

PIOTR MARECKI¹

Between Provocation and Experiment. Technical Reports and the Ecology of Scholarly Communication in the Humanities

Abstract

The aim of this paper is to describe a genre that is gaining importance in contemporary humanities, and especially in its areas devoted to digital media – the technical report. Technical reports are discussed as part of the larger trend of open notebook science. This form of communication draws from experiences worked out in the field of technology, computer science and science. In this understanding technical reports are a genre of gray literature, a form dedicated to communicating results of research projects conducted by laboratories. The case study discussed in this text is devoted to a series of technical reports from the MIT Trope Tank lab, which are interpreted in the light of a manifesto-text for this form of communication, *Beyond the Journal and the Blog. The Technical Report for Communication in the Humanities*, published by Nick Montfort. One of the aims of the article is also to contextualize technical reports against the background of other forms and methods of communication in laboratories from the field of contemporary humanities (including blogs, brochures, lab notebooks).

¹ Institute of Culture, Jagiellonian University, Poland, piotr.marecki@uj.edu.pl.

Keywords:

technical reports, digital humanities, creative computing, science communications, the Trope Tank, lab

1. LABORATORIES IN CONTEMPORARY HUMANITIES

Although laboratories in digital-oriented humanities are a relatively new phenomenon, they are a form of collaboration and research gaining popularity in the United States, where this field of study is most developed. MIT professor Nick Montfort, the head of The Trope Tank lab, explains: “Labs are frameworks for collaboration and research work which exist beyond the classroom or an individual scholar or researcher. A lab might have materials that allow people to work together in different ways...” (Marecki, 2016). Usually publications devoted to laboratories underline the possibilities enabled by the arrangement of space, equipment at the disposal of the team and possibility of teamwork. Labs located at universities specialized in the field of science, which is organized in the rhythm of grants for limited time periods, foster continuity of research.

This text is not devoted to the idea of a research lab in general; it focuses on the laboratories’ forms of communicating and informing about their work. The phenomenon of humanities labs shall be briefly mapped out, then we will discuss the case study of the experimental Trope Tank lab at MIT. The choice of this particular entity was inspired by the fact that its head, Nick Montfort, published a sort of theoretical manifesto – *Beyond the Journal and the Blog. The Technical Report for Communication in the Humanities*, in which he informs of the invention of a new form for communication in humanities and presents its advantages. The role of manifestos is often to provoke, but also to bring new, previously nonexistent, phenomena to life. Montfort’s text was published in the journal “Amodern” in an issue titled, significantly, „The Future of the Scholarly Journal” (Montfort 2013). The aim of my article is to study to what extent the manifesto was realized in practice, through the analysis of a series of technical reports published by The Trope Tank. I shall analyze a series of reports published by The Trope Tank, and shall try to set them against a larger context of literature on the use of blogs in sciences, described by Jill Walker or Cornelius Puschmann and Merja Mahrt, the wider trend of open notebook science and research conducted in humanities by laboratories (Montfort, Fedorova, Stayton). I shall also mention other genres used in communication from labs, including blogs, pamphlets, and lab notebooks.

One of the most influential labs in the world is the MIT Media Lab in Cambridge, Massachusetts, which can be treated as a sort of model for this type of research work and knowledge production. It is thus not surprising that its idea is close to the principles that underlie the functioning of technical institutes. The guiding principle of the MIT expressed in its motto, “Mens et Manus” – “mind and hand”, is combining intellectual work, broadening of theoretical horizons with development of the practical craft. Often, research, teaching and production are treated as equally important purposes of the laboratory. The Comparative Media Studies/Writing program founded in 1999 and developed under the leadership of Henry Jenkins has become the most influential curriculum in the field of media, with a special emphasis on digital media. One of the ideas of the program for Graduate Students was to offer them positions of Research Assistants in labs. In the CMS/W there are several labs and research groups, which often are organized around the collaboration of students with affiliated researchers and artists, as well as independent ones, on artists in residence at MIT². The idea promoted by the MIT proves itself to be a functioning solution also at other estimated American universities; for instance, Stanford University hosts a Literary Lab directed by Franco Moretti³, the University of Colorado at Boulder has a Media Archeology Lab⁴ led by Lori Emerson, Harvard University hosts the MetaLab headed by Jeffrey T. Schnapp, the Washington State University Vancouver has an Electronic Literature Lab led by Dene Grigar⁵, and the Maryland Institute in the Humanities of the University of Maryland hosts The Deena Larsen Collection directed by Dr. Matthew Kirschenbaum⁶. Another role is fulfilled by labs whose main focus is teaching, which are common in the higher education system. Examples of such labs include the centers at the New York City CUNY⁷, including the New Media Lab⁸. There are also laboratories, which, themselves being research teams, form larger networks, like CESTA (Center for Spatial and Textual Analysis)⁹, which includes the Literary Lab, the Spatial History Project and the Humanities + Design lab. One

