

**Title**

**Museums and social media: Catalonia as a case study.**

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**Abstract**

The main goal of this article is to describe the current situation of Catalan museums in social media. The study and analysis was developed following both a quantitative and a qualitative methodology, by creating parameters and indicators for scientometric purposes and by gathering and observing data from different platforms. Results showed that only 60% of Catalan museums present a social media profile of their own, and most of them are significantly lacking regarding feedback with their followers. A very heterogeneous situation was also detected in the Catalan museum system, which has a complex territorial organisation. Results also show that the introduction of state-of-the-art technologies is almost incidental. The discussion and conclusion sections also reflect on the presence and use of social media in Catalan museums, putting into question their communication strategies and plans, and how museums can communicate more effectively with their followers or visitors.

## 1. Introduction

The exponential increase in the use and spread of the Internet during the 1990s meant drastic changes and improvements on access to information about museums and their collections (Tasich, 2014). The so-called “new technologies” brought about significant changes in the ways museums performed their tasks (Besser, 1997). The quick adoption of digitization processes for converting text and images into digital formats affected the internal processes of museums. The convergence with high speed digital networks provided museums with the opportunity to share more information with wider audiences. Besser (1997) also foresaw that the appearance of new channels to disseminate information would quickly transform the social and cultural landscape, which became a reality when the so-called Web 2.0 came to prominence (O’Reilly, 2005). Web 2.0 technologies have turned the Internet into a space for contributing, creating and exchanging information (Río, 2011). The popularity of Web 2.0 technologies has prompted museums to be present on online platforms that provide significant social traffic, such as Facebook, Youtube and Twitter, in an effort to remain up to date. Their communication process and strategy has changed radically: museums have gone from providing a sole reference point -that of the official website- to an assorted variety or even, if considered in negative terms, a disintegration into several media that are external to the institution. There are plenty of references on the application of Web 2.0 technologies to museums (for instance: Berstein, 2008; Kelly, 2010). Thus, the future of museums, their relations, their relations with audiences and the use of technology have often been, and continue to provide, a fertile ground for reflection and discussion. Šola (2008) also reflected on the future of museums on the Internet, claiming that “[m]useums, as they are now, do not help us: they prefer either scientific aloofness or nostalgic passéism (...)”. Thus, Šola suggests a change in their global strategy, since “[t]he entire body of human knowledge is finally and literally at our fingertips via the endless ocean of knowledge that the spectacular Internet makes possible”. Sokolowicz (2009) analyzed how the Internet space should be, considering a web environment which catered to the needs of a new communication paradigm, and which guidelines to follow so that the role of social media was emphasized in it. According to Sokolowicz, the advantages of this Internet space would be the ability to attract new users for museums, the ability to create audiovisual content for exhibitions and collections, and the ability to provide greater dissemination for artworks and activities organised in parallel to the exhibitions. Communication and interaction as potential elements would have a universal outreach (Kaplan & Haenlein, 2010). To channel this relation through social media (Kidd, 2011), museums must understand the motivations and implications of their online visitors (Filippini, Stein & Browman, 2012), so that the potential elements are fully developed. In time, certain specificities of the relation between each and every museum and each and every social media platform were described, as in analyzing Instagram (Weilenmann, Hillman, & Jungselius, 2013). In any case, the adoption of social media has been met with significant reluctance by museums. Some institutions believe that the communication focus of the museum

“becomes deliberately diluted with the contributions by the users” (MacArthur, 2007). For others, some platforms such as Facebook “are not very serious”; this means that they affect the professional perception of the museum (Vogelsang & Minder, 2011).

At any rate, social media have turned us into networked citizens, since most information now flows through the Internet. The Net is not a passive information system, but provides information as well as thought processes, reading models and writing styles. Applied to museums, Web 2.0 tools are used to integrate visitors into the life of the museum, either through the institution’s website, through blogs and wikis, through media archives like YouTube or Flickr or through exchange platforms like Facebook or Twitter. Several studies have been conducted regarding these platforms, many considering the audiences as their main research object.

Loran (2005) conducted a full study which connected the presence of British museums on the Internet to the increase in visitors. Like Loran, Griffiths and King (2008) came to the conclusion that the presence of US museums on the Internet makes the number of visitors to their physical buildings increase. Arends (2011) delved into the relation that should be established between museums and their visitors, and claims that a two-way interaction is required. Simon (2007) foresaw the success of social media in a pyramidal structure of communication between museums and their visitors, the top tier being that of collective social communication, thus marking the beginning of the theory of the participatory museum to be developed some years later (2010). Also, Kelly (2010) explained how Web 2.0 and social media were changing the ways of working and communicating with audiences in museums, whereas Greenfield (2008) wondered how all these tools should be used to obtain good results, or a more participatory audience, in the activities promoted by museums. But once audiences are already visiting the museum, institutions have to consider what to do with them and what to do after their visit. Marty (2007, 2008) and Wilson (2011) provide insight into this matter, as well as suggestions for increasing loyalty among users. Marty (2007) conducted a survey among more than 1,200 visitors to nine different online museums. The results of this survey provide information about the use of museum websites before and after the visit, and indicate that Internet users frequently turn to websites to complement their visits to physical museums. This information might help museum managers to define their communication, attraction and loyalty strategies for visitors. Social movements have raised a global consciousness of cultural democratisation. As such, museums have had to shift from the concept of shut off spaces oblivious to their surroundings. This has resulted in museums having to throw themselves into a vertiginous process of adopting new applications, just as they were consolidating a long path of adaptations (O’Reilly, 2005; Ríó, 2011).

