CiudadaniaPlural.com: from Digital Humanities to Plural Humanism

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Abstract
The "Digital Humanities" are the result of the contributions made by Cybernetics in the Second World War. Computers made it easier for the Humanities and the Social Sciences to incorporate quantitative methods while the current technologies pose qualitative changes, modifying the relationship between producers and users of knowledge. This change will contribute to finding solutions to the problems derived from the social transformations, which demands the formulation of a new humanism. The criticism to the androcentric paradigm has allowed the conceptualisation of a History of Communication capable of addressing the implementation of mass culture and the information society, in the collective organisation as well as the vital routes of the plurality of men and women. This paradigm shift has allowed us to use the Internet and other digital resources to develop CiudadaniaPlural.com, a platform to produce stories about the network society and promote the Plural Humanism that we advocate for.

Keywords
Cybernetics, Digital Humanities, Androcentric Paradigm; History of Communication; cartography; Plural Humanism.

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1. Introduction

The development of Cybernetics in the Second World War had repercussions in the Humanities and the Social Sciences. The availability of computers facilitated the application of quantitative methods to different disciplines. Subsequently, the dissemination of personal computers, the Internet and multimedia resources, particularly the Web 2.0, and mobile telephony, brought about qualitative changes. A decisive change is the modification of the relationship between producers and users of knowledge, which has led to the exploration of new stories. Thus, the field of the so called "Digital Humanities" is becoming consolidated. However, Cybernetics has not had the development expected by some of its founders, such as Norbert Wiener (1950) who proposed that the understanding of the functioning of society had to start from the study of messages and communication.

The first part of the article examines how computers initially facilitated the use of quantitative methods, which had been in use since the mid-19th century, by applying statistics especially to the analysis of language and data, preferably of economic character. After the 1980s, the implementation of personal computers, the Internet, the first and second generation World Wide Web and multimedia resources, contributed to the development of qualitative changes. The use of digital technologies to modify the relationship between producers and users, opens the possibility of citizens to participate in the construction of knowledge. This is leading to the consolidation of the field of "Digital Humanities".

But this change should answer the new questions and contribute to finding solutions to the problems derived of the social transformations. This forces us to formulate what we define as a new Humanism, capable of accounting for the current, complex and plural societies.

The second part explains how the criticism to the dominant androcentric paradigm in the Humanities and Social Sciences, together with the proposal of Cybernetics to address the social functioning by considering that all activities can be understood as a movement of messages, has helped scholars to conceptualise a History of Communication whose objective is to understand the implementation of the mass culture and the information society in the collective organisation and the key routes of the plurality of women and men of different ages, backgrounds and social conditions, interconnected through a dense network of media and transports in increasingly shorter times.

This paradigm shift has allowed us to adopt a broad and plural approach, and to use the Internet and digital resources such as cartography, to conceptualise the CiudadaniaPlural.com, a platform to

develop stories on the Web about the global network society, through personal and expert contributions, formulating the Plural Humanism we advocate for.

The third part is dedicated to outlining the characteristics and potentialities of this platform and, finally, making a balance of the contributions that can be made to the construction of a Plural Humanism and the limitations in the current phase.

2. Quantitative methods in citizen participation

In the early 21st century, the almost seven billion people populating the Earth, formed by a plurality of women and men of different ages, backgrounds and social conditions, are related in various ways in increasingly reduced times (McBride, 1980), generating a global and complex system. For their organisation, it has been essential the development of new forms of information storage and reproduction, capable of circulating through communication telematic systems in real-time, articulated with means of transport as fast as automobiles and aviation, forming a dense mesh that constitutes the nerve system of the global network society (Berners and Fischetti, 2000).

The development of the technologies that turn information into digits responds to these needs and is provoking a decisive transformation in the production and management of the forms of communication, knowledge, and behaviour. One of those remarkable changes is that knowledge no longer originates exclusively in large centres of power that spread it vertically to the population. Now, many people -although with differences based on their social positions- can use technologies to communicate with others, solve their every-day needs and intervene in the political and economic life, in cultural and leisure activities. We are witnessing the proliferation of new explanations and dialogues that reveal the plurality of voices expressing knowledge derived from the multiple situations of people. Accordingly, in recent years, the mass media, as they have operated since the 19th century, unidirectionally and hierarchically, give way to other interactive, horizontal and multidirectional communication systems. A paradigm shift is taking place and it can be considered to be revolutionary.

Digitisation and its possibilities have also affected the scientific activity. As Horacio Capel (2010) points out:

> "The changes experienced by the Internet with the generalisation of what is known as the Web 2 have been very deep. Users are not only receptive subjects, and are not limited to consuming the available information, they also participate actively in the input of data, in the creation and modification of the contents of the network. These changes allow and stimulate interaction and collaboration, as shown by social networks, wikis and social indexing forms. The Web 2 is also changing the communication of science and some aspects of the scientific activity".

This has generated what some authors have defined as the new field of "Digital Humanities" which is being configured for more than half a century.

The origin of this field is placed, in the interest of the Italian Jesuit Roberto A. Busa, in the automatic analysis of language (Hockey, 2004). Busa (2004) explains that his interest during the Second World

War in automatizing linguistic analysis to make an index of all the words of the work of Holy Thomas of Aquino, led him to get in touch in 1949 with Thomas J. Watson, who worked in IBM.

For our part, we believe that it is important to put the emphasis on the prior development of Cybernetics in the Second World War and remember that it was designed to solve the problems of accuracy raised by the dropping of atomic bombs from airplanes. Therefore, in order to develop a new understanding of the Earth from outer space, which had begun with aviation and was later developed with artificial satellites. This was a change in the system of knowledge derived from the forms of world-domination, which tends to be underappreciated and can be considered similar to the change produced when the American continent was discovered (Elliot, 1972).

It is true that the availability of computers facilitated, first, the quantification of large amounts of data and that it has been personal computers, internet and multimedia resources, in late 20th century and early 21st century what have brought about qualitative changes and have consolidated the field of what is today known as "Digital Humanities". But Cybernetics still has not had the impact promised by some of its founders, such as Norbert Wiener (1950), who proposed that the understanding of the operation of society should start from the study of messages and communication.

This approach, which proposes to overcome the fragmentation imposed by the different academic disciplines and their redefinition based on the unitary notion of information, is fundamental to perform the paradigmatic change needed to go from the "Digital Humanities" to the Plural Humanism that we promote, causing a revolution in the Humanities and the Social Sciences in the sense proposed by science historian and philosopher Thomas Samuel Kuhn (1962), who proposed that the History of Communication can contribute to this revolution, as we will explain later.