² The MIT Game Lab, Hyperstudio, the Imagination, Computation, and Expression Laboratory (ICE Lab), the MIT Mobile Experience Lab, Open Doc Lab, E-Lab: the Laboratory for Public Engagement with Science, <http://cmsw.mit.edu/research-groups/>, [Access date: 10.02.2015].

³ <http://litlab.stanford.edu/>, [Access date: 10.02.2015].

⁴ <http://mediaarchaeologylab.com/>, [Access date: 10.02.2015].

⁵ <http://dte-wsuv.org/wp/ell/>, [Access date: 10.02.2015].

⁶ <http://mith.umd.edu/larsen/>, [Access date: 10.02.2015].

⁷ <http://www.gc.cuny.edu/Degrees-Research/Centers-Institutes/>, [Access date: 10.04.2015].

⁸ <http://newmedialab.cuny.edu/projects/>, [Access date: 10.04.2015].

⁹ <https://cesta.stanford.edu/>, [Access date: 10.04.2015].

of the most interesting groups realizing projects in the field of digital humanities in Europe is the Bergen University Electronic Literature Research Group headed by Scott Rettberg¹⁰. One of the members of this team, Jill Walker Rettberg, is the author of one of the most acknowledged blogs in the field of digital media, and has also been using this medium to publish the output of her research in this field. This is not an exclusive list, it names only a few of the institutions that both conduct pioneering research in the field of digital media, and teach students. It has to be underlined that the phenomenon is much more widespread.

The listed leading labs in the field of digital-oriented humanities each have their own aims, mission, and conduct different types of research. A detailed discussion of their mission and work organization is beyond the scope of this article. Given that laboratories in humanities are a new phenomenon, each of them deals differently with the problem of communicating their research results and informing about their work, both for the advanced reader as well as for students only at the beginning of their academic career.

2. THE TROPE TANK AND THE ECOLOGY OF COMMUNICATION

Some of the most innovative, and at the same time provocative, methods for communication have been proposed by The Trope Tank lab, MIT, headed by prof. Nick Montfort. In 2012, he began publishing a series of Technical Reports, of which 10 have been published as of February 2015. Given that reports are not the only form for communicating the research results employed by The Trope Tank, we shall begin with discussing other forms, often complementary to the reports.

One of the most important aspects of communication are names. Montfort, an expert in naming¹¹, explains the origin of the name for the project:

For the Trope Tank, I wanted a name that suggested inquiry into the literary and into poetics. If we studied interactive fiction all the time, we could call it the Interactive Fiction Lab, but that's not what we do here, right? If we studied digital poetry all the time, we could call it the Digital Poetry Lab, but we do those things and other things as well. I also wanted a name that made a connection to things like the Tow Tank at MIT, which is an actual tank of

¹⁰ <http://www.uib.no/en/rg/electronicliterature#>, [Access date: 10.04.2015].

¹¹ Alongside research and artistic work, Montfort also heads a company that provides naming services, cf. <http://nomnym.com/>, [Access date: 10.02.2015].

water into which robot fish and other things are immersed, and also the think tank, as if we were undertaking writing and research in that type of directed mode. So that's how the Trope Tank name came about (Marecki 2016).