Besides contributing to raising the visibility and expanding a museum’s message (Martínez-Sanz, 2012), social media are excellent bidirectional communication channels and therefore provide highly valuable feedback, not only for the centre, but also for the Internet user who feels involved in the museum’s process of change. This circumstance

has prompted the need to create a new communication culture in museums. The paradigm has changed; museums are not solely scientific institutions anymore, but now they are science-based communication institutions (Šola, 2012). Thus, activities and services have to be evaluated, and tools and systems have to be implanted to quantify the use of social media, to know what visitors do and how they do it (Tasich & Villaespesa, 2013), not only to justify resources but also to improve communication and dissemination.

There are also several regionally-focused studies on museums and how they use social media platforms. A comparative study among several European nations and the United States was conducted by López et al. (2010). Boost (2009) analyzed how museums used social media in Flanders (Belgium) and Vogelsang and Minder (2011) researched why Swiss museums would not use social media and how to solve the problem.

The case being studied in this article is the region of Catalonia in Spain. In light of the absence of previous studies, we wanted to learn about the museums' level of participation in social media, as well as the types of messages and dissemination channels used. We wanted to analyze their current situation in order to conduct more specific studies in the future.

### **1.1. Catalonia as a case study**

Catalonia is an autonomous region whose capital is Barcelona. Within Spain, it is the second most populated region (7.5 million inhabitants) and the first economy (PIB<sup>1</sup>). It also holds a leading position in technology, as stated by the last study of *La sociedad de la Información en España*: "Catalonia has reached high levels of technological use and equipment both in households and companies, thus consolidating an outstanding position in the Spanish context". It has a thousand-year-old language (Catalan; the oldest Catalan texts date from the 9<sup>th</sup> century) and a culture of its own with notable and distinguishable features within the Spanish ensemble. It also presents a long museum tradition. The city of Barcelona agglutinates many of the most visited centres, like the Sagrada Família, or the Futbol Club Barcelona museum. It also has prestigious art museums, such as the Picasso Museum, and the Tàpies and Miró foundations. Other noteworthy art centres are the Museu Nacional d'Art de Catalunya (MNAC) and the Museu d'Art Contemporani de Barcelona (MACBA). Because of the pull of the city as a touristic and cultural attraction, even now in a time of economic difficulties new spaces have been inaugurated, like the Museu del Disseny Hub (December 2014), or the Museu de les Cultures del Món (February 2015), and a franchise of the Hermitage museum is also being projected. Outside the capital, other Catalan cities have prestigious museums such as the religious Museu de Montserrat, situated in the Benedictine monastery of worship for the Catalan people, the Museu Episcopal de Vic (Barcelona), the museum on cinema in Girona, the toy museum in Figueres (Girona), the Gala-Salvador Dalí Foundation also in Figueres, the archaeological museum in Tarragona, or the art museum Jaume Morera in Lleida. Catalonia has a significant

network of local museums scattered through its geography. Actually, this is one of the features defining the territory in museum terms: there is not a small or medium-sized town which does not have its own museum.

Presently, the situation is particularly complex for several reasons. One of them would be economic. Since the economic crisis has brought about cuts in grants, cancellation of exhibitions and dismissal of employees, there has been a drop in the number of visitors. Another reason could be the idiosyncrasy of Catalonia's very fabric and museum structure. The 1990 law of Catalan museums (*Llei de Museus de Catalunya*) reorganized the whole museum system as a network structure, classifying the museums into three categories: National Museums, National Interest Museums and Local Museums. Subsequently, several master plans have reordered and updated the system. The Plan for 2007 (*Pla de Museus*) was approved with the strategic goal of combining the endemic debate between a territorial reality which is alive and constantly increasing and the need to create new national museum infrastructures within a persistent context of economic scarcity. The Pla devoted a specific section to new technologies: "our museums have to be completely open to the digital and virtual world that is spreading". The Pla de Museus from 2009 allowed for the creation of two new networks not contemplated in the 1990 law, which had become obsolete for obvious reasons such as the passing of time and the technological changes that had taken place. The two new networks were *Museus d'Etnologia i Història* (Ethnology and History Museums) and *Museus de Ciències Naturals* (Natural Sciences Museums). In 2012, a new attempt to articulate the complex system was presented under the title *Bases per a un Nou Pla de Museus* (Bases for a New Museum Plan). The new plan modifies how museums connect to each other, keeping the networked organisation to guarantee collaboration, but gathering them not only structurally but also thematically, now in four large areas: Art History, Contemporary, Natural Science and History and History of Society. At the same time, the Pla de Museus structures four territorial networks with reference centres to channel the services and activities of local museums. Other notable proposals are the creation of the *Col·lecció Nacional d'Art* (National Art Collection), the *Dipòsits Nacionals d'Art i Arqueologia* (National Art and Archaeology Storehouses) and the *Col·lecció Nacional de Fotografia* (National Collection of Photography). Nevertheless, the plan has been met with significant criticism from arts professionals who accuse the autonomous government of presenting it without a previous in-depth debate and of not establishing priorities or strategies or budget commitments.<sup>2</sup> This Plan is framed within the *Pla Estratègic de Cultura* (Strategic Cultural Plan) 2011-2021 which is in its first stage of development. As this article was being revised, the *Conseller de Cultura* (Culture minister) Ferran Mascarell, announced a 7% rise in the cultural budget for 2015, mainly in "policies to encourage cultural consumption, the support to creators and cultural companies, heritage resources, popular culture and associations". This rise would work, quoting again Mr Mascarell, "as leverage to improve the situation of a sector which has been badly damaged by the crisis".<sup>3</sup>

## 1.2. Research questions and research goals

After this initial presentation of the current context of Catalan museums, the following research questions are suggested:

- Are Catalan museums present on social media platforms?
- If they are, which ones are they using, what content do they disseminate, how do these institutions position themselves online, and how do they communicate and interact with users?