However, before making these proposals, we will address some of the most outstanding contributions that have marked the development of "Digital Humanities".

2.1. Use of computers in quantitative methods

As mentioned, the availability of computers initially facilitated the development of quantitative methods. In this context, Busa's Index Thomisticus project is considered pioneering. His work followed three phases related with the changes undergone by computer technology (Busa, 2004): between 1949 and 1955 he worked with electromechanical accounting machines and punch cards; between 1955 and 1980, with magnetic tapes that allowed him to write the 65,000 pages of the 56 encyclopaedic volumes of the Index Thomisticus, whose first printed edition was published in 1974; and from 1987 onwards, with data on CD-ROM, and published in this format for the first time in 1992.

Hockey (2004) made a review of the technical problems and the options that were adopted in the following years. From the 1940s and 1950s, some scholars showed interest in using the new machines to apply statistics to large amounts of data, in the fields of Linguistics and literature as well as in Economics, History and other disciplines. This orientation was reflected in the work of Robert Fogel and Stanley Engerman (1974), who are considered important references in the "new economic history", also known as Cliometrics. This work provoked wide controversy, not only for the use of

quantitative methods and computers, but also for the new perspective it offered on slavery in the United States. Another field in which the new calculating machines were widely used were classical studies, among which the "Thesaurus Linguae Graecae" project, directed by Theodore Brunner (1993), stands out. This and other initiatives provided classical studies scholars with incomparable resources for research in other disciplines. Thus, the use of computers for quantitative purposes predominated in most of the works related to the "Digital Humanities", even in the 1970s and 80 when they became consolidated and were used in new fields in the areas of archives and preservation of texts and what was later defined as digital library.

2.2. Qualitative change: building knowledge through participation

The merely instrumental use of new technologies began to change in the mid-1980s, when personal computers became available, and especially with the introduction of the Internet. The change was more noticeable in 2004, with the emergence of the Web 2.0, with multimedia resources that make it easier to build knowledge by using not only text and numeric data, but also images, sounds and audio-visual elements, and with the mobile telephony, especially with smartphones. The new technical resources have driven qualitative changes as the knowledge produced by researchers who are part of different centres is shared and new stories that change the relation between producers and users of knowledge have been developed. The field of "Digital Humanities" is becoming consolidated, but it is necessary to use technology to answer the new questions and find solutions to the problems arising from the social transformations, for which, in our opinion, is necessary to formulate what we define as a new Humanism that addresses the current, complex and plural societies.

Initially, the dissemination of personal computers increased its use among scholars of different disciplines, which decreased their dependence on the resources and experts of the large technology centres to perform their duties. They could therefore innovate with less constraints. In addition, the development of the email technology favoured the creation of international networks of experts. In 1986, Patrick Conner (1992) founded Ansaxnet, the oldest discussion list in the field of the Humanities.

But the most decisive change was introduced with the Internet and the World Wide Web, and from 2004 with the so-called Web 2.0. Initially, the Web was seen as a means to find certain types of information. Soon after people realised the Internet was also an excellent medium for the publication of the research results and the promotion of activities. Gradually, scholars, in addition to sharing knowledge, could think in network. And this change favoured the development of some innovative projects (Thomas, 2004), such as the Orlando Project [1] and *The Valley of the Shadow* [2], a website about the American Civil War, which was developed by Edward L. Ayers and allows users to choose different reading paths.

These experiences generated discussions about the differences between the book and the analogue and digital technologies, collected by Thomas (2004). Ayers (1999) admitted that, even though the hypertext offers great possibilities, there are important barriers to formulate a multidimensional story. Rosenzweig (2003) pointed out that, in a world with excess of information, historians should face a fundamental paradigmatic change: the large size of collections of digital data and the

interrelations between them raised the necessity for historians to develop tools and methods capable of giving meaning to these records. Other historians questioned the role of historical scholarship in the development of new narratives enabled by the Internet. Robert Darnton (1999), for example, proposed to organise information in a pyramidal layer model, while others proposed polyhedral models so that readers can explore a same event from different angles.

This approach allowed scholars to think about building plural knowledge, from any node in the network society, and not only from the traditional nodes linked to the centres of power, regardless of how small, insignificant or marginal their dimension and valuation may be considered. This possibility is reflected in the new collaborative instruments that are offered by the Internet. Capel (2010) has highlighted three.

Firstly, social networks can be considered as:

"Forms of social interaction, defined as a dynamic exchange between people, groups and institutions. They can be seen as an open system of continuous construction that involves sets of individuals who are identified in the same needs, problems and are organised to boost their resources" (Caldevilla, 2010; quoting the definition of the Conference on Management in Third Sector Organisations, held in the Torcuato di Tella University, Buenos Aires, Argentina).

We share this definition because it does not adopt a techno-centric approach but takes into account the decisive role of the communication between people, groups and institutions. We also support Capel's consideration that networks are created by links and that "the nodes (individual, institutional, collective) and flows matter above all" (Capel 2010).

Second, in 1996 the term wikis began to be used to refer to "web pages that are built in a collaborative way" (Capel 2010). Initially, it was used in programing, but from 2001 it was used to develop the Wikipedia Encyclopedia, which is widely recognised today and has served as a model for other similar projects such as *Wikanda, the open, free and multimedia encyclopedia of Andalusia* **[3]** about the 8 provinces of Andalusia and, with a more limited scope, *Xilocapedia, the encyclopaedic wiki of the Jiloca Valley* **[4]**.

This instrument was completed with the possibilities of incorporating photographs and videos, which was allowed by collaborative platforms such as *YouTube* in 2005 and *Flickr* in 2008 **[5]**. In Spain, we can highlight the large collection of photographs taken prior to 1975 and collected by *El Retrovisor, a Virtual Museum of Old Photos*, developed by the digital newspaper *20 minutos.com* **[6]**, which can be consulted by provincial map, timeline and theme. The success of these platforms has expanded with the mobile telephony and has inspired other projects.

The third collaborative instrument identified by Capel (2010) is the "social indexing through the assignment of tags and keywords", which has given place to the concept of folksonomy. The author warns that "this has to do with the increasingly refined search systems that have been developed", which allow "a collaborative classification of websites through the use of freely chosen keywords, called tags", although he finally affirms that social indexing systems "have a limited classification".

A field that has increasingly received more attention is Geographic Information Technologies (GIT), because logically the digital technologies, as mentioned, are at the service of a new understanding of the Earth related to the conquest of the planet from space, using aviation and satellites. According to Capel (2010), the GIT include:

> "Geographic Information Systems (GIS), global positioning systems (GPS), remote sensing technologies and various applications for the management and analysis of space and territorial databases".

