal stories. The changing paradigm can be seen in the democratization of the ways in which museum objects are given meanings. In other words, the professional staff of the museum ceases to be the sole producer of information about museum objects. The museum's role here is to enlist visitors as its collaborators who can contribute to the expansion of museum (i.e. curators') knowledge and who can, additionally, develop their own sense of heritage, and create their own links to both an individual and a communal past, but also to the present.

[5] Parry, Ross. Recoding the Museum – Digital Heritage and the Technologies of Change. London: New York, Routledge, 2007, 51

Online collections databases – enhancing access and participation

New technology, developing better and innovative possibilities for the distribution of information about the cultural material outside the physical confines of the museum has both followed the change of museum approach to the public and influenced it. It has revolutionized communication between the museum and its audiences in a two-stage development that occurred with the introduction of the World Wide Web – the first bringing accessibility, and the second bringing participation. Computing in museums first changed documentation practices of curators but better information retrieval offered by museum databases slowly ceased to be only curators' privilege. The web environment made possible for the collection to become widely accessible to a great number of people around the world. In an online environment museum material is just a click away. Naturally, visiting the museum building and experiencing the authenticity and originality of artefacts has its advantages. Nevertheless, virtual museums offer alternative possibilities.

After the first stage of publishing online exhibitions, highly curated and linear, museums began showing their collections databases on the web. At first their interfaces resembled the database management system used by museum professionals, but since then, they have developed a highly complex range of options for information retrieval. Searching and browsing is what makes the on line experience of the collection different from the physical museum visit. It is more individual and available to a larger audience and a greater variety of online users.

Ever since they appeared on the web, collections databases of museum objects have been a topic of discussion about whether, and in what form, they could engage properly online users and fulfil their educational and information needs. Donovan sees the first online databases resembling a printed museum catalogue in that they contained object-directed, expert information which was as such, of little interest to the broader public.[6] He therefore proposed that the bare facts of objects be surrounded by layers of interpretation, that is, information stemming from the socio-historical contexts of the objects. In other words, he proposed a content management system that could capture and manage the contents museums create and which they could publish on the Internet. Consequently, the term "access" meant to him only the ability to overcome spatial and temporal constraints to seeing museum objects and reading their labels in a digital form. For that reason he preferred the term "public learning" which could provide better learning opportunities for users through stories presented about objects via "entertaining, prescribed paths that both lead the user lightly by the hand

[6] Donovan, Kevin. The Best of Intentions: Public Access, the Web & the Evolution of Museum Automation. // *Museums and the Web 1997*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics

and encourage curiosity, exploration and serendipity".[7] Cameron dealt with similar issues concerning collections databases and the access to the wider content about museum objects.[8] Aware of the emergence of new knowledge paradigms and attempting to redefine documentation practices, she finds that the development of browsing and searching mechanisms could facilitate information retrieval processes. Like Donovan, she argues that collection information should be enriched by both narrative and object-centred histories with which the information can be conceptually expanded. Hyperlinking possibilities offered by the Internet technology, together with the associative systems of meaning making can provide layering and exploration of various contexts of museum objects. A free choice of paths is, in her opinion, inviting for users since they can explore collections in more depth and by self-guided interpretations. By traversing a database and following links between the curator-produced records, users create their own narratives. In combining narratives with object-centred histories Cameron approaches Manovich's view of a database as a cultural form, as a basis for an interface of a new media work. "An interactive narrative (which can be also called "hyper-narrative" in analogy with hypertext) can then be understood as the sum of multiple trajectories through a database".[9] His notion of the narrative belongs to the computerized society. It is the one which replaced the grand narrative of the Enlightenment and became a symbolic form of the modern age, or better yet, computer age, in which it presents the centre of the creative process open to a large number of people. This process of narrative formation is, however, made by selecting already existing information (through links).

