Altmetrics in the humanities: perceptions of Italian scholars

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Abstract
On-line access to publications and interaction through social media for researching is becoming increasingly used in the humanities as well as the sciences. The evaluation of humanities research should be based on the transparency of the quality of the research which now has the possibility of creating an “Altmetric” alternative to the traditional peer review and bibliometric indicators. The Project “Altmetrics for the humanistic disciplines” aims to understand not only what functions in Altmetrics, but how and why it functions and also to gain knowledge of how the results of evaluation may be influenced by different elements.

Keywords: digital humanities, altmetrics, evaluation of publications

Introduction
Scholars have from the very first used the Internet to exchange ideas and research results quickly. We have now entered into a second phase, which could be called “collaborative”, and is different from the earlier “connected or networked” which aimed solely at providing information and pre-prints. In this current second phase of Internet use by the scientific community, Internet and the Web are the basic infrastructures for collaboration amongst virtual communities. Not only may the scholar answers e-mails and share pre-prints as before, but he can interact with other experts in all parts of the world and undertake the sharing of his preferences (like), give open access to reports and research data, and collaborate with other experts on bibliographies and digital libraries. Even though still fragmentedly and differently in the various countries, scholars have the instruments to better the productivity and quality of their research through sharing digital resources and collaboration with other scholars. The impact of Internet and the Web on academic research has been studied by some authors who have underlined the reduction in duration of research, as well as other advantages such as the possibility of avoiding duplication, facilitating co-operation, stimulating innovation and making the research results available to all interested parties (Tenopir & King 2008). A recent study of circa 2,000 researchers (Rowlands, et al 2011), has shown that the majority of scholars in the humanities (79.2%) and social sciences (84.0%) have included social media in their research sources. These results indicate that on-line access and interaction through social media for researching is becoming increasingly used in the humanities as well as the sciences.

Evaluation of digital publications
The proliferation of digital publications on-line has however brought criticism that refers to publications that have a scientific appearance but do not follow a scientific method. Many of the new types of digital publications do not necessarily follow an editorial process: they are made available in Open Access, in the Universities’ databases, in their departments’ Websites, in Open Access periodicals, in University publication series available only on-line. The importance of the evaluation of humanities research is in the transparency of the quality of the research for a broader public, just as for the scientific community, which now has the possibility of creating an “open” alternative to the traditional peer review and bibliometric indicators. It can be useful to the scholar himself to understand the impact of his results. A number of initiatives have highlighted the importance of recognizing different and equally effective means of assessing academic outcomes (i.e. ACUMEN, WISER, EICSTES). For instance, the EU research framework ‘Horizon 2020’ and the EU Digital Humanities Manifesto (2011), are clear examples, the latter stating: “The diversity of digital media and publication genres need to be accepted as genuine means of scientific communication”, including “repositories, publication platforms, social media networks and blogging”, where “Peer-reviewed texts in print journals can no longer be the only publications to be considered in application and proposal procedures”. Terras (2012) adds that academics need to work on their digital presence to aid the dissemination of their research, to both their subject peers and the wider community. Recently, the

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National Information Standards Organization (NISO) announced a new two-phase project to study, propose, and develop community-based standards or recommended practices in the field of alternative metrics (NISO 2013).

**Alternative metrics**

A study which has not yet been realized is that of examining whether and how the infrastructure of the Web may be used as a social filter of quality of the digital publications in the humanities.

Webometrics is the study of the quantitative aspects of the creation and use of digital resources, of the platforms and technologies of the Web, based on bibliometrics. The term was coined by Almind and Ingwersen (1997) and the indicator "Web Impact Factor" (WIF) was introduced by Ingwersen (1998). The indicator WIF may be defined as the number of Web pages on a Web site that receive links from other Web-sites, divided by the number of Web pages published on the site that are accessible by search engines. There is also a second definition of Webometrics, the study of Web contents with essentially quantitative methods for the research subjects, and using social science techniques that are not specific to any field of study (Thelwall, 2009), that underscores the development of applications of statistical methods in other disciplines.