These technologies, which are widely used by public services, businesses and the general public, by means of computers, mobile phones and GPS, have affected deeply the scientific discipline of Geography. The development of GIS:

> "Has given way to a new scientific and technical discipline, known as Geomatics (or geospatial technology), which integrates all sciences and technologies used for the knowledge of the territory and the management of spatial databases, including GIS and remote sensing and global navigation satellite systems" (Capel, 2010).

Some authors believe this discipline defines the 21st century, together with biotechnology and nanotechnology, and its use has generated a new vision, that privileges a spatial perspective that is currently involved in all kinds of studies (Buzai 2001).

Some historians are building large-scale systems to publish historical data in geographical form of places around the world, from Britain to Tibet, and are finding new answers to old questions. One of these historians is Philip Ethington (2000), author of an essay and an e-presentation on the urban history of Los Angeles, who considered that cartography could be the key concept in the search for historical certainty.

Dynamic cartography has expanded the possibilities of using maps and enables any person to collaborate to enrich maps, as it happens with Google Maps, developed in 2005, and other platforms such as Wiquimapia (2006 and 2006). Moreover, mobile telephony and GPS have made these resources available to the public. The creation of maps through citizen collaboration is called "neogeography". One of the most widely used applications is MyMaps **[7]**, which allows users to carry out multiple tasks with maps and share them with others.

In short, as libraries and archives become digital, catalogued and accessible, experts of the Humanities and Social Sciences also increasingly use more digital objects, which can be defined as natives because they are not a simple digital replica of analogue objects but have been created expressly for and in the digital media: hypertext maps, oral histories, videos, databases and relational documentaries.

Thus, the field of "Digital Humanities" is becoming consolidated while transformations are taking place in the disciplines through resources that facilitate citizen participation. However, we can still identify important resistances that complicate the essential paradigm shift needed to produce the scientific revolution that allows the formulation of a Humanism suited to the needs of the current plural and complex societies.

These resistances can be identified in the *Manifesto for the Digital Humanities* **[8]** signed in Paris in March 2011. The document starts with the following definitions:

1. Society's digital turn changes and calls into question the conditions of knowledge production and distribution.

2. For us, the digital humanities concern the totality of the social sciences and humanities. The digital humanities are not tabula rasa. On the contrary, they rely on all the paradigms, savoir-faire and knowledge specific to these disciplines, while mobilizing the tools and unique perspectives enabled by digital technology.

3. The digital humanities designate a "transdiscipline", embodying all the methods, systems and heuristic perspectives linked to the digital within the fields of humanities and the social sciences."

These and the following definitions highlight the central role that is attributed to digital technologies, which does not seem to affect the set of paradigms, specific knowledge of the different disciplines. This way, the "Digital Humanities" are characterised as a "transdiscipline" that incorporates: "the methods, devices and heuristic perspectives linked to the digital within the fields of Humanities and Social Sciences". Therefore, for the authors of the manifesto change only refers to the use of digital technologies by experts when, as we have seen, it is precisely this technology that is transforming the production and dissemination of knowledge, through the incorporation of non-experts in the development of new stories.

There is a persistence of a vertical and hierarchical approach to knowledge derived from a notion of humanity which is only mentioned in the section in which the authors define themselves in the following way:

"5. We, professionals of the digital humanities, are building a community of practice that is solidary, open, welcoming and freely accessible.

6. We are a community without borders. We are a multilingual and multidisciplinary community.

7. Our objectives are the advancement of knowledge, the improvement of research quality in our disciplines, the enrichment of knowledge and of collective patrimony, in the academic sphere and beyond it."

This notion of human is restricted to the community of experts, which only recognises the rest of men and women in a diffuse notion "beyond the academic sphere". A notion of human is supposedly universal but is in fact partial and restrictive and, as we will explain widely in the following section, derived from the traditional androcentric paradigm which affects the Humanities and the Social Sciences and the concepts of each discipline, starting with those used to define them.

Clarifying the notion of human that establishes which humans are included or excluded, valued positively and negatively, considered agents or patients, is essential to evaluate the knowledge

produced by each discipline and to define how it must be transformed to contribute to the development of a Plural Humanism. It is also essential to define the categories that are used to organise knowledge, both by experts and citizens who link their contributions to certain tags.

In a context with an excess of information, it is essential to review not only the concepts with which we designate reality but also the categories we use to classify and group together objects into types, based on their properties, common relations and differentiating features and, currently, the social indexations that are used on the Internet. Classifications, according to Capel (2010), "give rise to hierarchical categories, which may, in turn, include other subcategories. The purpose of the classification is to name objects and sets of related objects, transmit information and make generalisations". This does not occur in social indexing since it does not attribute a logical order to information.

This organisation, in the case of the sciences that deal with human existence, starts from the clarification of the notion of human. Hence one of the challenges of the "Digital Humanities", especially if it wants to overcome the current phase and take a step towards a new humanism that gives response to the problems and needs of the current societies, is to review the language with which it has been traditionally built. And for this it is necessary to start by questioning whether the notion of human is flawed, as it has been revealed by many feminist research works.

This is also the conclusion suggested by a History of Communication that allows the understanding of the historical process of implementation of the media, mass culture and the information society, taking into account how it affects and is the result of the transformation of social relations between women and men of different ages, backgrounds and social conditions (Moreno Sardà, 1986; 1988; 2007). And it is in this task where we detect the interest of the proposal made by Cybernetics to overcome the disciplinary fragmentation in order to address the social functioning as a whole based not only on a multi or inter disciplinary approach, but on the unitary notion of circulation of information and messages.

3. History of Communication: from criticism to androcentrism and the plural approach

The History of Communication is a discipline that is being formulated since relatively a short time. In fact, there is no even an agreement to designate it as History of Communication, History of Communications, History of the Media, or to define its content and scope. This ambiguity is also due to academic factors coming from the two branches from which it primarily feeds on: history and research and mass communication theories.

W. D. Rowland (1997) explains that during much of his initial intellectual life, the History of Communication was the History of the Press. Certainly, historical studies on the media were the first to be developed, along with legal studies, in the 19th century and were interested on the first media to emerge: the written press. As other media became implemented, their corresponding stories were developed and in the second half of the 20th century there emerged the need for a global approach to understand the development of the whole of the media in their relations with the remaining historical transformations. However, for some communication historians, this discipline is still limited to each

of the media and this is partly why much of the studies on the structure and theories of the mass media have disregarded the historical perspective and adopted simplifying presentist views.