The main research goal is to analyze the presence of Catalan museums on social media platforms. The specific goals derived from the main goal are the following:

- To quantify the presence of each museum in social media
- To quantify the number of followers, uploaded documents, sent messages, as considered appropriate, and to monitor them in quantitative and qualitative terms, and in distinguishable time periods
- To analyze the form, message, content and communication language used by each museum
- To control the content updates from each museum
- To analyze the interaction levels

The *Guia de museus de Catalunya 2013*, published by the Departament de Cultura de la Generalitat de Catalunya (Culture Department of the autonomous government) has 113 museums registered, six of which are closed for different reasons. The other 107 museums have been analyzed.

## 2. Methodology

Research was conducted throughout the month of September 2013, with an update in June 2014, and is focused on the following lines:

1. Analysis of museum websites to establish the types of presence on social media platforms

The analysis was conducted by visiting and looking at websites in their entirety, and by writing down the observed data.

2. Quantitative and qualitative presence on social media platforms

A bibliographic record was created for the types of platform hosting Catalan museums. This record contains the date when each museum signed up officially, the number of followers, messages and content indexed.

## 2.1. Definition and contextualisation

In this article, our understanding of “social media” considers the definition provided by the *Oxford English Dictionary*, which is corroborated by and connected to the definitions provided by Oxford’s reference dictionaries such as *A Dictionary of the Internet*, *A Dictionary of Journalism* or *A Dictionary of Media and Communication*<sup>4</sup>:

*Websites and applications that enable users to create and share content or to participate in social networking.*

This definition includes the abilities to “create and share content” or to “participate in social networking” without restricting them to the latter, that is, to social networking sites like Facebook, Twitter and Tuenti, which the *Oxford English Dictionary* characterizes as “[t]he use of dedicated websites and applications to interact with other users, or to find people with similar interests to one’s own”.

Thus, the term “social media” rather than “social networking” encompasses all the platforms used by Catalan museums, which allow them to create and share, content, as well as to interact, regardless of the nature of their network.

## 2.2. Parameters and indicators

To obtain, monitor and analyze data, recommendations from Codina (2010) were followed by grouping different indicators into five parameters.

The parameters respond to the question “What do we want to evaluate?”, since there may be many features, and it is necessary to select some of them. In some cases, parameters may be general, such as authorship, opening hours or access, but subsequently specific parameters should be created, because every institution answers to a different typology, depending upon its own features.

The indicators are devised to check the efficiency of the parameters for establishing quality, and they answer the question “How to evaluate this parameter?” Overall, the evaluation process will provide insight into how efficiently museums use social media, and into the quantity and quality of the interactions between museums and their visitors through these online platforms.

Thus, each parameter presents several indicators. In this study, and according to the abovementioned recommendations, the following parameters were used:

1. Cooperation. Tools available between the museum and the visitors and among visitors, to enable information to be shared among one another and at the same time help create more quality information

Main indicators (Yes/No):

Description of the artwork or object with tags

Sharing information among visitors  
Votes for artworks with “likes”  
Number of followers, participations, news (quantitative record)

This collected data reveal the actual level of cooperation designed by a museum and made available to its users, so that these can collaborate with other users who might then collaborate directly with the museum.

2. Participation. The level of participation allowed by the museum to its visitors, and the level of ease for them to do so.

Main indicators (Yes/No):

Publication of comments on artworks and/or activities  
Publication of videos and pictures

The chosen indicators indicate the willingness of the museum to let its users participate.

3. Content. Access and visualization options offered by the museum to its visitors, which means making content available on its website. These indicators were selected after observing and reviewing the different websites studied.

Main indicators (Yes/No):

Access to museum artworks and spaces  
Download of textual and audiovisual content  
Content updates (Transcribed notes)

These indicators point to the extent to which the museum pays attention to updating its news and to the level of access that it chooses to extend to its users.

4. Technological innovation. What technological options does the museum offer to the users through its website? This parameter was created based on identifying several recently introduced technological tools.

Main indicators (Yes/No):

Image visualization and audio recordings  
Virtual visit  
Interactive games and activities  
Applications for mobile devices

State of the art technology: augmented reality, QR codes or geolocation systems

The technological tools the museum offers to its users reveal a great deal about its commitment to innovation and the ability to keep abreast of the technology.

5. Communication. These are communication channels the museum provides to its visitors with to keep them updated on everything that is museum-related, whether activities or exhibitions.

Main indicators (Yes/No):

Syndicated content channels: RSS

Blogs or wikis (if any)

Newsletters and other subscription-based items (if any)

Follow-up between museums and between the museum and its visitors

These indicators allowed establishing the importance of communicating with the users for the museum, and whether it has a communication policy or a specific digital communication strategic plan.

