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Virtual Academic and Metadata Research Communities

Introduction

The first virtual communities appeared in the 1990s thanks to the emergence of the Internet, but some studies put their inception in the 1970s. What is clear is that these kinds of groupings began to become popular starting with the creation of the World Wide Web (www or w3).

In general terms, we can say that a virtual community is made up of individuals, groups, or institutions that come together to achieve a specific end, and they do it using information and communications technologies (ICTs). In other words, compared to traditional communities where individualism prevails, these groupings are characterized by and benefit from a high degree of exchange and feedback about concrete questions, empathy among their members, the immediate support, and the possibility for informal socialization thanks to simultaneous communication,

and the production of structured knowledge emitted and transmitted by the prosumers of information.¹

People interact in these kinds of groups regardless of their geographical location. They may also decide to meet through electronic mail, on a website, a chat, a blog, wiki, or a videoconference, among other forms and media that technological development produces.

This article will deal with academic and research communities forged in the study of metadata by library science and information studies. In the first place, I will look at why we should study metadata, and then, I will cover a few examples of virtual communities.

About the Study of Metadata

Metadata are not of interest only for library science, but for all disciplines, given the rise in the issue of data (both big data and scientific data). This is because they have been

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put into a quantified format in order to tabulate and analyze them, as Viktor Mayer-Schönberger and Kenneth Cukier have explained when they dealt with datafication.²

The term “metadata” (“data about data”) was first coined by Jack Myers in 1960 and copyrighted in 1986 by a software and medical services company. According to Priscilla Caplan,³ by 1990, the term would begin to be used as part of the informational needs for humans to be able to use computer files, particularly of scientific, social, and geo-spatial data.

It was also introduced into the description of informational resources or objects and web connections. In 1995, it became part of bibliographic vocabulary after the creation of the first set of elements known as the Dublin Core Metadata Set. It should also be noted that that year is the turning point in information organization because it divided into what is known as cataloging and the creation of metadata.

The cataloging now known as “traditional” consists of the description, representation, and creation of descriptive logs of documents, texts, and magazines; that is, printed materials and non-book items such as tapes, photographs, maps, and audiovisuals among others. The new current about the creation of metadata alludes to the identification, description and localization of electronic resources distributed on the web, now popularized as digital information resources.⁴

In this context of change and adaptation of cataloging practice and metadata creation, researchers like Elaine Svenonius pointed out that we were dealing with a new bibliographic vocabulary in which both the properties and the characteristics of the data must be recognized, as well as the tendency for human intervention to decrease in the process of metadata creation, the stabilization of information networks and systems already developed to a great degree by ICTs.⁵

We must consider three aspects to understand the difference between cataloging and metadata creation. The first task in the case of metadata creation is to describe

the piece of information so it may be administered, preserved, and structured. Then, access must be associated to each of these descriptions. Lastly, it must be remembered that coding consists of laying out the elements in accordance with metadata syntaxis.

In this century, we are in a stage at which collections, processes, and users have been forcibly diversified by information technologies, the Internet, the www, and the new mobile technology. But, what does this have to do with metadata and virtual communities?

Metadata and Virtual Communities In Library Science

The study of metadata has intensified and is explored from its practical explanation to its theoretical contributions for understanding why we are entering the age of datafication. This means that new library and information science scholars are learning from the grand traditions of their area, but also from the knowledge of other disciplines, like computer science and systems analysis, among others.

As Chan Ping Wah and Ngian Lek Choh pointed out,⁶ these library and information science professionals, situated in a globalized world, need to pay more attention to user-centered models. In the past, the library was focused on products and services. This change explains the development of platforms with multiple communications mediums, different channels, and a wide variety of highly inter-operational content.

In terms of theory, it is said that the arrival of metadata prompted the rise of three schools of information organization. The first, traditional cataloging, involves descriptive metainformation; the second is structuralist; and the third is known as data structuring.

The second two aim for the normalization of information and the universal use of data marking languages. From this, it can be inferred that the three pillars for the structuralist school are the study of the semantic web, the standardization of metadata, and resource retrieval. This reaffirms what World Wide Web creator Timothy John Bernes-Lee, as quoted by G. G. Chowdhury and Sudatta Chowdhury,⁷ said: a common frame of reference must be established to be able to share and reutilize data, subject to a markup language and other references.

Communities, mainly academic or research communities have existed for several centuries. A great deal has been said about the importance and impact on them of what are called “invisible colleges.” However, it has been a long time since the first of these appeared; the communications media have changed, as have the motivations for reflection and analysis of what these academic communities experience.

As already mentioned, technological advances have made possible the creation and transformation of physical or in-person communities into virtual communities. To make the latter, several methodologies have been designed, such as the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model, created at Florida University, and another based on a community proposing three dimensions of virtuality: space, time, and structure. This leads us to three types of virtuality: in-person, permanence, and virtual skills.⁸

That is, according to the ADDIE model, the following phases must be gone through: being an in-person community; then, hybrid; and, lastly, virtual. Some cases have been documented, however, in which the communities are born virtual, with the help of new technologies and tools used by e-science, open access, Web 2.0, library 2.0, and information 2.0.

In the words of C. Benassini,⁹ the idea of community remits us to a form of organization that puts the priority on links of belonging. Its members know each other, share a code of values, and support each other when they face individual or group problems; but, above all, the communication and common purpose implicit in generating a group project persist.