The need for the adoption of a global approach became evident in the field of teaching. Crowley and Heyer (1997) explain that it was the lack of aids for the teaching of History of the Media and Communication Theory what prompted them to make a compilation of texts.

The faculty of the schools created in Spain in the early 1970s (Udina, 1995) faced the same problem. The first curricula included subjects of History of the Media and History of Journalism, which needed to be addressed in the broader context of a History of Communication. This same orientation was pointed out by Manuel Vázquez Montalbán (1980), who was a Professor at the Autonomous University of Barcelona.

This new approach coincided with few but decisive contributions made in the past decades: in the 1950s, the two works of Harold Innis (1950 and 1951) and, later, the works of Raymond Williams (1958 and 1962), both of which were a prelude to *Contact: Human Communication and its history* (1981); the work of McLuhan (1964), which according to the author is *"a foot note"* of the work of Innis; the work of Habermas (1962), which is part of the Marxist tradition of the Frankfurt School, and a brief summary drawn in France by Fernand Terrou (1962).

In the 1970s the debate increased on the need to address the History of Communication from this global approach and the questions that it had to answer. This was addressed especially in some articles published by the *Journalism History* journal (which appeared in 1975) and in some works of P. Schaeffer (1971-1972) and J. Curran (1977). Also, as part of this interest in investigating the relationships between the media and social transformations, some critical research works from various fields were published (Goody, 1975; Ithiel de Sola, 1977; Eisenstein, 1980).

However, it was in the 1980s when there was a proliferation of both research works and attempts to formulate general scenarios to help clarify a framework to place more specific analyses and studies. This change is related with the importance acquired by communication satellites, especially their relationship to television, and cybernetics (Stevens & García, 1980; Williams, 1981; Burke, 1985; Belis, 1988; Schramm, 1988; Stephens, 1988). In Spain, it is important to highlight the works of Timoteo Alvarez (1987) and Gubern (1987). In addition, some studies adopted innovative approaches on specific aspects (Perriault, 1981; Ong, 1982; Czitrom, 1982; Kern, 1983; Ifrah, 1987; Carey, 1989; Marvin, 1990).

Since the 1990s the History of Communication has been consolidated and recognised as an independent discipline, as shown by authors who had not previously expressed historical concerns, such as Flichy (1991), Mattelart (1994) and Moragas (2012). Other contributions have been made by communication historians, such as José María Perceval (2015), who recently published a *World history of communication*.

These works respond to one of the two key issues of the History of Communication: 1) the relations between the transformations that have occurred in social relations and the media, not only technologies but also institutions and means of symbolic reproduction of reality; and 2) the impact of the media in forms of communication and cognitive processes, both short and long term.

These issues have also been addressed by us professors of the General History of Communication at the School of Communication of the Autonomous University of Barcelona since the mid-1970s. To address these issues teachers had to resolve, on the one hand, the methodological problems posed by research on the press as a medium that represents reality symbolically.

The first studies that the School of Communication decided to carry on the history of the press focused on popular publications such as the gutter press and women's magazines. These objects of study are very different from the "general information" and "reference" press, which is the focus of the attention of historians, who considered it to be privileged sources, due to their target audiences and protagonists. These studies raised questions that were difficult to answer with conventional methods. In addition, examining these publications throughout their history meant taking into consideration a large volume of copies, even when a sample was selected, in order to identify tendencies and changes and relate them with their social context. This led researchers at the Autonomous University of Barcelona to adopt the method proposed by Jacques Kayser (1963), hemerographic analysis, but adapting it to apply it diachronically and automate it, by following the trend to use computers to make quantitative analyses.

In addition, we also had to solve the theoretical problems derived of taking into account communication history and theories and other disciplines. In this line, we agree with Jesús Timoteo Álvarez (1987: 8) and conclude that:

> "Contemporary historiography has a fundamental deficiency, as it has interpreted and examined society, mostly contemporary, based on multiple variables or penetration channels - from politics to sociology, biography, economy, religion, and even psychology-, but it is has forgotten one discipline that is perhaps decisive for the 20th century: information. It is really difficult to understand how the first world war, the ascension and triumph of Nazism, the successes and failures of the Bolshevism, the cold war, among others, have been explained without making references to information, the media and propaganda. Thus, it seems necessary to make a complete reinterpretation of all the contemporary age from this perspective, including as fixed value the variable <<information-communication-propaganda>>."

Other issues were also ignored in the works on contemporary history, and specifically a decisive one: the role of women as agent and protagonist subjects of the past and present and, therefore, also the domestic spaces in which women performed much of their activities, which was one of the spaces in which the mass media played an increasingly prominent role.

Moreover, the careful examination of whether the works of history, humanities and Social Sciences, which are fundamental to formulate the history of communication, when they speak of "men" as protagonist, take into account the whole of women and men, and therefore, whether they actually use this concept generically, indicates that they only include and value as significant the actions performed by adult males from dominant groups in public and institutional spaces, and excluded and scorned, as insignificant, the contributions made by the remaining women and men, in the private and marginal areas.

Therefore, the key piece of the explanation of human existence, which allegedly generalises the human, appeared as a partial concept which was presented as superior and was linked to a system of

values that considers the dominance of some human beings over others as natural; and for this, the rest of women and men who did not share this system of values or did not participate in the exercise of the power were presented as inferior. Moreover, this system of values is legitimised as if it were natural, eluding the examination of the impact of the dominance not only over the dominated groups, but also on those who exercise this dominance.

Thus, we conclude that the difficulties to produce a History of Communication that takes into account the diversity of women and men and their performances in various social scenarios derive from what Foucault (1971) defined as *The order of Discourse* and a key element: the notion of the human with which it is built. And the problem not only resides in what the academic discourse excludes and values negatively, women and men, but especially in what it includes and values positively, and in how the negative assessments have been symbolically built to formulate others that are granted a value of superiority. Thus, the ideas attributed to women and their performances in the domestic spaces, as well as to those men who belong to conquered populations, all of whom are valued negatively and are despised, had symbolically been built as such to be able to assess positively and as superior what was attributed to one part of humans: adult males belonging to dominant classes and peoples whose model of behaviour could be identified as a Virile Archetype. This Virile Archetype, corresponding to the concept of "man", operated as the key piece of the androcentric order of the academic discourse, which was in turn, sexist, adult, ethnocentric and classist.

