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FROM THE PUBLIC MUSEUM TO THE VIRTUAL MUSEUM

Communication in the Museum in Digital Environments.
The Spanish Situation

Introduction

In W.J.T. Mitchell's work: *What do pictures want?*, one of the major figures in Visual Studies, he raises the importance of images in the society of our time in a world in which it is increasingly difficult to take our attention and in which Arts are looking for their place in digital media to continue spreading the Culture. The History of Art and, in particular, museums have found in digital environments their best ally to set an informal education system outside their exhibition spaces. In this way, they intend to bind with the public and attract new audiences following business marketing strategies by translating the study and the research of their collections into the language of social networks and digital platforms, in accordance with the educational objective of the museum.

If we take as a starting point the latest version of ICOM museum definition in 2017, we can see how important communication is in this institution: "A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment".¹ However, the abstraction of the word *communication*, together with its unstoppable evolution, allows us to raise new reflections about the divulgation in the museum and its relation with education.

1 The current definition, which has only seen minor adjustments over the past few decades, does not reflect the complexities of the 21st century and the current responsibilities and commitments of museums. ICOM invited its members, committees, partners and other interested stakeholders to participate in the development of potential alternatives for the museum definition in time for the 25th ICOM General Conference, which will take place in Kyoto, 1–7 September 2019. The Executive Board selected the below as a new alternative museum definition for a vote to be included in the ICOM Statutes: "Museums are democratising, inclusive and polyphonic spaces for critical dialogue about the pasts and the futures. Acknowledging and addressing the conflicts and challenges of the present, they hold artefacts and specimens in trust for society, safeguard diverse memories for future generations and guarantee equal rights and equal access to heritage for all people. Museums are not for profit. They are participatory and transparent, and work in active partnership with and for diverse communities to collect, preserve, research, interpret, exhibit, and enhance understandings of the world, aiming to contribute to human dignity and social justice, global equality and planetary wellbeing", in: ICOM International Council of Museums, Creating a new museum definition, <https://icom.museum/en/activities/standards-guidelines/museum-definition/> (accessed July 30, 2019).

Therefore, the analysis of the dissemination role in museums is an essential task to know, not only the evolution of communication processes in the 21st century, but also the development of museums in recent times. The Digital Age has probably been the biggest revolution in the museum by proposing new forms of communication with its audiences. Nowadays, we could even say that we find the possibility of separating the museum and the analog public from the public and the digital museum. The institution has to work in favor of both binomials, in terms of dissemination strategies developing, a new paradigm that tells us about a change in the way of relating. If the 19th century museum used to communicate in a unidirectional way with its visitors, and the 20th century museum allowed a bidirectional communication between the institution and the public, the Computer Age demands from the user a multichannel and multidirectional conversation, which has resulted in this new state.

In 1947, André Malraux proposed in his work *Le Musée imaginaire* that the Museum had to be an institution open to the society and whose influence was not limited to the place where the object was exhibited, but its knowledge should surpass the physical building. In his essay, he already sensed that new museums would host all kinds of cultural and artistic expressions, which would use the new modes of communication, but he could not have imagined the limits of the information revolution.²

The evolution of the Internet and ICTs, as the basis of the current information society, allows a new way of accessing, disseminating, creating and learning information thanks to its digital format, to the extent of breaking temporary-spatial barriers. Contributions of ICTs to the media have not only led to an improvement in the efficiency of the communication process, but they also have changed that process.³ Regarding the digital format, its importance in the development of ICT has to be valued since it is the basis for the construction of the knowledge society that, along with the evolution of the internet, is creating a new way of learning, accessing information, working and producing and of dissemination. This new language favors the interdisciplinarity and it generates new perspectives to access to the *digital culture*.⁴

In this sense, it is essential to understand that the museum, as a part of the current society, has had to assimilate the new ways of communication with the population and it has been forced to enter the technological dynamics of the 21th century to achieve the audiences and not to be outdone. The museum is present in society as a leading cultural entity that works to reach all audiences through interaction with them, through the creation of online resources to support teachers, the digitization of collections for researchers, the design of mobile applications for people with functional diversity and not forgetting the immediate contact that daily work in social networks entails and that brings together all kind of users. The results are clearly positive,

2 César Carreras, Gloria Munilla and Laura Solanilla (eds.), *Museos on-line: nuevas prácticas en el mundo de la cultura*, <http://www.personales.ulpgc.es/emartin.dch/tutorialCD/obligatorias/Museos%20on.pdf> (accessed July 25, 2019).

3 María Luisa Bellido, *Arte, museos y nuevas tecnologías*, Gijón: Trea, 2001. In her book, she analyzes the importance that the Internet has acquired as an instrument to conceive new artistic manifestations and as a means to spread the publications, collections and services of museums that have made this network a substitute for the traditional pages of its newspaper publication.

4 José Luis Cordeiro, *El Combate Educativo del Siglo*, Caracas: CEDICE, 1998, p.25.

so we can affirm that virtual communities that have been created around museums are committed to their educational work through this virtual reality, always with the aim of bringing the museum closer to the potential user and visitor.