### 3. Results

The analysis conducted following the two previously described research lines showed that 65 (60.7%) out of the 107 museums studied do have a profile or an account on a social media platform. Only the museums with a profile of their own have been considered, thus ruling out those sharing an online profile and those falling under other institutions. There are 42 museums (39.3%) which are not present on any social media platform whatsoever (Chart 1).

Chart 1. Profile on any social media platform. Source: the author.



All those museums with their own social media profile have a Facebook profile, so this social networking platform is the most present in Catalan museums followed by Twitter,

where 46 museums have a profile. Results concentrate on the four main platforms (Facebook, Twitter, Youtube and Flickr). The difference with the other platforms, as observed in Table I, is very significant.

Table I. Presence on social media platforms. Source: the author.

Platforms	Museums	
	Absolute value	Percentage %
Facebook	65	60.7%
Twitter	46	43%
Youtube	32	29.9%
Flickr	18	16.8%
Google+	8	7.5%
Vimeo	5	4.7%
Delicious	5	4.7%
Pinterest	5	4.7%
Issuu	4	3.7%
LinkedIn	3	2.8%
Foursquare	1	-

Regarding the first parameter, Cooperation, the 65 museums with a Facebook profile allow Internet users to vote with “likes” for the exhibited artworks or activities organised, to add comments and to share them with other users. Nevertheless, none of them allows tagging artworks with keywords: the description is always provided by the museum. The number of followers is connected to the relevance of the museum. The biggest and most prestigious museums, such as MNAC, Picasso, Dalí, MACBA, etc. are those with the most followers (see the data for each platform in the section devoted to each museum).

In Participation, a parameter which is closely related to Cooperation, global results indicate that despite the fact that all museums allow Internet users to participate with comments and uploading images, there are filtering mechanisms on the content that users might add.

The two following parameters, Content and Technological Innovation, reveal most clearly the reality of museums in Catalonia. The Catalan system is fragmented (Badell & Térmens, 2013), there are many institutions scattered around the territory and the ability to both achieve budget increases and attract visitors are uneven. The biggest institutions have no difficulty adopting the most advanced solutions available at an international level, for instance, sponsoring offered by giant corporations like Google (Art Project) in the case of the MNAC and more recently in the Museu Episcopal de Vic. The smallest institutions commit to joining forces, to creating portals which facilitate locating and accessing the least-known collections, such as in the Xarxa de Museus Local (Local Museum Network) or the Xarxa de Museus d’Arqueologia (Archaeology Museum Network). It was found that projects are unsure about what their focus of attention should be: whether they should focus on the institution, following the

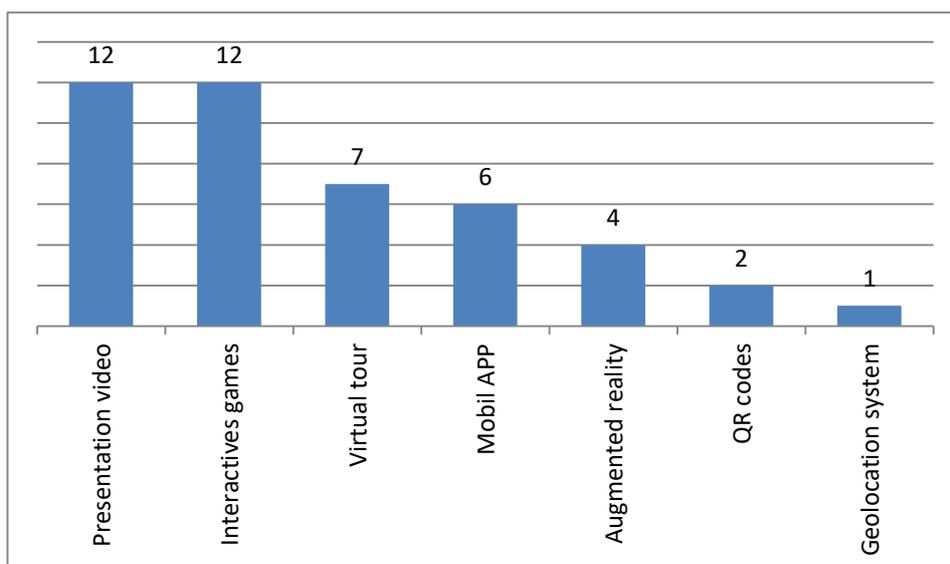
traditional model of museum/building; or on the artwork itself, whose significance and online presence may be quite independent of the museum that houses it.

At the technological level differences were detected too, since simple solutions, like the directory record in the Xarxa de Museus Locals, coexist with other institutions' emphasis on the spectacular appearance of virtual environments such as Google's Art Project. There is also a contrast between the projects which require a large technological platform and those based on standard or even free solutions.

The use of state-of-the-art technology (Chart 2) is almost incidental: only six museums offer applications for mobile devices, only two museums use QR codes frequently, and only four offer augmented reality. Seven museums offer a virtual visit, and 12 have a video to present the spaces and exhibition rooms of the centre. Nevertheless, some interesting initiatives should be highlighted, like the pioneer use of QR codes for a temporary exhibition at the Museu de Mataró (2012), or the use of augmented reality to geolocate industrial heritage and share the experience on Facebook and Twitter in the Museu de la Ciència i la Tècnica in Terrassa (Barcelona).