This androcentric approach, built clearly by the fathers of philosophy, is currently opaque, as it is concealed as if it were universal. And this procedure makes it difficult to understand the historical process of implantation of the media that affect the diversity of women and men and the activities and relations that are established not only in public but also in private and marginal scenarios.

The analysis of the symbolic representations disseminated by these media, especially the most massive media, allows and forces us to take into account the fact that they focus on this diversity of men and women who establish relations both in public settings and in private and marginal spaces; and that they offer a treatment that is adjusted not only to the criteria of the public rationality, but also to the criteria of sentimentality. Therefore, addressing the historical process of implementation of the mass media forces us to expand the androcentric approach and to adopt a perspective that considers both the rational-illuminist matrix and the symbolic-dramatic matrix.

It was essential to redefine and rethink the explanation of the past and the present starting from the criticism to the androcentric approach, in order to incorporate as significant all those people and things that had been valued negatively and excluded, silenced, all that had been identified as not-androcentric by discourse. Two tasks were behind this rethinking: clarifying the features and the scope of the androcentric order of the academic discourse (Moreno Sardà, 1988); and to take into account the possibility raised by Cybernetics of redefining the specific conceptualisations of the different disciplines of history and the remaining human and Social Sciences.

A careful reading of Aristotle's *Politics* allowed us to identify the traits of this philosopher's androcentric explanation which in order to present the Greek adult males as superior beings, first symbolically defines Greek women and children as inferior, and non-Greek men, women and creatures as barbarians and objects the Greeks had the right to enslave. In addition, the comparison of

this explanation of the father of philosophy with the versions offered by the scholars of the history of philosophy and political thought, even contrasting original and translated versions, has allowed us to notice that this androcentric thought persists and is presented in an opaque way, insofar as it is generalised as *human* what Aristotle attributed only to a part of the population, and that this was done by dismissing the rest of the women and men that the Greek philosopher mentioned, by defining them negatively, only to positively represent the Greek adult males.

In this same line, Aristotle explains in *Politics* that the activities of dominance of other groups are based on the private and public accumulation of goods by Greek men and women, who are considered free beings, and provides a model of analysis that is not restricted to the public, but allows the perception of its articulation with the private as well as the dynamic derived from the territorial expansion. However, scholars of his work focus on the performances of males in public areas, ignoring what happens in the domestic spaces, which is the basis of the *oikonomy*. This restricted and opaque approach makes it difficult to understand the role of those media that today interconnect the domestic spaces to institutions and technologies that articulate transnational networks, as well as to the women and men who use them and are symbolically represented by them.

As for the redefinition of the Social Sciences, this has been proposed since long time ago by some authors (Braudel, 1968), like Norbert Wiener (1950) creator of the term *Cybernetics*. We have already referred to the relationship between military needs, raised by the new instruments of conquest of the Earth from space, and the contributions of Raymond Williams. Other scholars of the Social Sciences and of communication theories (De Fleur and Ball-Rokeach, 1982) also conceived this possibility of rethinking the analysis starting from the unitary notion of communication to redefine the fragmented view of each specialty and to develop a global perspective. One of the scholars who served as reference was Edgar Morin (1973), who proposed considering the social dynamics or socio-genesis as product of phylogenetic ontogenesis, that is, the process of personal assimilation of the collective memory. The sociology of knowledge has also raised the need to attend the long-term cognitive effects of the media, to overcome the narrow margins of the synchronic dimension of each medium and to address more the diachronic dimension. The History of Communication should take into account these contributions: it should not be reduced to a linear and teleological account of the events and technological developments, but should attend the role of the institutions and the media in the process of generational reproduction of social life in the long term.

These and other contributions made it possible to formulate two paradigms of the History of Communication which have oriented the educational proposals that were developed from the 1980s at the Autonomous University of Barcelona. The first paradigm proposes the capacity of human communication, and the historical forms of communication, behaviour and knowledge. It aims to understand how in the personal stories people assumes the collective memory, forged by the previous generations, which allows them to articulate the personal and collective past and present, if the goal is the transmission of synchronous and diachronic information. This leads to the consideration of the social dynamic as a product of the non-assimilation/ personal assimilation of the collective memory. This way we can consider the personal and collective participation in the generational production and re-production of social life. This framework also helps to understand how in the personal stories we learn to identify ourselves with the Virile Archetype as a being aware of the academic knowledge, as well as with other models of behaviour based on how the different social divisions and the positions that we occupy affect us.

The second paradigm examines how social relations, understood as communicative relations, have been historically organised, taking into account their continuances and transformations. Here the analysis of the functioning of the past and present of social life is also undertaken with the purpose of clarifying the functioning and scope of the hierarchical communicative relationships between different women and men, and their orientation guided by the desire of world domination. This second paradigm, by taking into account the impact of the expansive dynamic in the organisation of communicative relationships between women and men of the group that practice them, and with women and men of other groups on which domination is exercised, allows us to understand the historical construction of the communication ecosystem until it reached the shapes and dimensions that are characteristic of the conquest of the Earth from the space that characterises our contemporary world, which has provoked that today a fourth of the world population is part of the society of wastage at the expense of the other three parts who are marginalised in areas of misery. This is the historical context that today prompts many men and women to assume and reproduce, although contradictorily, that Virile Archetype as a conscious self that is aware of the public rationality.

The confluence of both paradigms allows rehearsing an explanation of the History of Communication and, thus, of the contemporary world in which, faced with the chronological, linear and teleological androcentric historical discourse that justifies the current forms of expansive domination, we can re-acknowledge the personal and collective performances in that process of generational re-production of social life, in which all of us participate in some way with our everyday performances, to the rhythm of the dynamic of the collective history. This is an explanation in which we can articulate personal and collective histories and clarify the role of those media that connect the most intimate aspirations and dreams of large numbers of people with a planetary nerve system, which is the most recent expression of the conquest of the Earth... from space.

This theoretical framework allowed us, in the 1980s, to raise the possibility of using oral history and the audiovisual media to develop new explanations on the implementation of the media and mass culture in the life stories of women and men of different ages, backgrounds and social conditions and positions. The development of the Internet in the 1990s led us to consider that the web could be an instrument to develop an explanation of the network society taking into account cartography as well as the representation of the networks and the media that articulated the relations between people and groups. In the 1998-1999 academic year, we developed in the Virtual Campus of the Autonomous University of Barcelona, the website that originated the platform that is introduced in the following section: *Walks around the communication networks from...* (*Paseos por las redes de comunicación desde…*). This platform aimed to build an explanation that could be addressed from any node of the different historical frames. In 2006, we explored the possibility of developing a city portal for citizen participation in the construction of collective knowledge: *SocTortosa.cat*, which was linked to the aforementioned website. Both projects are currently inactive, victims of the difficulties of preservation faced by these spaces when institutional support disappears (Galina-Russell, 2012: 188). But this and other experiences, in which we have also used the cartography to facilitate knowledge from the plurality of social positions, allow us to think about the need and the possibility to continue working on the development of instruments to produce stories on the global network society and to formulate a new Plural Humanism. This is what we propose with the platform CiudadaniaPlural.com, which is introduced in the following paragraph.