The term Altmetrics is derived from Article level metrics or Alternative metrics, showing two different approaches to applying Altmetrics: either indicators of impact at the level of the article, or in a broader way, alternative bibliometric indicators. The term was proposed for the first time in 2010 in a Manifesto by Priem, Taraborelli, Groth and Neylon and has its roots in the Twitter hashtag # altmetrics. Altmetrics should be considered a subset of Webometrics, in as much as it concentrates on the impact of academic research measured on certain platforms and on-line academic social media rather than on the Web in general. (Priem J, Groth P, Taraborelli D, 2012). There are platforms that apply Altmetric metrics, for example: Altmetric.com, Plum Analytic, peerevaluation, Research scorecard and ImpactStory. The platforms that use Altmetrics metrics do not limit themselves to the basic statistics of download and access to the document, but attempt to obtain information about the readers and their use of the contents.

The supporters of Altmetrics do however point out that the indicators show the influence rather than the impact on scientific progress (Lin, Ferrer 2013). Even for Altmetrics one can find some disadvantages and obstacles: one can not avoid a manipulation in the order of relevance of the results, one may not depend only on automatic systems as it could influence the desired transparency of the evaluation (Priem, Groth, Taraborelli 2012).

**Aims and objectives**

The Project “Altmetrics in Italian humanistic disciplines” will propose alternative models and methods of traditional evaluation of digital publications in the humanities.

To obtain this scope, the Project proposes to:

- make evident the usage and the perceptions of the creators of digital resources for evaluation by Altmetrics;
- understand what may be the barriers and obstacles to evaluation by Altmetrics

The question in hand is: can Altmetrics become a system for evaluation of digital publications in the humanities?

The case study deals with academics in the humanities in Italy, in discipline groups classified by the Government as 10 and 11. Even academics in the humanities are creating increasing numbers of digital publications, accessible in digital libraries, institutional data-bases, or on the Web: besides books and periodicals, there are the blogs, teaching resources, research data, and other digital resources from research and teaching in university departments. Digital publications are hypertextual, dynamic, easily accessible, and may be opened and used again. The traditional Italian evaluation conducted by the Government Agency ANVUR considers only one type of publication – in print or pdf – whose evaluation is controlled by the publisher and offered to other academics in a one-dimensional way that excludes interaction. Consequently we may say that the traditional system of evaluation of quality is not adequate for the types of digital publications that use multi-medial systems and completely different editorial processes. The three traditional measures used for the humanities also have other disadvantages. Peer review is slow, inefficient and favors conventional thinking. Measures like the h-index require to much time to collect data, and the impact factor of the periodicals is applied wrongly as a way of evaluating the work of a single academic. Given the specific characteristics of digital publications on the Web, the procedure of evaluation of digital publications stimulates experimentation of Altmetrics which is open and collective, combining qualitative (peer review) and quantitative (bibliometric indicators) systems, making the seriousness of the digital resources on the Web clear.

**Methodology**

The Project, to last a year, is based on case study methodology of the community of humanistic scholars in Italy who participate in the Association for Humanistic Informatics and Digital Culture (Associazione Informatica Umanistica e Cultura Digitale (AIUCD)).

In the first phase of the Project “Altmetrics for humanistic disciplines” an analysis of the literature and documentation was begun, using a Wiki as the instrument for sharing humanistic digital resources in Italy. The Project will attempt to create communities of interest for each disciplinary area and to identify the authors who use social media in their research and/or on-line digital resources. To find these resources we will use the different platforms listed under the various categories in Table 1. The authors will be those in the AIUCD list. The expected result of this first
phase is that of discovering the types of digital resources used and the academics in each humanistic sector who create and use digital resources.

The on-line platforms covered by the Project “Altmetrics in humanistic disciplines” are grouped under the four categories as below.

Identification of the authors

Firstly it is necessary to identify univocally each author and/or contributor – for example, blog commentators. ORCID1 solves the problem of unambiguous identification of academics and contributors. ORCID is used for both traditional bibliometrics and Altmetrics.

Indicators of access to digital resources

The visibility of the Web, in order to make transparent the impact of digital publications, includes the possibility of their positive identification and measuring their download statistics. Various tools may used to this end. The primary instruments are proprietary and are based on access data. COUNTER is the measure given by the aggregators and counts the number of downloads for a publication. Google Analytics is another source for access metrics. Instruments in the social network are Research Gate and Academia Edu, used to measure impact calculated from access and downloading of publications.