When entering the lab's website, the first thing the reader sees is its mission statement: "Developing new poetic practices and new understandings of digital media by focusing on the material, formal, and historical aspects of computation and language"¹². According to information on the site, it is in this area that Prof. Montfort collaborates with Research Assistant students, chosen persons from MIT faculty (like librarian Patsy Baudoin) and also visiting scholars from The United States, Mexico, Russia, Slovakia, Denmark, Poland. The Trope Tank's website also lists the specific projects that have been developed in the lab during the recent years, including *10 PRINT CHR\$(205.5+RND(1)); : GOTO 10*, *The Deletionist*, *Racing the Beam*, *Slant*, *Renderings*. The site lists 28 names of collaborators, including outstanding artists like Gretchen Henderson, Amaranth Borsuk, Mark C. Marino, or two leading professors in the field of game studies, Jesper Juul and Ian Bogost, who are not affiliated neither with the lab, or the MIT. Montfort and his associates have also gathered an impressive collection of historical computer and gaming equipment, which is functional and used in the everyday activities of the lab. To put it in Montfort, Stayton, and Fedorova's (2014, p. 53) words, "The Trope Tank offers hardware (in working condition and set up for use) from the 1970s, 1980s, and 1990s, including videogame systems, home computers, and an arcade cabinet". The creation of a catalog of the lab's collection (hardware and software) was a separate project by the MIT student Erik Stayton¹³. This diverse team of researchers communicates its results in a number of ways. The most traditional ones are presentations at international conferences¹⁴, printed articles in scientific journals or books (The Trope Tank has an affiliated book series, Platform Studies, published by the MIT Press¹⁵). Among the less traditional forms of research presentation practiced by Montfort are reading series, a form of author meetings popular in the United States. The meetings organized at the MIT are a form for presenting texts in the digital age open to all listeners/

¹² <http://trope-tank.mit.edu>, [Access date: 10.02.2015].

¹³ http://nickm.com/trope_tank/materials/, [Access date: 10.02.2015].

¹⁴ Nick Montfort and his collaborators present at conferences around the globe, and begin their presentations with a short introduction about the Trope Tank's activities, during which they also show photographs of the lab and its equipment.

¹⁵ <http://mitpress.mit.edu/books/series/platform-studies>, [Access date: 10.02.2015].

viewers/readers. The idea and name of the series, Purple Blurb, are explained by its founder as follows:

When I started my series at MIT, where the assumption is that everything of course involves technology, computers and so on, I called my series Purple Blurb, which is a much more fanciful, unusual name. Purple Blurb derives from Frank Gelett Burgess, probably the first famous creative writer to be an MIT graduate, who actually invented ‘blurb’ as a term for a certain type of endorsement and also wrote the poem *The Purple Cow* (Marecki 2016).

Communicating research results and reporting scientific activities through presenting works of art created in the process of research work at the lab¹⁶ is also not a new thing at MIT, where the corridor walls are hanged with maps for visitors indicating locations of works of art and architecture on campus. The exhibition *Games by the Book*¹⁷ organized as the lab’s scientific project can be considered an effort devoted to presenting digital works in public space. The idea of presenting an exhibition of games based on literature at the Hayden Library, mounted on computers, with the books they adapt attached to them with chains, was an experiment in exhibiting and promoting digital works. The pioneer challenges accompanying the organization of the exhibition and the challenges of exhibiting digital art in general were explained for the audience in a report titled *Electronic Literature for All: Performance in Exhibits and Public Readings* (Fernandez-Vara, 2013). It is worth underlining that in this research project the equipment used was equipment from the laboratory, and The Trope Tank team decided to communicate their research progress through technical reports.

Compared to the described forms of presentation, the blog co-authored by Nick Montfort (Grand Text Auto¹⁸, one of the most influential blogs about digital media, active since 2003) or his Twitter profile (<https://twitter.com/nickmofo>) seem to be more traditional forms of communication in the field of science.

¹⁶ A number of projects conducted by the lab have artistic results, like generative texts, demos, programs, or translations.

¹⁷ The exhibition was also shown in Poland, under the title *Gry: przypadki książkowe* in Kraków during the 2014 Ha!wangarda Festival, http://nickm.com/trope_tank/games_by_the_book/, [Access date: 10.02.2015].

¹⁸ <http://grandtextauto.org/>, [Access date: 10.02.2015].

3. THE TROPE TANK TECH REPORTS

As we have mentioned, The Trope Tank reports are only one of many forms of communication the research team uses to communicate the progress or results of its research. Montfort, experienced both as a researcher and a blogger, intended the reports to be a form situated in-between (which is also signaled in the title of his manifesto). Montfort notes that using the technical report genre is a form of provocation, and that as a form it matches perfectly the variety of retro platforms used daily at the MIT lab. The technical reports in his view are a genre for communicating scientific content that are not subject to peer-review (the reports are, however, read and discussed during lab meetings). Referencing the tradition of the 20th century reports, Montfort (2013) writes: “[...] the technical report is a vital format that can be of further help to the humanities, as it already has been in in many fields (including ones with some humanistic connection)”. He then describes reports as an iconic example of “gray literature”, that is “unofficial written work disseminated by organizations whose primary business is not publishing” (Montfort 2013). It seems that it is not by coincidence that Montfort in the title of his manifesto referred to blogs, a form of communication extremely popular in the field of science, and especially among researchers in digital media. As Puschmann and Mahrt (2012, p. 179) remark:

Blogs are actively used in a variety of scholarly contexts by academic communities around the globe. They are used by individual academics to document their research, discuss ideas with peers, educate and communicate with a wider audience beyond their immediate work context, and promote their research and often themselves before a wider public. Blogs are also used by science organizations, journalists, and enthusiasts, who often have in-depth academic training, to communicate about scholarly issues.