Museology and Audiences, Origin and Transformation of Communication

Having argued the importance of communication in the museum and its gradual development, we cannot begin these reflections without going back briefly to the opening to the public of museums in Europe at the end of the 18th century, where the path of education in the museum through the democratization of the rich royal collections and its opening to a select sector of the population began. Moving back to the origins of the relationship between the museum and the user and highlighting the role of *New Museology*, we can now understand the transformation process of the institution and the revolution in communicative terms.

Defenders, detractors and even those who remain indifferent, cannot ignore that the museum is a place where not only works of art are preserved and shown, but also many other functions of this institution have reached unimaginable dimensions. The transformation has reached such a degree that we have forgotten the museum meaning of Adorno, who identified *Museum* with *Mausoleum*.⁵

In the USA and Canada, in the early years of the 20th century, the beginning of education in the museum was established as an extension of the classrooms.

We can outline Louise Conolly or Anna Billins Galup as personalities who created a precedent in the museum education, later renamed Anglo-Saxon museology. This trend will focus its attention on the public and not so much on the conservation of works, as Mediterranean museology, based in Europe, did.⁶

In this shift, the museum is increasing its weight in all areas, establishing itself as an irreplaceable and consolidated entity thanks to the praise and criticism it receives. The museum has been defined as the *decentralized structure at the service of the heritage of a community* that Marc Maure claimed as a defender of the New Museology.⁷ It emerged in the 80's, looking for a new language

5 Theodor W. Adorno, Valery Proust Museum, in: Theodor W. Adorno *et al*, *PRISMS*, London: Neville Spearman, 1967, pp. 175–185: "The German word *museal* has negative connotations. It refers to objects with which the observer does not maintain a vital relationship and are in the process of dying. Its conservation is due more to historical respect than to the needs of the present. Museum and Mausoleum are related by more than just a phonetic proximity. Museums are the family graves of works of art"; Luis Alonso Fernández, *Nueva Museología*, Madrid: Alianza, 1999, p. 17.

6 Javier Gómez, *Dos museologías. Las tradiciones anglosajona y mediterránea: diferencias y contactos*, Gijón: Trea, 2006. In his work deals in depth with these topics that can bring us closer to the future of museums, raising methodological differences between different traditions and also focusing on the most current controversies that are guiding the future of these institutions.

7 The principles of this New Museology also developed by Desvallées were others, as they focused on bringing the museum to all audiences and extending its influence on society as a whole, as part of everyday life, thus criticizing the old museology, completely obsolete and for an elite. André Desvallées, *Nouvelle muséologie*, in: *Enciclopedia Universalis*, Paris, 1989 [1980], pp. 921–924.

and a further opening and socio-cultural participation, which defines the international movement that has managed to remove the museum institution from its foundation. All these advances were related to the previous works about museology in general, and to concepts such as the *ecomuseum* in particular, of the recognized Georges H. Rivière.⁸

Desvallées, Maure and Rivière could see how the rusty museology of the 19th century was destroying the museum from inside. Therefore, the rupture with this conventional profile of the museum has been favoured from the last fifty years. Thus, we arrive to a new conception of museum in the 20th and 21st centuries as a result of this new paradigm, which gives rise to an organized, lively and didactic museum, leaving behind the idea of the *warehouse museum*, to become an *exchange databank*. Moreover, the New Museology creates an alluring museum, which attracts all kinds of audiences, in the line of the *entertainment culture*, and in direct relation to the post-industrial and consumerist culture of postmodern society.⁹

Thanks to the New Museology, museums have become both a means and an end of cultural action. In other words, the most conservative facet of museums is being lost in favor of the enhancement of human aspects and to the detriment of the exhibition quality or the appropriate conservation of heritage. As Valdés Sagués says, the museum's socializing character makes words such as *education, teaching, pedagogy, dissemination and communication* essential when we talk about the museum institution.¹⁰

Along these lines, the relationship between society and museums has evolved over time, so if we take the Enlightenment museums as an initial point, we will see that it has been a complex process that has completely transformed the situation until today, where different types of public demand new ways of relating from the institution, using new technologies and digital media.

The Museum in Digital Environments

In recent times, the museum has crossed the border of its buildings to access digital devices, adapting to the reality of contemporary society, which demands its presence. Although we are faced with a fairly recent issue, the debates about the level of "digitalization" that the museum has to assume are extensive. These issues have caused various disagreements among the theorists of the more traditional museology, who understood that this institution should not appropriate this communicative language, which was considered far from the original purposes of the museum. These positions corresponded to misinterpretations of what the technological revolution of the museum really means today, which has not replaced the essence of the museum, but quite the opposite.

8 George Henri Rivière, *La Museología. Curso de Museología, textos y testimonios*, Madrid: Akal, 1993.

9 Alonso 1999 (as fn. 5), p. 56.

10 María Carmen Valdés, *La difusión cultural en el museo. Servicios destinados al gran público*, Gijón: Trea, 1999, p. 45. At this point, could be an interesting book recent work of Ferrán Urgel, *Manual de estudios de público de museos*, Gijón: Trea, 2014.