Manovich's "hyper-narration", which is actually a form of retelling, can be further elaborated with tools that have been introduced in the second stage of the web revolution that redefined the role of producers in online environments. The development of the so called web 2.0 applications have for a decade now been enabling and encouraging participation from online users who ceased to see themselves solely as consumers of information but started sharing their own experiences and interpretations about certain topics, including those related to museums and their collections. This has been a positive step towards democratization, greater engagement of the public and greater interaction among online museum users through web 2.0 technologies such as blogs, forums, wikis, and

[7] Ibid

[8] Cameron, Fiona. The next generation - 'knowledge environments' and digital collections. // *Museums and the Web 2003*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics.; Cameron, Fiona. Object-Orientated Democracies: Contradictions, Challenges and Opportunities. // *Museums and the Web 2008*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics

[9] Manovich, Lev. Database as Symbolic Form. // *Museums in a Digital Age* / Perry, R. (ed.). London: New York: Routledge, 2010 (1999), 69

resulting forms of social networks where museums have created platforms for lively discussion about certain museum events. Openness and user centricity are core components of web 2.0 which have been influencing and encouraging museums to open their strictly controlled collections and change their conventional ways of communications by allowing users to contribute to them.

Collection databases have also been affected by the technological changes. Social tagging or folksonomy[10] has served to encourage user engagement with the collection. "What distinguishes tagging as a form of visitor engagement from other kinds of "interactive" museum programs is that the impetus lies not with the institution but with the individual; the visitor completes the experience. Tagging represents a personal investment in the museum's collection. Visitors add value for the museum, for themselves, and for other visitors by revealing distinct perspectives and connections, and recording them with tags".[11] Adding labels is even a more creative way of engaging users and broadening the interpretative potential of the objects. One such example is the Science Buzz web site of the Minnesota Science Museum.[12] Another kind of user contribution to the meanings of collections has been achieved through wikis. A wiki is a specialized form of Content Management System (CMS) which provides a facility that makes writing to and updating a web site very easy for a group of users and can lead to one or more people building up a corpus of knowledge. The Science Museum Object Wiki[13] was developed in order to engage users with the objects in the museum collection and encourage them to add their personal memories and experiences of using the objects.[14]

Blogs are yet another way of connecting museums and online users, though its organization depends on a temporal ordering of articles and associated comments. Unlike wikis, it allows individual contributions which are shown on the interface as individual, are open to readers' comments to the blog posts. An important element of a blog is the topic. The community that forms online users is highly variable and shaped largely by topic.[15] Museum related blogs can be

[10] For example on the website of the Indianapolis Museum of Art http://www.imamuseum.org/art (10 April 2011)

[11] Wyman, B., et al., Steve.museum: An Ongoing Experiment in Social Tagging, Folksonomy, and Museums. // *Museums and the Web 2006*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics.

[12] http://www.sciencebuzz.org/museum/object/2011_01_mummified-hawk/labels (11 April 2011)

[13] http://objectwiki.sciencemuseum.org.uk/wiki/Home (11 April 2011)

[14] Looseley, R., and F. Roberto, Museums & Wikis: Two Case Studies. // *Museums and the Web 2009*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics.

[15] Grabill, J.T. et al. Take Two: A Study of the Co-Creation of Knowledge on Museum 2.0 Sites. // *Museums and the Web 2009*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics

launched by the museum itself[16] or by an online community that feels connected to the museum and its programmes.[17]

Collaborative creation of meanings

Following the developments of online collections databases and interfaces, the Story Sharing online participative model proposed in this paper includes some of the characteristics of the aforementioned examples and shares the lines of thought about the future of museum communication with the broader public. However, it also introduces a new feature that supports the change of knowledge paradigms in museums.

Trying to compare the process of creating hyper-narratives Manovich draws on Mieke Bal's elements of the narrative and states that it is not enough only to create online trajectories. The online user, the creator of the narrative should "control the semantics of the elements and the logic of their connection".[18] Grounded in this statement the Story Sharing model adds the actual creation of information, all performed by an online user. In other words, what this model aims to achieve is to create space(s) on the museum site (i.e. online interface) which will provide online users with a possibility of creating their personal, individual content and share it with the entire online community (Fig. 1). In creating a personal story the user can post on his/her page already existing material by taking it over from the online environment[19], personally created material (texts, photos, videos) and the objects from the online museum collection (images with accompanying text). The created story can be commented and evaluated by other online users. Each interface is reserved for only one user, where he/she can add their content and use the museum-created information as well. As such, the model combines the features of blogs and wikis. The key differentiating feature is the use of the museum's online collection, in other words, museum objects that can be used and brought into the relationship with individual stories. They become related to unpredictable contexts and find their particular associative place in the "mental maps" of users.