The educational role is very present and highly valued in Catalan museums. A hundred and four out of the 107 museums analyzed offer an educational or pedagogical service. Most of the activities cater to schools, promoting educational visits with teachers, the creation of teaching materials and the organisation of interactive workshops. Some innovative activities were also detected, such as role games at the Museu Comarcal del Bages (Manresa, Barcelona); interactive and digital games at the Museu de Gavà (Barcelona); jigsaw puzzles at the Museu del Joguet (Figueres, Girona), and interactive play activities at the Museu Marítim de Barcelona. The Museu de Ciències Naturals de Barcelona, for instance, has created an educational model programme within its activities project which is available online. Thus, there is a clear educational commitment at all levels of the Catalan museum system.

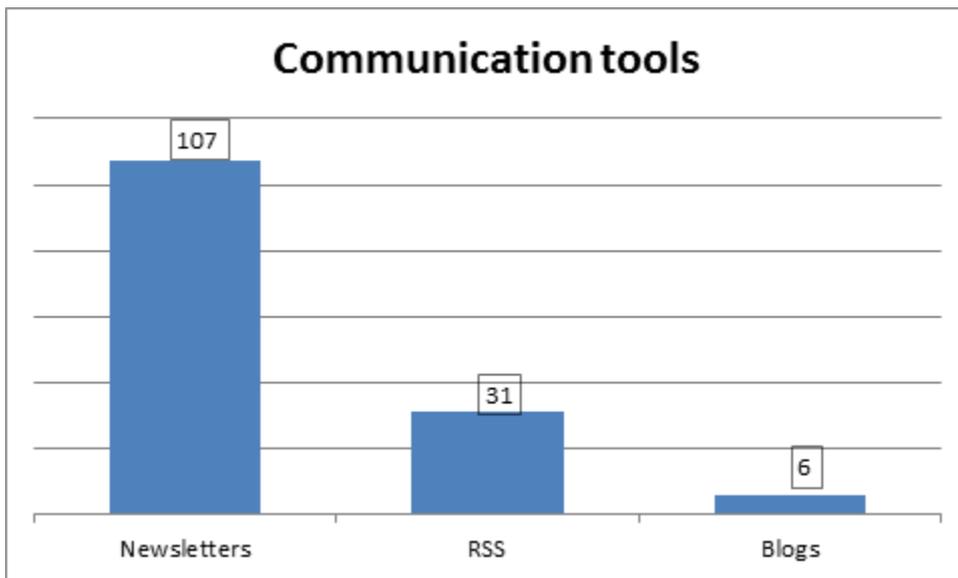
Chart 2. Technological innovation parameter. Source: the author.



Regarding the fifth parameter studied, Communication (Chart 3), there is very little incidence of blogs: only six museums (5.6%) keep at least one active blog. In this respect, it is important to highlight that the Museu Marítim de Barcelona has four different blogs, all of them very active. The Picasso Museum, which was a pioneer in the use of this communication tool, continues to maintain an updated blog. Actually, this museum was also a pioneer in the change towards web 2.0, since the blog received a *Best of the web* award in the Social media category during the *Museums and the web conference* that took place in Denver in 2010. The case of the Museu de la Vida Rural (Espluga de Francolí, Tarragona) is also noteworthy, because it has several active and updated blogs, but unfortunately it is an exception among local museums. There are also very few museums offering syndicated news channels, or RSS. Generally, Catalan museums follow more traditional communication online channels such as newsletters, magazines or the mailing of news and announcements.

A growing tendency observed is to include a link to Tripadvisor for reading the comments left by museum visitors. This tendency is understandable since tourism has a major economic impact in Catalonia: it is the Spanish region which receives the most tourists and Barcelona is the first city in Spain, and the fourth in Europe, regarding the number of visitors.<sup>1</sup>

Chart 3. Communication parameter. Source: the author.



In the next section, the most significant aspects of each social media platform with regard to Catalan museums are explained. A specific section has been devoted to the two most used platforms: Facebook and Twitter. YouTube is grouped with the remaining platforms because museums only use it to disseminate video, although it does offer social networking functionality in its interactions with users, such as its services for messaging and adding comments.

### 3.1. Facebook

The museums with the most “followers” or most “likes” are the biggest centres, such as the Picasso Museum, which has more than 64,000 followers; the Museu Nacional d’Art de Catalunya (MNAC) with 26,000 followers, or the Museu d’Art Contemporani de Barcelona with more than 25,500 followers. Table II shows the results of the 12 museums with the most and the fewest followers, in order to facilitate reading and understanding the data gathered. The smallest museums show much more modest numbers, like the Museu de Montserrat, which has more than 6,200 “likes”; the Museu Comarcal de l’Urgell (Tàrrrega, Lleida), which has a little more than 5,000 likes, or the Museu Pau Casals (El Vendrell, Tarragona) with 1,300 likes. In any case, there is not always a connection between size and followers, since there are museums of a certain significance located in populated cities which have few followers and are not very active, like the Museu de la Música de Barcelona with 1,200 followers, or the Museu d’Història de Sant Feliu de Guíxols (Girona) with 485 followers. The opposite also happens: sometimes there are small museums with a lot of followers like for example the Museu de la Vida Rural de l’Espluga de Francolí (Tarragona), located in a small town, which has almost 2,800 followers, or the Museu del Càntir (Argentona, Barcelona) with more than 4,800 followers.

Table II. The 12 museums with the most and the fewest followers on Facebook, 30/6/14. Source: the author.