As Deloche says, the debate about the virtual museum tends to focus on the competence of information and communication technologies in museums. For him, the reasoning is very simple:

If the public can see the collections through the Internet, they will stop coming to the museum, which will lead to a decrease in the number of tickets sold and, consequently, the institution's sources of funding. However, we have been observing that the visit rate does not stop increasing, which seems that the competition, if it is real, must be in another place, where we do not expect it [...]. So, there are two curiously confused problems: about the definition of the virtual museum and about the competition of new media with the institutional museum¹¹.

Deloche insists in his work *The Virtual Museum* that "the museum is not a *cyber museum*", in other words, the museum must be understood as a cultural institution that uses the media of each time to publicize its collections, support research and conservation and specially to spread their activities and connect with the visiting public.

Similarly, this author calls the utopian idea of the virtual museum into question as a kind of artificial museum manufactured to replace the traditional museum, as we conceived so far. He tries to explain how some researchers imagine "a kind of *cybermuseum* that would replace the dusty museum of once, a museum for educated people, but in a hurry that would visit every morning like who reads the newspaper while having breakfast". For these theorists reluctant to update the institution, the museum we know today would disappear to become "a kind of robot capable of offering its customers a new version of *cultural fast food*";¹² a museum based on the latest technical advances and the computer programming, an "automatic museum" like the one Benoist imagined in his *Musée et Museologie* in the 1960's.¹³

In contrast to these theorists' thought, the museum has naturally been adapting to the new times and has been including digital technologies in its daily work as another tool. The New Museology, above mentioned, meant a fundamental step in the social evolution of museums, reaching its peak with the advent of the Internet and digital connection networks in the late 80's, when the great museums began to use that new medium, finally settling in the mid-90's.¹⁴

Prior to that, the technology reached the museums through the first digital applications designed for the delight of the public and as one of the most attractive elements of the visit. In order to use them, it was decisive the introduction of computers in the exhibition halls with the aim of interacting with visitors. This type of dynamic tools of the exhibitions in the museums that allowed to extend information to the public in the same room have also been evolving with the technological advances. In the last decades, we have shifted from seeing in the museum simple audiovisual equipment, audio guides or interactive screens fixed, to see augmented reality or touch devices that accompany us through the rooms.

11 Bernard Deloche, *El museo virtual*, Gijón: Trea, 2001.

12 Deloche (as fn. 11), p. 187.

13 Luc Benoist, *Musée et Museologie*, Paris: Presses Universitaires de France, 1971, pp. 121–122.

14 José Nicolás del Río Castro, Museos de arte en la Red, <https://telos.fundaciontelefonica.com/archivo/numero090/museos-de-arte-en-la-red/> (accessed July 23, 2019).

Returning to the 90's, the first cd-roms used to visualize the works that made up the permanent collections of the museums and, to a lesser extent, the temporary exhibitions came into existence. This technology, which shortly after was replaced by the DVD, currently has a residual representation within the offer of merchandising products in museum stores.¹⁵

Obviously, as we have already advanced in the previous pages, the appearance of the Internet was the great communicative revolution of the museum because it directly interconnected the user with the museum without the obligation of the physical visit. It was no longer necessary to go to the museum to learn about the works that were exhibited in a digital museum that was open 24 hours a day, every day of the year. With this purpose, the first websites of museums arose, and have remained the most important corporate reference of the institution up-to-date, and which officially represents the museum on the Internet.

In this way, the current institutional communication model, based on unidirectionality, has expired. This practice, consisting in the organization transferring its message through the media, advertising or marketing, with the intention of impacting a passive receiver, has been outdated. The technological advance has enabled a change of role in the different actors that make up the communication process.¹⁶

The Internet allows us to break, on the one hand, with the barriers of time – since it is not necessary the simultaneity of the visit- and, on the other hand, of space – since it is accessible from any point of the planet. All of this modified the function of those responsible for the museum, as well as the wide range of public to whom the activities of the institution can be directed. Nowadays we cannot think only of the local public, who can move physically to the museum, but also in that public of many other countries that may be interested in the institution, making the museum a completely accessible space.¹⁷

Likewise, the museums conceived their presence on the network as an advertising tool. Through them, they showed in a simple way their opening hours, their location or their contact information. Later, the websites of the museums ceased to be simple calling-cards to become work tools, and learning and leisure tools for all audiences. In this way, museums began to offer in their digital spaces interesting materials to the user, from digital pictures of their backgrounds with textual information, to educational activities related to the collection, as an invitation and complement to the physical visit to the museum, so the user could know better the space he was going to visit from his electronic device.¹⁸

Another of the great advantages of the network is that it served as a meeting point between visitors and museum professionals, which allowed, for the first time, the fluid communication between them. Therefore, the communicative barrier was broken and the museum got to know

15 Bellido 2001 (as fn. 3), p. 40.

16 Raquel Martínez-Sanz, Estrategia comunicativa digital en el museo, in: *El profesional de la información* 21 (4) (2012), pp. 391–395.