[16] Such as the one launched by the Powerhouse Museum in Sydney, Australia http://www.powerhousemuseum.com/collection/blog/

[17] Dulwich on View blog is related to the Dulwich Picture Gallery http://dulwichonview.org.uk/; Liu, A., et al., Dulwich OnView: A Museum Blog Run by the Community for the Community. // *Museums and the Web 2010*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics.

[18] Manovich, Lev. Database as Symbolic Form. // Museums in a Digital Age / Perry, R. (ed.). London: New York: Routledge, 2010 (1999), 70

[19] Provided that the material is not copyrighted or it is published under the GFDL or one of the Creative Commons Licenses

The institutional change suggested by this model is reflected in the way personal stories of users might bring new insights, information, emotional and aesthetic discoveries related to the museum objects and consequently be inserted into the museum database (possible influences on the "upgrading" of the museum databases and on the curators' professional perspectives are shown in Fig. 1 by the dashed arrows)

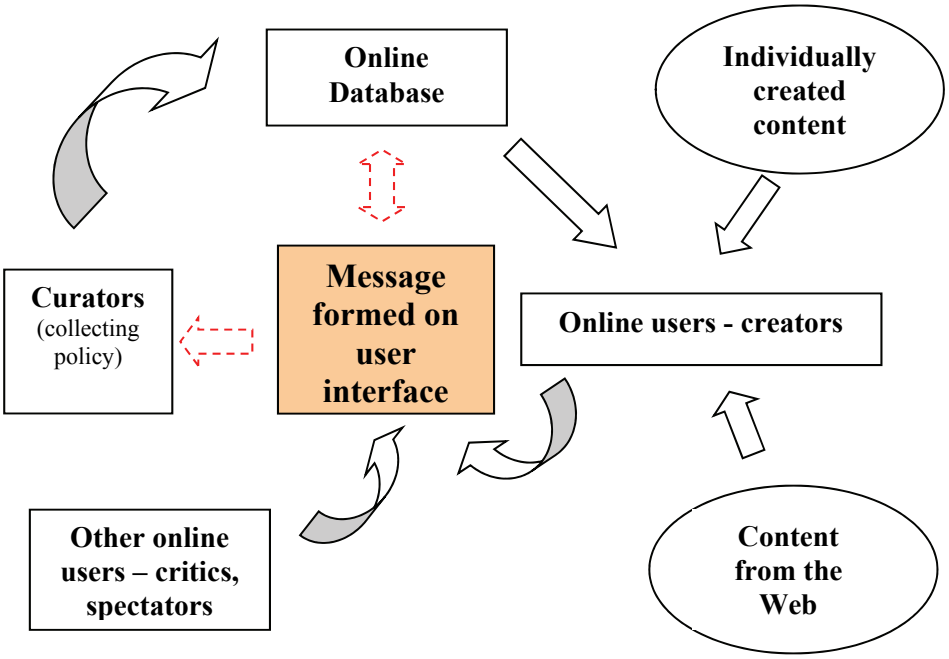

Fig. 1 Creation of personal content related to museum objects and the directions of impact on the institutional "rationale"

In constituting the model it was important to choose the most appropriate form of the desired relationship between museums and their online users. That is why, in addition to spectators, who are seen as the audience in the narrowest sense of the word, the success of the model relies on creators, and to a lesser degree to critics[20]. It is also important to stress that the target users are not specialists since the model does not envisage any sort of information quality or update such as might be evident in wikis. It rather encourages participation that brings into play individual impressions, emotions and/or aesthetic expressions in addition to factual information. It also allows other members of the online

[20] Out of all possible categories of online users – creators, critics, collectors, joiners and spectators, http://forrester.typepad.com/groundswell/2007/04/forresters_new_.html

community to post their comments and evaluate stories. The Story Sharing model shows the relevance of the collection not only in terms of presenting curator-produced meanings but of facilitating a feeling of connection and familiarity with the material culture housed in the museum through the production of meanings that stem from the objects' contextualisation within the fabric of people's living memory.