Museums with the most followers		Museums with the fewest followers	
Picasso Museum, Barcelona	64,060	Museu d'Art, Cerdanyola del Vallès (Barcelona)	579
Museu Nacional d'Art de Catalunya, Barcelona	26,474	Museu d'Història, Sant Feliu de Guíxols (Girona)	485
Museu d'Art Contemporani, Barcelona	25,577	Museu Nacional Arqueològic, Tarragona	449
Fundació Joan Miró, Barcelona	20,509	Museu de l'Immigració, Sant Adrià del Besòs (Barcelona)	441
Museu de la Ciència i la Tècnica de Catalunya, Terrassa (Barcelona)	17,295	Museu de l'Estampació, Premià de Mar (Barcelona)	439
Museu del Disseny, Barcelona	12,085	Ecomuseu de les Valls d'Àneu, Esterri d'Àneu (Lleida)	404
Museu d'Història de Catalunya, Barcelona	8,261	Museu de Mataró (Barcelona)	380
Teatre Museu Dalí, Figueres (Girona)	6,752	Museu de la Garrotxa, Olot (Girona)	345
Fundació Antoni Tàpies, Barcelona	6,364	Museu Tomàs Balbey, Cardedeu (Barcelona)	213
Museu de Montserrat, Monistrol de Montserrat (Barcelona)	6,192	Museu Municipal de Nàutica, Masnou (Barcelona)	199
Museu Marítim, Barcelona	5,476	Museu Etnogràfic, Ripoll (Girona)	169
Museu Episcopal, Vic (Barcelona)	5,365	Museu de Tortosa (Tarragona)	160

Facebook tends to be the main platform to give news on activities, exhibitions and other events, or related to exhibitions and collections in the centre. To a lesser extent, museums give information about activities in their surroundings, city or neighbourhood. The updates and dissemination of communiqués are given some days before an event, the day before, the day of the event and only in a few cases is related news disseminated after the event. The Picasso Museum, which has the most followers, is only publishing two to three posts per week, since it considers that more frequent posts could be intrusive for its friends following the Timeline.

In this research, it was observed that museums do not follow each other through their Facebook profiles. This fact is detrimental to the possibility of users linking from one museum to another by following their exhibitions and activities. Clearly, it is also

detrimental policy for obtaining incoming links which could contribute to the visibility of museum websites (Badell & Rovira, 2010).

### 3.2. Twitter

The results on Twitter (Tables III and IV) coincide with those on Facebook regarding the connection between quantity and importance of the centre. The Picasso Museum stands out with the most followers (more than 40,100), followed by two other large institutions: the Museu d'Art Contemporani de Barcelona, with 37,257 followers, and the Museu Nacional d'Art de Catalunya with almost 33,400 followers.

But there are significant differences regarding interaction, which depends on the community manager and the communication policy of the museum. Some small or medium-sized centres are very active on Twitter and receive many replies. For instance, the Museu del Cinema de Girona has tweeted more than 2,800 times since the account was created and has more than 4,200 followers, but one of the most active ones is the Museu de Vida Rural, with more than 3,700 tweets and almost 3,800 followers.

Presenting much more modest numbers are the Fundació Miró, with 13,674 followers; the Museu d'Història de Catalunya, with 7,239 followers, and the Museu del Disseny Hub (Barcelona), which was created recently but already has 10,000 followers. It is surprising that the most visited museum in Catalonia, the Gala-Salvador Dalí Foundation, presents much more modest numbers, with 3,576 followers and slightly more than 1,000 tweets generated.

Table III. The 12 museums with the most and the fewest followers on Twitter, 30/6/14. Source: the author.

Museums with the most followers		Museums with the fewest followers	
Picasso Museum, Barcelona	40,159	Museu de la Pesca de Palamós (Girona)	838
Museu d'Art Contemporani, Barcelona	37,257	Museu Verdaguier, Folgueroles (Barcelona)	786
Museu Nacional d'Art de Catalunya, Barcelona	33,337	Fundació Palau, Caldes d'Estrac (Barcelona)	728
Fundació Joan Miró, Barcelona	13,674	Museu del càntir, Argentona (Barcelona)	722
Museu del Disseny, Barcelona	10,161	Museu d'Història dels Jueus, Girona	691
Fundació Antoni Tàpies, Barcelona	9,565	Museu de Tortosa (Tarragona)	610
Museu d'Història de Catalunya, Barcelona	7,239	Museu Institut Català de Paleontologia Miquel Crusafont, Sabadell (Barcelona)	515
Museu de Ciències Naturals, Barcelona	5,310	Museu Romàntic Can Papiol, Vilanova i la Geltrú (Barcelona)	425
Museu d'Arqueologia de Catalunya, Barcelona	5,155	Museu de l'Estampació, Premià de Mar (Barcelona)	371

Museu Marítim, Barcelona	4,249	Museu de l'Immigració, Sant Adrià del Besòs (Barcelona)	284
Museu del Cinema, Girona	4,190	Museu de la Noguera, Balaguer (Lleida)	244
Museu de la Vida Rural, L'Espluga de Francolí (Tarragona)	3,706	Museu Pau Casals, El Vendrell (Tarragona)	220

Table IV. The 12 most active and least active museums on Twitter, 30/6/14. Source: the author.