17 César Carreras, Gloria Munilla and Laura Solanilla Gruo Òliba (eds.) *Museos on-line: nuevas prácticas en el mundo de la cultura*, <http://www.personales.ulpgc.es/emartin.dch/tutorialCD/obligatorias/Museos%20on.pdf> (accessed 25 July 2019).

18 Miquela Forteza, El papel de los museos en las redes sociales, in: *Biblos* 48 (2012), pp. 31–39.

the public's opinion through the introduction of visitors' suggestions. Before, the only possibility of obtaining this information was from surveys that facilitated this adaptation of the institution to the visitors' preferences, in the so-called *public studies*, that with the emergence of these new technologies have also been revolutionized.¹⁹

At the beginning of the 21st century, the online museum begins to take shape as its own entity. It goes from being an *advertisement* that redirects the potential visitor to the museum, providing useful information, to use digital tools, and mainly the website, to introduce content and services that enrich the museum's offer. In this way, the visitor will arrive at the museum with a clearer idea of what will be found in the museum, but there is also the possibility of bringing the museum closer to audiences who, for different reasons, will not be able to know the institution face-to-face.

As Forteza Oliver says, we find two very differentiated audiences: on the one hand, the *off-line audience*, represented by the locals and tourists who go to museums to have an experience similar to what they would have if they went to a cinema, to a theater or restaurant; and on the other, the *online audience*, looking for a tool that can offer different utilities, from instruction and information, to expansion and fun. This is one of the keys of the online museum, making the museum accessible to the non-face-to-face public and improving the presence of visitors.²⁰

In addition, at present, the digital presence of museums is not a recommendation to attract new audiences or boost their activity; now, the museum has the obligation to provide this service at the same level that dedicates its efforts to the conservation of its collections or the assembly of temporary exhibitions. Furthermore, this is not exclusive to large museums, but is also a challenge for the smaller ones. As we will see in the following pages, and almost paradoxically, the smaller museums have worked the most in having a careful online presence, serving as an example on many occasions to the most important museums.

It is important to keep in mind that, in the virtual scene, the spatial limits are blurred, the surface that the museum occupies is a second place and where the museum is located is left in the background because the Internet user only can see in the screen the content that the institution has posted, with the image that the museum wants to offer to its users. What the virtual visitor is looking for is useful information and quality content, without worrying so much about which institution it comes from.

For this reason, museums with fewer resources should work together, developing a network museum policy in order to join efforts and prevent the individual work from going unnoticed in the digital maelstrom. Social media, in addition to serving to boost and expand the museum's message, is an excellent listening channel, which allows bidirectionality and, consequently, valuable *feedback* for both the institution that directly receives what its public wishes to convey as for the Internet user who feels himself as an active part in the evolution process of the museum.

19 Álvaro Notario, El público en el museo actual. Reflexiones sobre la Nueva Museología y las masas, in: *De Arte. Revista de la Universidad de León* 17 (2018), pp. 191–203.

20 Forteza 2012 (as fn. 18), p.33.

This dynamic is what will make it possible to strengthen a community of followers around common concerns.²¹

In contrast, it is important to consider the differences presented by more relevant museums regarding to smaller ones. To start with, smaller museums can empirically investigate with their digital communities what kind of performances their audiences like the most, which ones have greater and lesser impact, and which ones find better results, both virtual and face-to-face. However, large institutions, due to the impact they have, are usually much more cautious on the creation of new dialogues with the public in general terms, and specifically in the case of virtual presence, because the conversation becomes in multichannel. These museums try to be very conservative and analyze carefully each step they take.

Regarding to the mentioned impact that the great museums have, it is necessary to point out the differences between the resources that some museums can have in front of others. Not only in terms of economic resources, which can allow a greater deployment of digital media, with the latest generation programs with constant updates, but also with specialized personnel dedicated to these tasks in a specialized manner. In this sense, we see how the staff dedicated to these tasks in museums is not a specialist in the field, in general terms. Museum curators have had to specialize in museums with continuous training in parallel to their usual work to meet these needs. Only in the great museums and just recently, journalists, graphic designers and community managers are slowly beginning to be included among their teams. In short, the digital communication professionals begin to be decisive.

Even the location of these professionals in their departments has been a problem for many of these museums. In general, although the departmental organization of each museum is different, everything related to communication began to be treated from the departments of education until, little by little, it has been sliding away and assuming a relevant role within the organizational chart of the museum, with specific departments of press, dissemination or communication. Only in larger museums, it has been considered essential to have departments dedicated to new technologies, with complete teams specialized in the field.

However, most museums, because of their tight budgets and limited staff available, assume these tasks as a complement to the rest of their work, with the consequent neglect that this implies in something as important as the communication of all their activities. It is essential the continuous training of the museum staff and the transversal work of all the departments, to achieve these objectives, which will be reflected in the innovation, rigor and originality of the virtual content that the user will receive. The museum in its online version, in addition to qualified professionals, requires the involvement of all departments of the museum, ceasing to be an individual activity to become a teamwork.