Simulation of the model (html)

The Pool of Topics web page (Fig. 2) represents the central point of the Story Sharing model (within the museum website) where online users (whether museum curators or audiences) can see all the relevant topics relating to or implying the museum's wider sphere of social and cultural engagement.

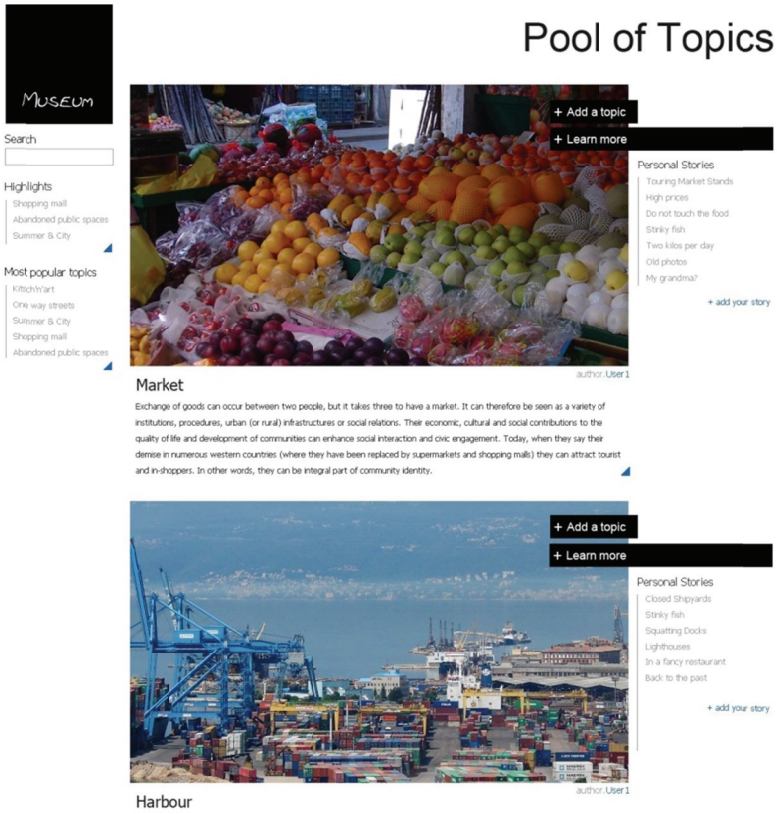

Fig. 2 Pool of Topic web page

In addition to browsing the existing topics, users can suggest and post new ones, but also create their own stories on the topics of their choice. Personal stories (Fig. 3) can be formed by one or more texts and photos and/or videos created by

users and the images of the artefacts from the online museum catalogue. Posted stories are open for comments and assessment by the entire online community. Most important or interesting topics can be selected by the museum curators (which is shown in the left-hand vertical navigation menu, under “highlights”), and a list of the most popular topics crated automatically through filtration of the information about visits and evaluation of certain topics and stories by online users.