Museums with the most tweets		Museums with the fewest tweets	
Museu d'Art Contemporani, Barcelona	8,108	Museu Nacional Arqueològic, Tarragona	361
Picasso Museum, Barcelona	5,981	Museu de la Garrotxa, Olot (Girona)	360
Museu del Disseny, Barcelona	5,966	Museu Romàntic Can Papiol, Vilanova i la Geltrú (Barcelona)	331
Museu de Ciències Naturals, Barcelona	5,880	Museu del càntir, Argentona (Barcelona)	307
Museu d'Història de Catalunya, Barcelona	5,126	Centre de Documentació i Museu Tèxtil, Terrassa (Barcelona)	272
Museu Nacional d'Art de Catalunya, Barcelona	4,432	Museu del suro, Calella de Palafrugell (Girona)	260
Fundació Antoni Tàpies, Barcelona	3,980	Museu Pau Casals, El Vendrell (Tarragona)	227
Museu de la Vida Rural, L'Espluga de Francolí (Tarragona)	3,754	Museu de la Noguera, Balaguer (Lleida)	218
Museu Industrial del Ter, Manlleu (Barcelona)	3,359	Museu de l'Immigració, Sant Adrià del Besòs (Barcelona)	189
Museu de la Ciència i la Tècnica de Catalunya, Terrassa (Barcelona)	3,255	Museu de l'Estampació, Premià de Mar (Barcelona)	108
Museu del Cinema, Girona	2,873	Museu Etnogràfic, Ripoll (Girona)	107
Can Quintana. Museu de la Mediterrània, Torroella de Montgrí (Girona)	2,861	Museu de Tortosa (Tarragona)	86

If we compare the data from the museums with the most Twitter followers and the number of tweets generated (Chart 4) we can see that, on many occasions, they are related: more followers mean more tweets. However, if we apply the same comparison to the museums with the least Twitter followers (Chart 5), we do not see the same correlation. In some cases, the number of tweets generated is higher than the number of followers.

Chart 4. Museums with the most followers on Twitter, and number of tweets published.

Source: the author.

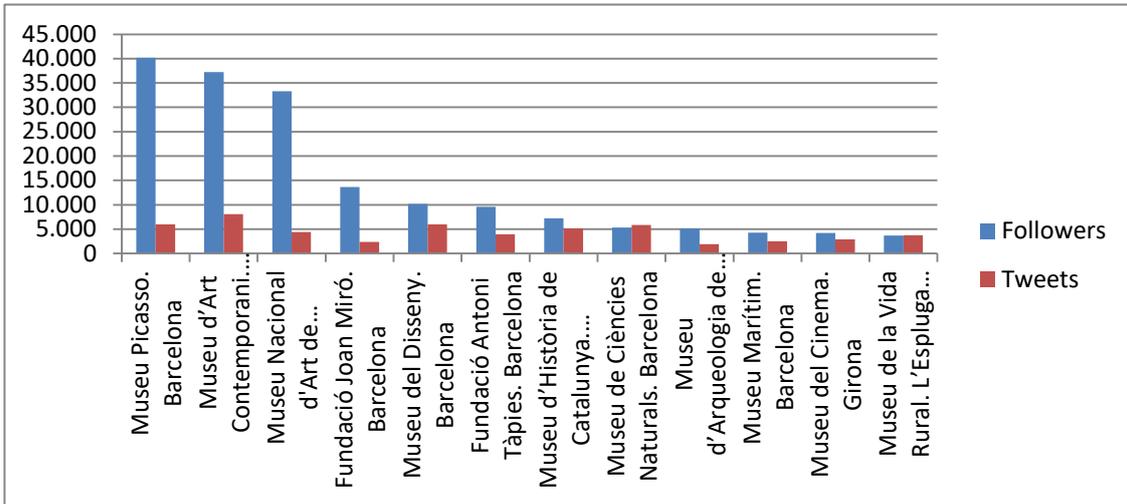
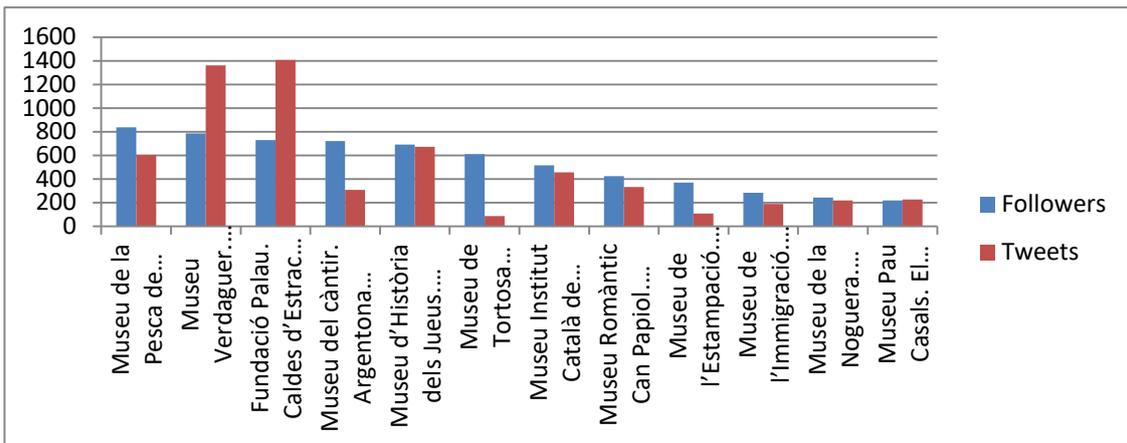


Chart 5. Museums with the fewest followers on Twitter, and number of tweets published. Source: the author.