New professional profiles must be added to the museum's own team, although they work from outside the institution, invigorating the contents through its own digital tools. In the recent past, we could refer to them as bloggers or digital journalists, perhaps today is more appropriate the term of *cultural influencers*. They are the new art critics, who through their opinion articles in the press, on their own blogs, video channels and, of course, with their work on social networks,

21 Martínez-Sanz 2012 (as fn. 16), pp.393–394.

help spread the museum's activity. In this sense, it is increasingly common for museums, as well as for their traditional press conferences when an exhibition is inaugurated, to organize a meeting with these new digital communication professionals.

Digital Communication in the Current Museum

At this point and before studying the Spanish situation specifically, we are going to analyze the keys of communication in the current museum. As we will see, the web and social networks have become essential aspects when we consider communication strategies, but the fact of having them does not guarantee good results. It is essential to know how to manage them and exploit the potential of each of these communicative channels, within the overall strategy of the museum. However, as the *ConnectaMuseu* report shows, which analyzed the online reality of museums in 2016 and that will guide us to analyze the phenomenon of digital communication in general terms, in some museums there is a lack of online strategies, and, even worse there are museums that do not have these essential tools yet.²²

The museum of the 21st century, in addition to virtual, in the words of Gómez Vílchez, is a social museum that has transformed the idea of a traditional museum and now focuses on creating a dialogue with the public, understanding that it should not only work for its visitors, but also with its visitors. The new museum is a center that generates and distributes content and information, offering varied channels for museum-user interaction and accepting the participation and collaboration of its visitors in the construction of knowledge. Based on communication education, the museum uses the possibilities of technology and new networked environments, but it is not enough to make use of the virtual medium, it must be included as part of everyday work and as part of Institution development.²³

From our point of view, we understand that the museum must have minimums that guarantee its digital presence today. In addition to the importance of the web and the presence in social networks, in which the museum must work on its maintenance and constant updating, nowadays, streaming, augmented reality and the mobile device are strategic tools for communication between the museum and the user, being keys to the online-museum.

Website

The website is the new door created by the Internet that allows the virtual visitor to enter the museums. These corporate websites are gradually important in the communication of museums,

22 The *ConnectaMuseu* report has allowed us to consider the situation of museums and art centers in Spain, but it is not the only one of this type that tries to put a spotlight on this issue. For example, Dosdoce.com presented in 2016 a report that analyzed the degree of use of all types of technologies in the three phases in which a citizen has direct contact with a cultural entity. These three phases include, first of all, the actions before visiting the center (discovery phase), secondly, during the visit (direct experience phase) and finally, after visiting it (phase where you share your experience/satisfaction), <https://www.lasnaves.com/wp-content/uploads/2017/08/INFORME-CONNECTA-MUSEU-2017.pdf> (accessed August 1, 2019).

23 Soledad Gómez Vílchez, *Museos españoles y redes sociales*, <https://telos.fundaciontelefonica.com/archivo/numero090/museos-espanoles-y-redes-sociales> (accessed July 26, 2019).

as they are increasingly visited by web-surfers and they progressively stay longer in them. For this reason, beyond the basic information museums should take advantage of communicative opportunities to publish the maximum information about their collections, economic management, administrative organization, visitor data, etc., which creates a positive transparency image of the institution.²⁴

The website remains the official channel of the institution, which bundles all the information necessary to visit the museum, such as that calling-card we referred to, or the origin of its existence. But at the same time, it is the place where the museum more fully explains its functions and its activities and where it presents its collections and the full range of resources and products it can offer the virtual user. Moreover, due to its greater extension and the great possibilities it offers, it is the platform that brings together the rest of the communicative channels, redirecting us to social networks, blogs, video channels or even related pages, where we can find information that is potentially of the interest of the user. For example, platforms or digital projects in which the museum participates, in the case of Spanish museums, *Cer.es*, or in the European ones, such as *Europeana*,²⁵ which we will refer to later.

The great revolution of the websites, has come with the semantic-websites, a type of websites that allows you to link all digital tools and databases to the service of the user, and therefore helps to generate a global strategy in digital terms with the same platform on-line. This kind of websites also allows interconnecting all the data to adapt them to different audiences and aimed at maximizing the satisfaction of their interests, offering data explicitly related to those results, satisfying the user's questions.²⁶

Social Networks

On the other hand, as other lighthearted information channels, we can find social networks. Recently, these networks have become essential tools to boost the daily life of museums. Within the great revolution that the Internet has meant in society in general, the social networks have had the greatest impact on the daily life of the population, becoming the backbone of the Internet. Thanks to them, museums are offered an opportunity, as never before, to establish a constant and direct dialogue with the public through social networks.

These new digital communication channels offer museums the possibility of approaching their visitors in a different way and also try to reach those web-surfers who do not know the museum, bringing the institution closer to their electronic devices. Thanks to social networks, the museum reaches more people, its communicative potential is inexhaustible and represents a new way of working that can bring great results to the institution, with new dissemination cam-

24 César Carreras, Gloria Munilla and Laura Solanilla (eds.), *Museos on-line: nuevas practicas en el mundo de la cultura*, <http://www.personales.ulpgc.es/emartin.dch/tutorialCD/obligatorias/Museos%20on.pdf> (accessed July 25, 2019).