Virtual communities, therefore, are established in cyberspace or in Web-based environments and bring together persons related to a specific theme who share documents and electronic resources because they have common, shared interests. Or, in other words, they are networks of persons with information and communications technologies, with a common (professional) discipline or interest that allow them to share information and innovation.¹⁰

Montserrat Tesouro i Cid argues that in virtual communities, subjects participate motivated by common projects.¹¹ That is, the community does not manifest as a collective determined by spatial and temporal limits, but rather as a configuration of subjects who establish parity-based communicative links and relations in the service

of a common objective. That is why this community represents an extension of our daily lives.

Another trait of a virtual community is that its location will be specified by its access route or URL (uniform resource location), or the digital social network that will give it meaning in cyberspace. In addition, the connectivity of its members will occur through the mobile devices they have; in this way, people use information technology and the Internet to maintain community links in cyberspace, thus forming significant support relations.

To make clearer what I have said about these communities, I will focus on those identified as research or academic communities. Among other specificities, they are organizations that maintain continuity over time but are above all defined by the fact that their members share a practice.

Some Virtual Communities About Metadata

These are organizations aimed at sharing practices, advances, and the most recent developments regarding the study of data and metadata, as well as to display advances in research on platforms, software, or mobile apps, among other topics. What follows is a brief review of six of these groups, five from abroad (the majority international) and one from Mexico.

1. Dublin Core. Of the six communities listed here, the oldest and, it's said, the one that was born at an in-person meeting, is Dublin Core, founded in 1994. Its aim is to support innovation in metadata design and best practices in the entire metadata environment. It is headquartered in the United States.¹²
2. RDA. The next is Research Data Alliance (RDA), founded in 2013, with 12,400 members and a presence in 145 countries. Aimed at harmonizing the administration of research data, its headquarters is in Belgium.¹³

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3. EAD. The Encoded Archival Description was founded in 2014; it has seventy-one member organizations and 12,916 active affiliates. Its aim is to build social and technical infrastructure to allow for the open exchange and reutilization of data in the archival sphere. Its headquarters is in the United States.¹⁴
4. DLF. The Digital Library Federation launched operations in 2016 to develop skills, share ideas, strengthen digital commitment, and promote advanced technological collections and initiatives among libraries, museums, and archives. It is also located in the United States.¹⁵
5. The Core Metadata Interest Group of the American Library Association. This is the most recently founded virtual community, initiated in 2020 with the aim of exchanging information about advances in research, tools, and current activities that affect metadata and information resource on the Web. It is a national network operating in the United States.¹⁶
6. The Seminar for Metadata Research (Seminario de Investigación Metadatos). This community exists in Mexico, hosted by the UNAM Library Science and Information Research Institute (IIBI). Beginning in 2009, it was initially in-person, but in 2012, it became a virtual community. Its aim is to analyze the structures and schema of metadata to determine the appropriate storage, description, representation, accessibility, and usefulness of digital objects' data.¹⁷

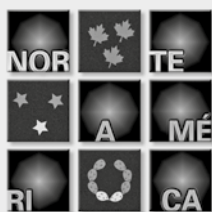
Conclusions

As we know, for several years now, the digital age and globalization of information have marked a new course for everyone who communicates through networks, the Internet, and virtual communities, regardless of their spe-

cialization. Therefore, their postulates, objectives, and scope must consider community participation, the speed with which advances in information technology are logged, and the reutilization of data, to ensure that, regardless of their geographical location, they can interact. ■■

Notes

- 1 The term "prosumer" is a combination of the words "producer" and "consumer" and refers to people who generate digital content and share their ideas and opinions about a brand or another topic on social media, just because they like them or are interested in them. [Editor's Note.]
- 2 Viktor Mayer-Schönberger and Kenneth Cukier, *Big data. La revolución de los datos masivos* (Madrid: Turner Noema, 2013), p. 100.
- 3 Priscilla Caplan, *Metadata Fundamentals for All Librarians* (Chicago: ALA, 2003), p. 1.
- 4 Ibid., p. 2.
- 5 Elaine Svenonius, *The Intellectual Foundation of Information Organization* (Cambridge, Massachusetts: The MIT Press, 2000), p. 53.
- 6 Chan Ping Wah and Ngian Lek Choh, "Back to the Future: Augmenting Competencies for Library 2.0," *Singapore Journal of Library Management*, no. 37 (2008).
- 7 G. G. Chowdhury and Sudatta Chowdhury, *Organizing Information: from the Shelf to the Web* (London: Facet Publishing, 2007), pp. 39-40.
- 8 David J. Skyrme, *Knowledge Networking: Creating the Collaborative Enterprise* (London: Routledge, 2017).
- 9 C. Benassini, "De las comunidades sociales a las ¿comunidades? virtuales," *Razón y Palabra*, no. 10 (1998), <http://www.razonypalabra.org.mx/anteriores/n10/claudia.htm>.
- 10 R. Tissen, D. Andriesse, and F. Lekan Deprez, *El valor del conocimiento para aumentar el rendimiento de las empresas* (Madrid: Prentice, 2000).
- 11 Montserrat Tesouro i Cid and Juan Puiggalí Allepuz, "Las comunidades virtuales y de conocimiento en el ámbito educativo," *Pixel-Bit. Revista de Medios y Educación*, no. 28 (July 2006), <https://recyt.fecyt.es/index.php/pixel/article/view/61329/37343>.
- 12 See <https://www.dublincore.org/>.
- 13 See <https://www.rd-alliance.org/value-research-data-alliance-libraries>.
- 14 See <https://www.loc.gov/ead/>.
- 15 See <https://www.diglib.org/groups/museums-cohort/>.
- 16 See <https://www.ala.org/core/member-center/interest-groups/metadata>.
- 17 See <https://difusion.iibi.unam.mx/CIM2020/>.



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