4. Plural citizenry: past and present of the global network society

We have seen that digital technologies and the Internet are making visible the plurality and diversity of voices that coexist in contemporary societies, through very useful applications for citizen participation in the construction of plural knowledge in the global network society (Berners & Fischetti, 2000). But we cannot forget that these technologies are sometimes used to feed the prejudices and confrontations that threaten human coexistence or simply exalt a frequently unsupportive individualism. Therefore, experts in the Humanities and the Social Sciences have the responsibility to use them, as Capel (2010) suggests, for "solidary and collaborative science": to build a new humanism for the benefit of human development, social progress and the resolution of problems and the current challenges of a culture that is oriented to world peace.

In the last few years there has been a proliferation of online tools that give visibility to personal contributions (Jiménez Chávez, 2012; Subires, 2013). In our environment, an example is *El Archivo de la Experiencia* ("The archive of experience"), conceived as a social good that gives protagonism to elderly people:

> "Because people are those who make a country and are the stories of every man and every woman what give them a personality, the "Archive of experience" becomes an important living document on the history of 20th century Spain and a source of essential information for the future" **[9]**.

Another more recent and active example is *El Banco de Recuerdos* ("The Bank of Memories"). Led initially by the Queen Sofia Foundation and linked to the fight against Alzheimer's disease, it is currently funded by the General Foundation of the University of Salamanca as part of the *Cross-border space on ageing* project. Anyone can donate a memory through written text, photography or video, or sponsor one of the memories on display and make a financial contribution **[10]**.

In addition, some entities have created pages to accumulate knowledge about a municipality or a region which sometimes allow the participation of citizens, as mentioned. But these contributions do not affect decisively the information on the past and present that is published by the websites the municipal governments. Although most of them have a historical section, this is limited to some images and short texts on the remains of past times that can arouse some cultural or touristic interest, but they do not say anything about the most recent past whose protagonists have been the people who populates or populated the municipality. Moreover, almost all municipal websites have a section that provides information on the current situation of the municipality, but it is usually limited to some demographic or economic statistics disassociated from social changes **[11]**.

Ultimately, these explanations offer little, limited and fragmented information that does not allow to understand the past and present of the men and women of the different generations that make up the population of each town, and the ways that they have lived there, nor describe the continuances and changes, which are basic knowledge to consider the policies that should be adopted personally and collectively to improve the present and the future.

The focus of this information is also isolationist, since it does not allow people to understand that the daily reality of people living in each municipality has been and s closely linked to the reality of other

near or far localities, in which their inhabitants, in their daily activities, have woven and are weaving historical patterns. And they do not usually offer the possibility for citizens to make contributions to enrich the information.

These shortcomings are the result of the persistence of the androcentric, restrictive and vertical academic paradigm, which conditions the explanations of the humanities and the Social Sciences and makes it difficult to formulate a plural, horizontal and networked thinking and to articulate collective and personal explanations, which is the goal that we intend to contribute to through with the CiudadaniaPlural.com platform (www.ciutadaniaplural.com).

As explained on the main page of the website, we have designed the platform:

> "As a collaborative tool to know how the current societies is have been built historically, by making visible information of collective character as well as information resulting from personal experiences. The objective of this pieces of information is to enrich each other and thus help to formulate a plural humanism, essential to know what we want to preserve and change to define more equitable and fair forms of political organisation".

4.1. Criteria

To develop the *Ciudadania Plural* platform, we have taken into account criteria that we have used in earlier projects, which we continue considering valid. We aimed to modify the androcentric academic approach and adopt a wider and plural perspective that, based on the various positions occupied by people in the localities they inhabit, allows the understanding of the supra-local interrelations considered as historical frames that articulate the social relations starting from the means of transport and communication. In addition, this approach should take into account and allow the understanding of the experiences of different women and men of different ages, backgrounds and social conditions, in public as well as domestic and marginal spaces, taking into account the role of the institutions.

For this, we consider that we should organise the documents in a complex documentary database, structured by three axes: space, time and theme:

☐　　The space axis allows us to place the information in each locality or territorial scope, and relate it to pieces of information corresponding to other local or supra-local geographical and social areas, which are linked through networks of transport and communication. To do so, cartography is used as a resource that helps users to make sure information pieces, both personal and collective, are identified with the social positions occupied by persons and groups at each time and throughout the daily and ordinary itineraries or the life histories, either private, public, or marginal, so that they can better understand the continuities and changes in scenarios in which the life of people and groups takes place.

☐　　The time axis is used to locate the events both in the conventional chronology (day/month/year, period of time), as in the vital time that corresponds to the history of people's lives (childhood, adolescence, age...). The aim is to review the present of each locality or supra-local scope by taking into account the traces that remain of the activities

undertaken by the members of the previous generations, diachronically, to be able to relate collective and personal information. We also took into consideration the situations and events occurring synchronously, those lived by people in a same historic moment, although they experience it according to the different phases of life and conditions in which they live.

☐   Information is organised according to a tree of themes, which was conceived to avoid adopting an androcentric academic approach, which focuses preferably on the institutions and protagonists that act in public scenarios of the political, economic and cultural power, and belittles the performances of the rest of women and men. For this reason, this tree is organised in four large categories: first, the social space in which the life of the people takes place and defines the social positions that mark the conditions of life; second, the population, that is, the diversity of women and men of different ages, social conditions and backgrounds, their number, distribution, displacement, performances in the private, public and marginal scenarios, and the social relationships that are at the base of the institutional organisation; third, the media, culture and knowledge transmission systems; and fourth, the means of transport. The objective is to organise knowledge by focusing on the diversity of people that act in the different social spaces and are interconnected with others through the networks of media and transport, which are considered the nerve system that articulates the «network society» that currently has a global scope. These four large thematic fields are subdivided in other fields organised in a tree of specialised thematic tags. The definition of these categories is a difficult task, given the weight of those androcentric conventional systems.

The organisation of the documents in this complex documentary database allows reading from multiple points of view, and relating collective and personal explanations on the local and supralocal past and present.