25 *Europeana Collections*, <https://www.europeana.eu/portal/es> (accessed August 1, 2019).

26 *Museo del Prado, Estándares semánticos y datos enlazados*, <https://www.museodelprado.es/modelo-semantic-digital/estandares-semanticos-y-datos-enlazados> (accessed August 1, 2019).

paigns more effective than traditional ones. It gives to the museum the ability to attract new sectors of the public to Museum.

We can observe a direct and unlimited medium of communication, with all the risks that implies for the institution, and many benefits if they are well spent. The key is to generate a commitment from the virtual public, in through the creation of a digital community related to the museum, which participates in the proposals that the institution made to its users. In this way, these tools have become the point of union of a virtual community interested and loyal to the museum project. The museum has a crucial role in managing its relationship with the physical audience, but also with the on-line user, knowing how to grant him his position as an interlocutor. Communication expands and the museum even reaches those who are not potentially public. Thanks to social networks, any user can now be talking about a museum, anywhere in the world, in any language.²⁷

Museums have positioned themselves in a diverse way, carried by the responsibility of opening the doors of the institution in this way. At the beginning, there was a fairly major rejection of museums entering the world of social networks. Even, certain museums expressly prohibited opening institutional profiles on social media, but currently the social trend has been growing and museums have launched themselves to create diverse network spaces. Gradually, museums have entered the dynamics of digital presence and, to a greater or lesser extent, today, all museums have profiles on different social networks. An analysis based solely on quantitative elements could imply that cultural institutions have understood the message and that the museum has been opened to its public and has been updated to current times.

However, although the general use of these digital tools is adequate, in some cases the absence of a careful digital strategy is perceived and it is not always easy to recognize if certain museums make use of social media by conviction or if they are following the inertia of this rising trend. Being present in networks without a structured communication plan, a development program and clear objectives are not positive.

Gómez Vilchez says that an institution must be part of social networks and must assume a series of commitments. It implies creating community and responding to the requirements of its members. It is not enough to be simply present in these media, but it is necessary to carry out a work program, agreed and organized, that promotes conversation and participation.²⁸

A few years ago, the tendency was to create new institutional profiles in all the new digital platforms that were becoming fashionable (Facebook, Twitter, Pinterest, Youtube, Vimeo, etc.) without a specific strategy for each of them. However, nowadays, there is an increasing recognition of the importance of having a smaller but careful digital presence instead of a wide range of neglected social networks or in which repetitive content is turned over. The current commitment is to maintain a communication strategy appropriate to each of the social networks, in form and content, evaluating the real resources that the museum has to attend them. There is

27 La Visible, La comunicación online en los museos. Nueve tendencias, <http://www.lavisible.org/larevista/2016/03/22/comunicacion-online/> (accessed July 23, 2019).

28 Gómez (as fn. 23).

nothing that causes a worse impression on an institutional profile than the outdated content, so many museums have eliminated those that were unable to attend, and focused on those that have the greatest impact.

Streaming

One of the great social networks' novelties has been the possibility, not only to share content with users from any part of the world and at any time, but also to share it in rigorous direct. Although there were specific tools for this, such as Periscope, nowadays Instagram or Facebook, allow you to generate connections with users and broadcast live videos from a mobile phone, which can be saved and subsequently shared as content that can be viewed in the future.

This allowed in the mid-2010's that the web-surfers attended cycles of conferences, press conferences, restoration laboratories, book presentations, concerts, etc. from home. Undoubtedly, this commitment to immediacy and innovation in communication has come to stay. Museums, increasingly, include these live connections with their virtual community in their daily schedules. The use of this type of social network extends the audience's experience and above all it generates closeness between the institution and the virtual public.²⁹

Augmented Reality

As part of virtual technology, augmented reality currently represents a powerful tool that has shown its versatility in a wide range of applications in different areas of knowledge, especially in the educational field where it has found great possibilities for the dissemination of content that is presented in an attractive and pedagogical way at the same time.³⁰

The Augmented Reality has appeared with great force within this context in recent years, and in museums it is represented as a substitute for the interactive elements we talked about previously. It offers great possibilities for its attractiveness, its ability to energize the exhibitions and to interact with the visitor.

However, despite providing useful options, its implementation is still a problem in many museums and it is often difficult to take advantage of it when there are many people in the rooms. In addition to not being a technology available to all museums, due to its high economic cost, not all users have understood how it works. The use of mobile devices such as smartphones and tablets to access this expanded information of the works through augmented reality is complex, it takes a few minutes to focus with one of these devices and it may make the experience uncomfortable for the rest of visitors.³¹

Let us not forget that, like the previous interactive tools, all the digital elements used in their rooms are characterized by obsolescence, which represents a risk for the institution that invests on these technologies. Many of them choose to sign collaboration agreements with leading companies, generating a mutual benefit.