Authors may use these statistics to gather basic information about the impact of their publications and use the analytic data to integrate information on their studies with impact factors of single publications. The administrators of institutional data-bases can use the statistics to promote their own contents (IR) as well as furnish information about the intellectual impact of the university to its administration.

Sharing of preferences

Social media such as Twitter and Facebook, Linkedin, Reddit, Faculty of 1000, Google+ are in this class of instrument. Twitter is the most used for sharing short messages, almost mini blogs, characterized by the #hashtag that groups tweets on a given argument. LinkedIn is a Web service used mainly to promote professional contacts. In January 2009 LinkedIn had about 30 million users, and in May of 2010, 68 million – more than double. The possibility of sharing bookmarks, with open indexing systems (tags) are the services based on a single platform on which it is possible to find collections of citations and links.

Bibliographical software like Zotero, Mendely, CiteUlike, Connotea are meant for academics and the organization of their publications and bibliographies, more than for librarians. The encyclopedias like Wikipedia, based on collaborative efforts, are part of this group, as they may be used to find relevant citations together with scientific and generic Blogs. Instruments like Delicious and Library thing also share opinions and key words, grouping citations on given arguments.

Creation of interest groups

Some Web platforms allow sharing of resources and create interest groups, facilitating the creation of thematic or geographical communities. Other instruments of this kind are the sites for organizing conferences like Lanyrd.com. The digital libraries may considered as part of this group of platforms, as they allow academics to share multidisciplinary resources and in some cases offer help in storing research findings and creating publications.

In a second phase there will be an inquiry based on a questionnaire followed by interviews with experts in each disciplinary sector. The questionnaire will be distributed through the AIUCD network and aimed at understanding academics’ perceptions of Altmetrics.

In the third phase, during the second half of 2014, the Project will produce a final report which will be discussed on the basis of data analysis, with possible recommendations for increasing visibility and quality of digital academic publications. The final Report will be discussed by thematic focus groups with experts in order to understand what barriers and obstacles there may be to alternatives to traditional evaluation.

The results will be analyzed following the measures inspired by the Plum and PLOS studies. PLUM classifies the indicators in 5 distinct types: Use, Capture, Recommendations, Social Media, and citations. Examples of each are:

- Use - Download, seen, held by libraries, ILL, document delivery
- Capture – Preferreds, bookmarks, saves, readers, groups, bibliographical systems.
- Recommendations - blog, news, Wikipedia, comments, reviews
- Social Media - Tweets, Facebook, ranking Google
- Citations - Web of science, Scopus

The Public Library of Science (PLoS) began evaluations of article levels (ALM) in 2009, prior to the development of Altmetrics and collects the activities used for evaluations into five groups.

Using PLOS taxonomy in evaluating research articles, the platforms that will be applied for the Project are grouped into the following categories:

- Access – the means by which the user enters online resources;
- Register – the users means to organization and sharing of digital resources;
- Discuss – discussion of research described in a source by a short Twitter to a blog;
- Recommendation: recommending a source using various platforms;
- Cite – formal citation of a source in scholarly journals

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Table 1 Classification of online platforms

Conclusion
Programs for the evaluation of digital scholarly publications, academics, and all the involved interests, and the cultures of the varying disciplines, are in constant evolution, making the evaluation of research a cycle of continuous learning. Attention to this process guides the Project “Altmetrics for humanistic disciplines” and may allow us to understand not only what functions, but how and why it functions and also to gain knowledge of how the results of evaluation may be influenced for example, by variations in the availability of a source, its access by a broader public, or by available infrastructures. This suggests that any evaluation of digital resources in the humanities should be as comprehensive as possible, going beyond bibliometric measures and taking into consideration the specific disciplinary characteristics of each field by combining traditional methods with Altmetrics.

REFERENCES


Curriculum Vitae
Anna Maria Tammaro teaches at the University of Parma and is the local coordinator of the International Master Digital Library Learning, joint course with Oslo (Coordinator) and Tallinn University. She holds a Ph.D. in Computer Science from the University of Northumbria. She has been member of the IFLA Governing Board and now Chair of the IFLA Library Theory; she is Vice-President of the Italian Association Humanities Computing and Digital Culture