Jill Walker distinguished three forms of blogging in the academic field: 1) the first type are public statements by researchers, who treat their blog as a platform for political, social, ideological debate, where they comment on current events in politics, etc. The implied reader of such texts is a very general audience; 2) the second form, the research log, is defined by Walker (2006) as “record of research conducted and ideas that might be pursued”. Jill Walker points to a number of related traditions in the field of science, like notes, logs, quotes in the field of humanities, or records of experiments in laboratories. The audience of this form may be already limited to more aware readers; 3) the third type of research blogs

are Pseudonymous Blogs about Academic Life, which are a voice from inside the academia about the life of the university or the less official part of conducting research (they most often have an unofficial form, different from discussions during events like conferences devoted to academic life).

One of Walker's intuitions is the observation that blogs, in contrast to academic reports, are not closed forms. They are a process, action, a place of exchange, dialog (Walker even compares blogs to Socratic dialogues), where the output is created through exchange. This form of writing also gives a number of opportunities for further advances: "Research blogging can likewise be research practice" (2006, p. 9). Walker does not view blogs as an alternative to traditional publications. Lack of scientific rigor, superficiality, urgency of writing do not promote deeper reflection. The open form in turn leads to continuous returning to the same subjects and changes of mind.

Within such a framework, technical reports would be something between a Research Log and a traditional academic article published in a scientific journal. One of the advantages of this form of communication is the possibility of escaping the superficiality of urgency of writing, with which Walker characterizes blogs.

Technical reports are also part of a rather radical approach to communication in science – open notebook science, the main principle of which is regular publication of the results of conducted research. Scientists who belong to this movement take the radical step of publishing results right after obtaining them in the form of open notes, without waiting for a conference presentation or publication in a peer-reviewed journal (which is usually associated with a long waiting period)¹⁹. In this sense, technical reports, which also by-pass these steps, are close to the principle of publishing results directly upon their obtainment.

In the manifesto Montfort quotes several definitions of reports; for instance, one proposed by Mount and Kovacs (1991, p. 48), who treat reports as "documents prepared by organizations to provide specific information about specific projects or programs of interest to knowledgeable people".

Preparing scientific papers throughout his career, the head of the lab read and referenced several technical reports:

Specifically, there was work from Carnegie Mellon University's Oz Project issued as technical reports, which I would have otherwise been unable to access, and they were doing quite radical and unusual projects, which weren't

¹⁹ Examples of open notebook science forms can be found in the Open Notebook Science Network (<http://onsnetwork.org/>), or The IPython Notebook (<http://ipython.org/notebook.html>).

something like mainstream biology or chemical engineering. In many cases, they were ahead of the mainstream of their field and there weren't journals that were ready to publish this work (Marecki, 2016).

As of now, the series of reports comprises of 10 published texts. Four were written in 2012, three in 2013, two in 2014, and one in 2015:

1. *The Trivial Program "yes"* (Nick Montfort)
2. *XS, S, M, XL: Creative Text Generators of Different Scales* (Nick Montfort)
3. *Creative Material Computing in a Laboratory Context* (Nick Montfort and Natalia Fedorova)
4. *Carrying across Language and Code* (Nick Montfort and Natalia Fedorova)
5. *Electronic Literature for All: Performance in Exhibits and Public Readings* (Clara Fernández-Vara)
6. *Videogame Editions for Play and Study* (Clara Fernández-Vara and Nick Montfort)
7. *No Code: Null Programs* (Nick Montfort)
8. *New Novel Machines: Nanowatt and World Clock* (Nick Montfort)
9. *Stickers as a Literature-Distribution Platform* (Piotr Marecki)
10. *Textual Demoscene* (Piotr Marecki).