Therefore, the introduction of documents is performed through a content management system in which each entry is attributed to the corresponding spatial, temporal and thematic references in the database so that it is related to the other entries.

The organisation of documents according to these basic coordinates allows the articulation of explanations of the collective information, elaborated by experts, with other personal explanations, while the individual contributions become significant and enrich a polyphonic collective history.

4.2. Preparation of documents

The documents contain, in addition to text and numeric data, graphics, photographs and audiovisual elements. They address the continuities and changes, providing a view of the context in which the personal stories that have shaped the history of the local and supralocal groups have been developed.

To build this plural explanation we should not only use academic bibliography, written most of the times in accordance with the restrictive androcentric conventional guidelines, which consider local knowledge and personal experiences as insignificant. Plural Humanism must value as significant what the diversity of people have lived and live in their everyday life, their contributions to the collective life also by considering that collective frame, in each town and in their displacements.

Ultimately, the digital memoirs must be conceived as: "A democratic and globalised, multicultural and multilingual memory" (Melo, 2011: 89).

In the *Ciudadania Plural* platform, more than 400 documents have already been introduced and 7 stories have been written, which are collections of documents with common parameters. One of the entries corresponds to the past and present of Catalonia, the wider geographical area that has been addressed, and another part corresponds to two locations in Catalonia that have been chosen to develop and test the platform: Cerdanyola del Vallès, the municipality where the Autonomous University of Barcelona is located, and Tortosa. The platform has also incorporated some documents about Popayán, in Colombia, fruit of a research exchange with a university institution within the framework of this project.

The members of the research team introduce the documents in the platform through a content manager system that offer different tools to organise and shape the documents that will be subsequently viewed by users. These tools have different features that are represented in Figure 1.

Attribution of parameters. Chronology. Assignment of references

Figure 1. Document management in CiutadaniaPlural.com
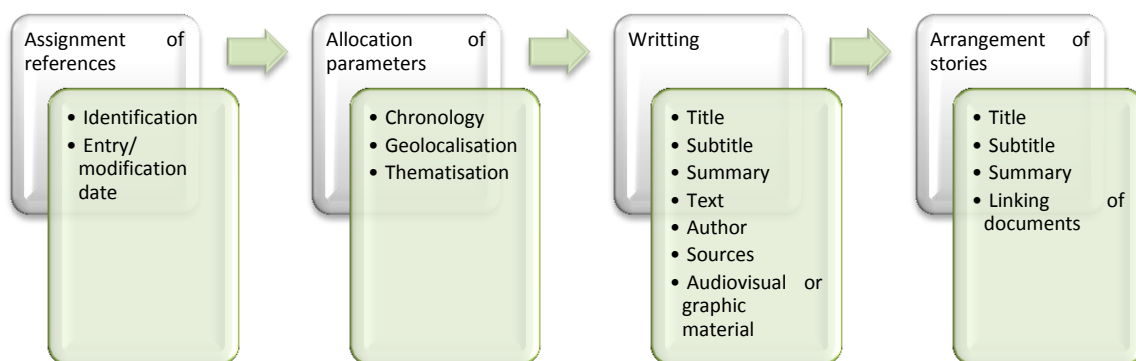
Source: Authors' own creation.
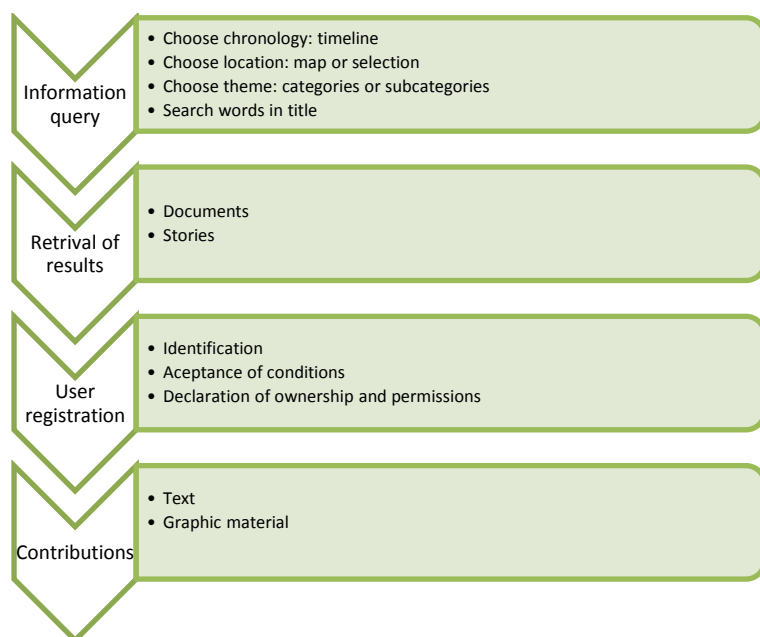
Each of the functions includes several tasks:

a. Automatic assignment of references: whenever a new document is opened, the tool automatically assigns two identifiers:

- Identification: each entry is assigned a number in the database, which helps researchers to locate the documents through a reference that is easy to order and search.

-      Date of entry / modification: This is assigned automatically. It is updated automatically if the input is modified or may be modified manually.

b. Allocation of parameters: each new document is assigned basic coordinates (chronology, space and theme) in the database so that it can be retrieved individually or in relation to other documents that are part of a story.

-      Chronology: each document can be located in a period of time, using two calendars that can assign start and end dates, or a particular date in the case of specific events. The information within a document can also be placed in the vital time line, marking a person's birthday, age or both. Personal and collective temporary references are not mutually exclusive but complementary. This system allows to reference each document chronologically without requiring a rigid structure that delimits information in specific periods. Thus, the different issues can be addressed in different chronological segments according to their own characteristics or the spatial parameter that is addressed in the document.

-      Geolocation: each document can be assigned at least one geo-location that corresponds to the main territorial area in which the event took place. In addition, it can be assigned other geo-location depending on other spaces mentioned in the document. This geolocation is made with Google Maps, which allows users to place a sign over the desired location and to assign an explanatory text over the map. Currently, geolocation is possible over the Spanish State, autonomous communities, provinces, regions and municipalities. There is also a search engine to identify locations in the map. In later stages, we intend to enable closer zooming in the closest and widest areas.

-      Thematisation: each document is identified with a category depending on its main and tangential themes. The labelling system allows the subsequent retrieval of documents. The development of the tag tree has been one of the most time-consuming and troublesome tasks in the project, and undoubtedly will require reviews, since the list of themes and subthemes should allow all documents about the personal experiences of anybody to be related to the documents of the collective history. The tree is organised into four basic areas: space; population; communication, culture and knowledge; and transports. Each one of these themes is subdivided into subthemes and each one of them can to be subdivide up to a fifth level of concretion.

c. Writing of documents: each document consists of different parts with formal characteristics characteristic of journalism, so that it is easily understandable and attractive without losing academic rigor.