29 La Visible (as fn. 27).

30 David Ruiz, Realidad Aumentada, educación y museos, in: *Revista Icono* 14 (2) (2011), pp.212–226.

31 La Visible (as fn. 27).

Mobile Phone

All the applications, platforms and digital tools that we have mentioned are essential to connect the museum with the user, both inside and outside the museum, but they have the mobile device as a meeting point. Thanks to the mobile phone, we live connected to the world, we know the news and we communicate with our environment, we establish social relationships, we share our own information through social networks and we spend our leisure time surfing these applications.

It is not surprising that it also becomes a key element for communication used by museums in order to transform the visitor's experience both before making their physical tour of the museum and during their visit: the mobile phone has become the new audio guide from the museum. By downloading an application created by the museum or by capturing a QR code, the viewer has in his personal mobile all the information that the institution has prepared to make his visit to his exhibitions more enriching. Many museums have invested in the implementation of Wi-Fi connections in their spaces so that users can consult that information during visits.

Many of these mobile applications already have geolocation based on beacons, portable devices that are incorporated into physical objects and that, through the Bluetooth connection generates virtual maps that are reflected in the applications. In consequence, we obtain personalized interactive tours that give museum visitors additional information about what they are seeing, such as the stories about some paintings, X-ray images of the works, as well as interactive games.

In addition, iBeacon technology can detect the active presence of visitors thanks to the mobile application, thus starting to offer information that is updated according to the distance and location in the museum. It also offers a virtual map-guide based on GPS technology on the works of art of the museum.³²

The Spanish Situation

In Spain, the introduction of Information and Communication Technologies in museums has followed a slow path. Technological changes have been taking place gradually but, little by little, they have been growing in their virtual presence with the use of different tools.

Spanish museums, in general, began to bet decisively on new technologies at the end of the 90's, at the time, the digitalization of the collections of state museums with the DOMUS program began. It is a parallel process to which we are analyzing and it has a great relationship. Thanks to this program, the collections of our museums were also made accessible to researchers and the general public by the Internet, while ensuring their conservation. Undoubtedly the creation of Cer.es, the virtual public access platform in which all the information of the DOMUS program can be found, implied a revolution in the dissemination of the collections of Spanish museums.³³

Focusing on the communication tools of museums and users, after the first trials of corporate websites, it will be at the end of the first decade of the 21st century when Spanish museums

32 Ibid.

33 Red Digital de Colecciones de Museos de España, <http://ceres.mcu.es/pages/SimpleSearch?index=true> (accessed August 1, 2019).

have begun to incorporate the new tools of Web 2.0 in their areas of communication as more broadcast channels, although the *modernization* has been different in each specific case.

According to the 2016 ConectaMuseo report, it wasn't until 2009 when state museums started opening their profiles on social networks. However, as we anticipated in the previous pages, the smallest museums have been the pioneers in many cases, especially in the use of social networks, with virtual projects that required the response of users, creating small communities on-line with great results. By analyzing the general panorama of Spanish museums, we can see the independence of the magnitude of the institutions of good practices, despite the fact that the impact and effect of large museums is always much greater.

As said by Gómez Vilchez, by typologies of museums, we can observe that the involvement of modern and contemporary art museums in social media was, at the beginning, higher than in other categories of museums³⁴. In opposition to this, archaeological and fine art museums, especially provincial and local ones, have taken longer time to join their presence on the Internet and especially in social networks. Although with some exceptions, the number of these museums in networks is reduced and their profiles do not reach a majority support from users. In the same situation there are ethnographic museums, science museums and house-museums, which do not get good positions.

We can also perceive a similar effort in some museum networks, for instance, the State Museums. Their presence in social media did not exist until the early years of the 21st century. However, they have grown qualitatively and quantitatively in the last decade, with numerous profiles widely supported by the public. If in 2010 Gómez Vilchez said that the involvement of Spanish museums in social networks "is still limited", 10 years later we have to say that evolution has not only been positive, but that expectations have been exceeded. Many of the most traditional museums, following the great examples worldwide, such as the Louvre, the Metropolitan or the Tate, have taken a great step in this direction. They surprise us every day with innovative and dynamic content with which the user interacts actively.

According to Conxa Radó there are many Spanish museums that can serve as an example to the rest. She says that one of the best references could be Museo Thyssen that, from the beginning of this incursion in the virtual world of museums, has worked in a good on-line communication strategy through the creation of blogs, then with their profiles in social networks and later with their applications and interactive games of great quality. Radó also highlights the MUSAC of León that has organized several years meetings about museums and social networks in the 2010's. and in Barcelona she stresses the CCCB Lab and the Picasso Museum, which have a very powerful social networking activity.³⁵

Within the numerous public and private museums that make up the cultural reality of Spain, we must highlight the role of State Museums, which with few economic and human resources have managed to position these public institutions on the Internet. However, there are also

34 Gómez (as fn. 23).

35 Ende Comunicación, La dimensión digital alcanza a todos los ámbitos del museo, Interview with Conxa Radó, <http://endecomunicacion.com/entrevista-con-conxa-roda-responsable-de-estrategia-digital-del-museu-nacional-d-art-de-catalunya-cataluna/> (accessed July 23, 2019).

public museums, Museo Nacional del Prado and Museo Nacional Centro de Arte Reina Sofía, that have great equipment, budgets and the immediate impact of everything they do. Both museums, main cultural institutions in our country, generate a lot of content and know how to manage their resources, reaching unthinkable objectives for the rest of the museums.