They all tackle issues within the scope of The Trope Tank's interests, dwelling on subjects from the field of creative computing²⁰. Most of them fulfill the conditions for technical guides. Some of the reports are devoted to broadly understood software studies and platform studies, in which digital works are analyzed through close-reading of the algorithm (the reports devoted to the program *Yes*, generators of different scale, translation of programs, and novels created as computational literature) or the analysis of the relationship between hardware and software. A separate category of reports includes texts created during particular projects realized at The Trope Tank, like experiments with translating digital works, exhibiting digital works in public space, and editing, documenting or porting games. The reports are very consequent in applying the methodology proposed by Montfort and Bogost (2008) for the analysis of digital works. They propose that there are five levels of analysis of works: reception/operation, interface, form/function, code, platform. Hence, the technical reports that are accounts of the creation of a particular work as part of a research project discuss every aspect of the work,

²⁰ The name for this activity is taken from the magazine "Creative Computing", which was originally edited by David Ahl and ran from 1974–1985.

including a detailed analysis of the code, a material and historical discussion of its platforms, as well as the interface and functions of the work.

One of the most provocative and experimental reports is the one devoted to null programs, in which Montfort focuses on programs without contents (the report is a sort of supplement to Craig Dworkin's (2013) book *No Medium*, a review of the 20th century works from different fields that have "no content"). The provocativeness of this report lies in the fact that when Montfort analyzes works without code he includes also the characteristics of platforms, which enabled the creation of such programs.

It seems that the form of the technical report gives the writers freedom and inspires boldness (that they would not permit themselves writing to a peer-reviewed journal) – an example of which is the very choice of the subject of the report initiating the series, which was devoted to programming for fun, and programs that generate output like "yes", „Nick Rules", etc. But only at first glance the research problem seems frivolous. The second report categorizes artistic programs, like clothes, according to size: XS, S, M and so on. Montfort writes that it is his will to experiment that pushes him to create in this genre (Marecki 2016). It should be mentioned that both the humor and the experiment are targeted at a viewer/reader who can appreciate them.

Another important aspect is situating this genre within a scientific context. In the case of tech reports literature and references are mentioned, but often in a rather off-hand manner. The reports are written with a specialized audience in mind, an audience who knows the literature, so often there are just single references, without drawing a broader scientific context that is required in traditional papers. In the aspect of citations, reports are exactly in the middle between blogs (which often use almost none) and papers with rich bibliographies. Reports are above all accounts of projects, both work-in-progress and finished ones. They are closer to the idea of presenting how the described process operates rather than interpreting or contextualizing it.

One of the aims of existence of the laboratories mentioned above is primary research: the practical creation of new realizations, pioneering discoveries. The idea of laboratories in humanities is far removed from understanding humanities as the philological interpretation of texts. The reports are most often devoted to accounts of pioneering research. They are often the only publications about a given subject (for instance, it is hard to find texts on translating digital works other than *Carrying across Language and Code* or publications about trivial programs).

Technical reports are a phenomenon tied to the institution and formula of the laboratory. As I have underlined above, the laboratories are often furnished with

special equipment. The proper use and understanding of that equipment and tools offered by it is helpful in the preparation of such a document. Hence, familiarity with the hardware and software often conditions the participation in the work of the lab in the field of digital media. Technical reports are accounts only of projects created within a given laboratory. They are not accounts of research in libraries (as can be blogs or papers), they refer only to projects created by a given team, using given equipment within a particular space (the laboratory).

The distribution of reports is also an interesting aspect. The reports are printed and binded, members of the MIT community can pick them up from a shelf installed on the corridor wall next to the entrance to the lab, one of the walls inside the lab is also dedicated to exhibiting previous reports, which the guests are free to take. The reports are also distributed during meetings at MIT and events dedicated to creative computing (like those organized by the Electronic Literature Organization), or international conferences, in which affiliated researchers participate²¹. All the reports can be downloaded from the website²² (they are published with Creative Commons license that “allows any sort of redistribution, commercial or non-commercial, that includes attribution and preserves the reports’ original sharability” (Montfort, 2013). It is worth adding that, in accordance with the above definitions, most reports are not targeted to laymen; the audience they are aimed for has to be well versed in code studies in order to appreciate a report about programs without code. There is no doubt that in scientific writing aimed for a broader audience, some notions would have to be explained or put in context (this level of presentation is often omitted in the described reports, although they often have references to literature). It is in this respect that the reports’ genre adherence to “gray literature” is visible, as opposed to forms such as “white papers”, which are written by experts for non-experts.