-      Title: each document is assigned a title written in journalistic language, collecting the essence of the document.

-      Subtitle: the document can also be assigned a sub-title, which complements the wording of the title and reinforces the journalistic nature of the presentation of the documents.

-      Summary: large documents contain a summary that collects the main aspects of the text, so that the reader can know them in a quick reading.

- Text: main content of the document.

- Author: name of the research group, laboratory (LPCCP), or person that produced the document.

- Sources: list of bibliographic, documentary references consulted for the creation of the document.

- Audiovisual or graphic material: each document can incorporate one or several photographs, graphs or audiovisual elements that sometimes complement the text of the document and some others constitute the main material, especially in the case of audiovisual material created by the research group.

d. Development of stories: once the documents are introduced they can be organised into a story. Stories are created by the authors themselves by relating different documents on the same period, geographical area or theme. For this, the content manager provides a specific tool that allows searching and selection of documents by title, subtitle and summary.

4.3. Citizen participation to formulate plural explanations

Figure 2. Utilities for users, in CiudadaniaPlural.com

Information query
- Choose chronology: timeline
- Choose location: map or selection
- Choose theme: categories or subcategories
- Search words in title

Retrival of results
- Documents
- Stories

User registration
- Identification
- Aceptance of conditions
- Declaration of ownership and permissions

Contributions
- Text
- Graphic material

Source: Authors' own creation.

Visitors can consult and obtain information, or make contributions by explaining their experiences with any of the documents. The following Figure summarises the possibilities of use and the requirements involved in each of these possibilities.

The home page offers a brief explanation of the portal, its contents and the background of the project. In addition, the menu has three sections: *content, about us* and *I want to participate*. The section *About us* introduces the research team and the collaborators.

The section "content" can be accessed by any person without the need for registration or identification. The user has basic tools to consult documents and they correspond to the three parameters that conceptualise the database: space, time and theme. The user can also carry out searches by words contained in the headline. Once a document is located, if a user wants, he/she can make contributions.

a. Information query: to consult information in the platform users can carry out a search for documents by using the three basic tools:

☐ Choose chronology: this operation is done with a timeline that covers all the 20th century and from the beginning of the 21st century to the present day. Therein, the user is able to delimit the chronological period of interest while the same page presents a list of documents and stories that correspond to the selected option and can be accessed by users.

☐ Choose location: the tool presents the cartography of Google Maps with the indicators over the locations indicated in the documents. When the user places the cursor over each sing on the map a brief clickable headline of the document appears with a geo-reference. User can access those documents. The selection may also be carried out through a drop-down menu that presents different demarcation options (municipality, regions, state, etc.) and the precise location, in a second drop-down menu that includes the possible results, for example: the relation of the autonomous communities of Spain when the user chose the "autonomous communities" option in the first menu.

☐ Choose theme: this is selected from the tag tree, which presents, firstly, the four themes of the first level (space, population and social organisation; communication, culture and knowledge; and transports). Clicking on each of these themes unfolds to the second level, and so on provided the theme contains other sublevels.

The selection of each parameter is related to the other two, in such a way that the result shows the documents that refer to the three parameters jointly.

☐ Search for words in headline: in addition to the basic parameters, the tool has another possibility that allows searching for documents by the words contained in the title of the document. This possibility is also related to the fundamental parameters.

b. Contributions: the contributions of users are published completing the information of the document published by the experts. At the end of each document there is a space that allows users to enrich it with contributions corresponding to personal experiences. For this, it is necessary for the user to be registered and identified with a name and a password and to accept the terms and conditions on display. The contributions can be texts or images accompanied by a description.

5. Balance: contributions to the construction of a Plural Humanism

The platform CiudadaniaPlural.com, as it is currently developed (December 2016) is a basic model and structure that allows users to experience the possibilities of building a plural and networked explanation on the past and present of the global network society, although the geographical area in which the attention is focused is circumscribed to Catalonia and some specific municipalities. This is the main contribution based on which we will be registering experiences of citizen participation in the construction of plural collective knowledge.

Nevertheless, and taking into account the possibilities that digital technologies offer today, as well as the difficulties of constructing new stories that do not make the mistake of adopting the androcentric plural, traditional and networked paradigm, the work carried out so far has limitations, both in the thematic categories that we use to organise these documents, and the definition of the characteristics of the different documents and materials to be used as the most important in the content.

We hope this plataform can contribute to the formulation of a Plural Humanism.

6. Notes

[1] Orlando Project available at http://orlando.cambridge.org/ (consultation date: 12/12/2016)

[2] *The Valley of the Shadow* available at http://valley.lib.virginia.edu/ (consultation date: 12/12/2016)

[3] *Wikanda* available at http://goo.gl/3ZcOAD, has collected 2,812 articles and nearly 4,044 images (consultation date: 7/12/2016). It hosts wikis of the 8 provinces of Andalusia and a generic wiki for common and transversal themes. Derives from the *Andalusia's 2007-2010 Information Society Plan*.

[4] *Xilocapedia* available at http://xiloca.org/xilocapedia/index.php?title=Portada (consultation date: 10/12/2012)

[5] *YouTube* available at https://www.youtube.com and *Flickr* at https://www.flickr.com (consultation date: 6/12/2016).

[6] *El Retrovisor* available at http://www.20minutos.es/museo-virtual (consultation date: 6/12/2016).

[7] *Google Maps* available at https://www.google.es/maps, Wikimapia at http://wikimapia.org, OpenStreetMap at https://www.openstreetmap.org, and MyMaps at https://www.google.com/maps/about/mymaps/ (consultation date 6/12/2016).

[8] See "Manifesto for Digital Humanities" available at https://tcp.hypotheses.org/487

[9] Previously hosted at http://www.archivodelaexperencia.es, but currently inactive.

[10] *Banco de los Recuerdos* available at http://goo.gl/oDL1qQ. Other examples are: *MEMORO the El Banco de la Memoria* in http://goo.gl/lai422, which is a Spanish version of the Italian initiative *La Banca della Memoria* http://www.memoro.org/it/ (consultation date: 9/12/2016).

[11] See results of the analysis of the websites of the municipalities in the *Reports* section of the *Mapa Infoparticipa*: http://goo.gl/6zlwRA (consultation date: 12/12/2016).

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