In this sense, the work they have done in Museo Nacional Centro de Arte Reina Sofía with the website is noteworthy. This is a perfect example of how the information about exhibitions or about the collection can be clearly expanded thanks to this channel. There, you can find all kind of information, for example, the podcasts of the Reina Sofía Radio (RRS) in which we can find debates, conversations and programs that add context to the works available in the different exhibitions and in the collection of the museum.³⁶ Despite this, it is the Museo del Prado and its newly released *semantic web* the most notable example.

Regarding networks, the digital media *par excellence* was Facebook. Its format allows to explain in a comprehensive way the news of the institution and redirect the flow of users to the web. Facebook perhaps was the platform with which Museums join the social networks world. On the other hand, Twitter, much more instantaneous and that allows less extension in the shared contents, was the most used medium and the one that experienced the greatest growth until the arrival of Instagram.

Nowadays, Instagram is undoubtedly the social network that stands out in growth. However, the museums' video channels on YouTube or Vimeo usually maintain their activity but, in some cases, they have been replaced by streaming connections. The participation of some of the Spanish museums in the Google Art Project, which allows virtual tours of some of the most prestigious museums in the world, is also very remarkable. In addition, in some specific cases, such as the Museo Nacional del Romanticismo, playlists have been generated in Spotify with musical songs according to the time of their art collections. In contrast, accounts on Flickr or Pinterest have gradually disappeared, with some exceptions, to give way to Instagram.

It was in 2010 when Instagram was born. No museum could anticipate the importance that social networks and their online communities would have in the dissemination of art. In fact, many of the large centers did not have communication departments specialized in social networks and online communication at that time. We should underline the foresight that museums such as Museo del Romanticismo or Museo Cerralbo had at that moment. They opted for this new network, despite being small-impact museums and in spite of having reduced teams, achieving excellent results and positioning themselves at the top of digital communication in their field in our country. Must be also highlighted the activity of Museo Thyssen and its headquarters in Málaga, Museo de la Alhambra, MACBA (Museum of Contemporary Art of Barcelona), Fundación Canal, Espacio Fundación Telefónica or Museo Guggenheim Bilbao.³⁷

Thanks to social networks, and especially thanks to Instagram, the museum opens the doors to events and spaces never known by the visitor, whether for reasons of accessibility, security or conservation. In this way, the virtual user knows from his mobile phone the day-to-day of the museum

36 La Visible (as fn. 27).

37 Mariola Llorca, Museos en red. Instagram al servicio del arte, <http://www.hojadellunes.com/index.php/reportajes/81-museos-en-red-instagram-al-servicio-del-arte> (accessed August 1, 2019).

and its workers. These on-line users can attend press conferences, bloggers' meeting, exhibition assemblies, the work of restorers. In addition, they can participate in creative competitions to win tickets, exhibition catalogs, etc. Surprisingly, the last ones to join this social network in our country have been Museo Nacional del Prado, in February 2017, and Museo Nacional Centro de Arte Reina Sofía, in September 2018, continuing the example of the most pioneering museums without risks.

More than these initiatives that demand the participation of visitors, a series of celebrations have been established for the museum community in which users also participate, mainly through Twitter. For instance, the international days of the #MuseumWeek or the #MuseumSelfieday. Alongside them, museums continue to commemorate, on a particular level, the artists' anniversaries of their collections, dates of historical importance for the institution. In addition, they participate in the celebration of religious or civil festivities sharing in their social networks the art works of the collections of each museum, related to this holiday, generating dialogues in network and offering new knowledge to the web-surfer. Next to these activities that, with greater or lesser intensity, all the museums carry out in their digital channels, it stands out the *life-shows* of the 10 in the morning of Museo Nacional del Prado or the humorous stories of Real Academia de Bellas Artes de San Fernando, both on Instagram, to give just a few examples.

As a conclusion, museums, like the rest of cultural institutions, should not remain outside of this digital revolution that has impregnate all stages of life, from the point of view of the organization it requires opening up to the participation and demands of the audience, who want to be heard. These changes entail, not only a renewal of the communication tools, led by the incorporation of the social media, but also require a change of mentality and priorities.³⁸

One of the main consequences of the implementation of the new communication technologies has been the emergence of large groups of people connected through their personal computers and mobile phones to get involved in joint projects for ludic, business, scientific, social or policies purposes.

Museums in general, as well as Spanish museums in particular, have managed to adapt to the times and, despite the initial caution, they have positioned themselves at the top by updating their professional teams with very good acceptance by users. We do not know what the future will hold in terms of virtual relationships, what we can be sure of is that museums, as institutions that grow and evolve with the society of their time, will know how to adapt to continue growing.

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38 Martínez-Sanz 2012 (as fn. 16), p. 394.

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