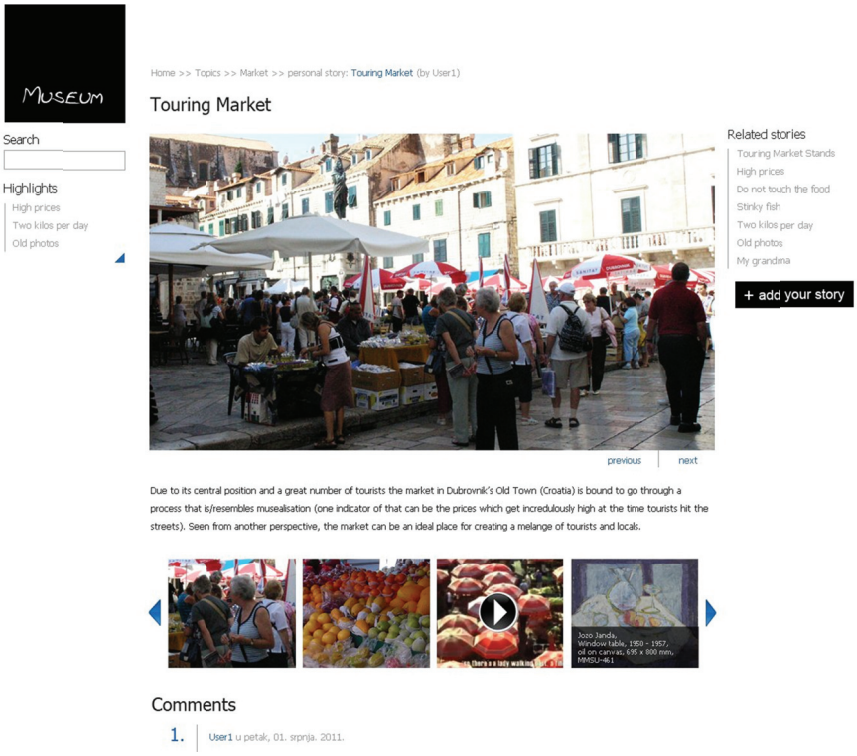

Fig. 3 Personal Stories web page

Concluding remarks

An institutional change encouraged by this model is discernible in several respects. The museum, i.e. curators, assumes a role of a moderator, someone who might choose a topic and moderate discussions and/or different opinions about certain topics. The starting topic is just a set of information on or around which people build their own narratives. The museum also ceases to be the authoritative voice in the dissemination of values but one tone in a cacophony of individual voices forming an online community. As such, the museum can serve as a place, or rather, space for stimulation and empowerment where an online participation is not an end in itself, but a continuous process of the changing of

perspectives of both the institution and its users. The following phase of the project will include qualitative and quantitative methods of evaluating the functioning and success of the model.

References

Cameron, Fiona. The next generation - 'knowledge environments' and digital collections. // *Museums and the Web 2003*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics. http://www.archimuse.com/mw2003/papers/cameron/cameron.html (18 June 2009)

Cameron, Fiona. Object-Orientated Democracies: Contradictions, Challenges and Opportunities. // *Museums and the Web 2008*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics. http://www.archimuse.com/mw2008/papers/cameron/cameron.html (3 July 2010)

Donovan, Kevin. The Best of Intentions: Public Access, the Web & the Evolution of Museum Automation. // *Museums and the Web 1997*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics. http://www.archimuse.com/mw97/speak/donovan.htm#ixzz1PS1D52H7 (5 July 2010)

Grabill, J.T. et al. Take Two: A Study of the Co-Creation of Knowledge on Museum 2.0 Sites. // *Museums and the Web 2009*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics. http://www.archimuse.com/mw2009/papers/grabill/grabill.html (20 July 2010)

Hooper-Greenhill, Eilean. Museums and the Shaping of Knowledge. London: New York, Routledge, 1992.

Liu, A., et al., Dulwich OnView: A Museum Blog Run by the Community for the Community. // *Museums and the Web 2010*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics. http://www.archimuse.com/mw2010/papers/liu/liu.html (20 February 2011)

Looseley, R., and F. Roberto, Museums & Wikis: Two Case Studies. // *Museums and the Web 2009*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics. http://www.archimuse.com/mw2009/papers/looseley/looseley.html (14 June 2009)

Manovich, Lev. Database as Symbolic Form. // Museums in a Digital Age / Perry, R. (ed.). London: New York: Routledge, 2010 (1999), 64-71

Prown, Jules David. An Introduction to Material Culture Theory and Method. // Winterthur Portfolio/ 17(1982) 1; 1-19

Parry, Ross. Recoding the Museum – Digital Heritage and the Technologies of Change. London: New York, Routledge, 2007

Weil, Stephen E. Rethinking the Museum and other mediations. Washington: London, Smithsonian Institution Press, 1990

Wyman, B., et al., Steve.museum: An Ongoing Experiment in Social Tagging, Folksonomy, and Museums. // *Museums and the Web 2006*/ Trant, J; Bearman, D. (eds). Toronto: Archives & Museum Informatics. http://www.archimuse.com/mw2006/papers/wyman/wyman.html (17 June 2009)