²¹ All the reports are available for download in pdf format from The Trope Tank’s website, they are also available at DSpace@MIT, which, according to the description on MIT’s website, is “a service of the MIT Libraries to provide MIT faculty, researchers and their supporting communities stable, long-term storage for their digital research and teaching output and to maximize exposure of their content to a world audience. DSpace@MIT content includes conference papers, images, peer-reviewed scholarly articles, preprints, technical reports, theses, working papers, research datasets and more. This collection of more than 60,000 high-quality works is recognized as among the world’s premier scholarly repositories and receives, on average, more than 1 million downloads per month”, <http://libguides.mit.edu/dspace>, [Access date: 10.02.2015].

²² http://nickm.com/trope_tank/#reports, [Access date: 10.02.2015].

4. CONCLUSION

Technical reports in the field of humanities are a developing part of open data science, closely connected with the formula of the laboratory. They belong within the larger phenomenon of open notebook science, which communicates information obtained in given research for an audience advanced in the given field. The style and scientific character of the reports is more organized and structured than in the case of notes or blogs. However, given their more relaxed treatment of literature and lack of peer-review, they do not fulfill the criteria of traditional papers. Technical reports are a form of communication in the field of humanities that is aimed at practice.

The technical reports from The Trope Tank are only one of the forms in which the lab communicates its research achievements. A very similar formula was adopted at another influential lab, the Literary Lab at Stanford University, where cyclical “pamphlets” are published²³. More in the spirit of open notebook science are communications by the Humanities + Design research lab at Stanford University, which are published in the form of short notes (often not even a full sentence)²⁴. Reaching for this rather outdated formula matches the research focused on media archeology, and perfectly fills the space for experiment in simultaneous communication and provocation. As Montfort (2013) writes about the genre: “The technical report is as fast as a speeding blog, as detailed and structured as a journal article, and able to be tweeted, discussed, assessed, and used as much as any official publication can be. It is issued entirely without peer review. On the one hand, this means that it cannot be considered vetted and used immediately for credentialing purposes”.

References:

- Bogost, I., Montfort N. (2008) *New Media as Material Constraint: An Introduction to Platform Studies*. In *Electronic Techtonics: Thinking at the Interface* (pp. 176–191). Raleigh: Lulu Press.
- Dworkin, C., *No Medium*. (2013). Cambridge–London: MIT Press.
- Fernandes-Vara, C. (2013) *Electronic Literature for All: Performance in Exhibits and Public Readings* (pp. 1–17). http://nickm.com/trope_tank/TROPE-13–01.pdf, [Access date: 10.02.2015].

²³ As of now there have been 8 reports published, cf. http://litlab.stanford.edu/?page_id=255, [Access date: 10.02.2015].

²⁴ <http://hdlab.stanford.edu/lab-notebook/>, [Access date: 10.04.2015].

- Latour, B. (1983) Give Me a Laboratory and I will Raise the World. In K. Knorr-Cetina, M. Mulkay (eds.) *Science Observed. Perspectives on the Social Study of Science* (pp. 141–169). Beverly Hills: Sage.
- Marecki, P. (2016) The Trope Tank. The Idea of a Lab in Humanities. *Zarządzanie w Kulturze* 1 [in print].
- Montfort, N. (2013). Beyond the Journal and the Blog. The Technical Report for Communication in the Humanities. *Amodern* 1, <http://amodern.net/article/beyond-the-journal-and-the-blog-the-technical-report-for-communication-in-the-humanities/>, [Access date: 10.02.2015].
- Montfort, N., Stayton, E., Fedorova, N. (2014). The Trope Tank: A Laboratory with Material Resources for Creative Computing. *TextoDigital* 10(2). (pp. 53–74). <https://periodicos.ufsc.br/index.php/textodigital/article/viewFile/1807-9288.2014v10n2p53/28341>, [Access date: 09.04.2015].
- Mount, E., Kovacs, B. (1991). *Using Science and Technology Information Sources*, Phoenix: Oryx Press.
- Puschmann, C., Mahrt, M.(2012). Scholarly Blogging: A New Form of Publishing or Science Journalism 2.0?. In A. Tokar & M. Beurskens & S. Keuneke & M. Mahrt & I. Peters & C. Puschmann & T. van Treeck & K. Weller (eds.), *Science and the Internet*, (pp. 171–181). Düsseldorf: Düsseldorf University Press 2012.
- Walker, J. (2006). Blogging from Inside the Ivory Tower. In A. Bruns & J. Jacobs (eds.). *Uses of Blogs* (pp. 1–11). New York: Peter Lang.
- Walker, J., Mortensen, T. (2002). Blogging Thoughts: Personal Publication as an Online Research Tool. In A. Morrison (ed.) *Researching ICTs in Context* (pp. 249–279). Oslo: InterMedia.