Twitter is the second social media platform for Catalan museums after Facebook, but the level of interaction and generated tweets is superior than in the first one, which leads to the question: would it not be better to have a greater presence on Twitter than on Facebook? Perhaps the answer is that museums should be more aware of the needs of their visitors (Šola, 2012). Thus they would be able to take more strategic advantage of the features each social media platform offers.

Also, the content on Facebook and Twitter is generally up-to-date and no major dysfunctions were detected in this regard. Museums tend to provide information to their followers on a regular basis, and respond to them quickly.

### **3.3. Other platforms**

#### **YouTube**

The museums that are active on YouTube use it as platform to provide basic information on the institution, meaning video recordings on spaces, collections, activities and news. These are basically descriptive videos about the installations, rooms or spaces, but, as previously remarked, very few centres offer a virtual visit on their websites.

Another significant platform which is similar to YouTube is **Vimeo**, but it has a lower impact. Only five Catalan museums (4.7%) have an account on Vimeo, very few if we are to compare them to the 32 centres (29.9%) which have a YouTube account. Vimeo can be considered a relatively new service which is significantly less popular than YouTube.

#### **Flickr**

In general, Catalan museums use Flickr to upload pictures of the activities and spaces of the centre. To a much lesser extent, some of the museums have chosen other platforms such as **Picasa**. Regarding intellectual property, 59% of the centres have copyright licenses on their pictures, while only 12% share their photographs with a Creative Commons license.

#### **Google+**

This service is very similar to Facebook. It allows for the uploading and sharing of pictures, videos, interacting with other users, managing contacts, a profile, etc. The eight (7.5%) museums that have a Google+ profile also have a Facebook profile. The same information is duplicated on both profiles, without any additional content being offered on either service.

#### **Delicious**

Only five museums (4.7%) out of the 107 museums studied have a Delicious profile. This scarcity in use might be partly explained due to the changes in the platform, which was in beta state in 2013.

#### **Issuu**

It is not very common in Catalan museums. The four museums which have an Issuu account use it to duplicate the same information they put on their websites, so there is no added value.

#### **LinkedIn**

Three museums have a LinkedIn profile. It is odd that this professional networking platform is so uncommon among museums and cultural institutions since it could contribute to increasing their visibility, their chain of links, and could be useful for sharing professional opinions and activities.

## **Foursquare**

Only one museum uses Foursquare. This social media platform allows users to give their opinion about a place they have visited. Thus, it could be a very useful tool to know about the opinion and impact of a visit to the museum, its activities and exhibitions. But, as previously mentioned, there are some museums offering a link to TripAdvisor. It is likely that museums prefer to be on Tripadvisor because of its impact on the touristic sector.

Two examples of platforms which are practically non-existent among Catalan museums are also described. Firstly, regarding **Technorati**, none of the centres analyzed uses it. It is a very interesting service for creating news alerts and other similar content. It can be useful for identifying what is being said online, for brand-building and corporate identity-building processes. Another interesting example would be **Tuenti**, which is very popular among young people for sharing all kinds of information. If museums want to attract young audiences, it is odd that they are not present on this platform. A possible explanation might be that Tuenti users are not homogeneously disseminated in Spain: for instance, there are many in Andalucía and Madrid, but very few in Catalonia.

## **4. Discussion of results**

The presence of Catalan museums in social media is still limited. Quantitatively speaking, it can be seen that museums have yet to become present on social media platforms. In qualitative terms, the updating and interaction processes are efficient, but they are also lacking in some significant aspects. For example, as Martínez-Sanz (2012), Stein (2012) and Stark (2013) suggest a strategic digital communication plan which is specific to each museum must be implemented. Neither the Pla Estratègic de Cultura 2011-2021 of the autonomous government nor the Pla de Museus 2012 (which is currently being applied) explicitly mention the introduction of this strategic plan.

The Pla Estratègic de Cultura 2011-2021 has not been in effect long enough for its effect on the centres to be evaluated, particularly considering the context of the last few years: museums need to adapt in technological terms; culture has become globalized; cultural consumption has decreased in many households, and new sponsorship mechanisms, with new formulas of public-private cooperation, must still be developed.

The crisis situation has been particularly virulent with Catalan museums since 2012: budget cuts, workforce reductions and cancellation of exhibitions have coincided with a significant decrease in the number of visitors. Also in this regard, the heterogeneity of the Catalan system has been revealed to be problematic: the decrease in visitors has been concentrated on the most important museums, such as the Picasso, but at the same time user numbers are growing at the Gala-Salvador Dalí Foundation. It would be extremely interesting to conduct research on the reasons for this circumstance. The situation of the smallest local museums is worrying because they have a limited ability to generate and attract funding. We should pay attention to whether the previously

mentioned increase in the Catalan cultural budget will actually have a positive impact on museums.

Considering the number of current visitors, one could question whether the use of social media is truly succeeding in attracting new users. The Picasso Museum is one of the most active ones and it concentrates the most followers on Facebook and Twitter, but it is also the museum that has lost the most visitors during the last two years. The Gala-Salvador Dalí Foundation is the centre that has managed to attract more visitors, but it is not very active on social media. These two examples, which are significant because of the importance and prestige of the two museums analyzed, cannot be extrapolated to the rest of the cases, since there are many other variables (temporary exhibitions, activities organized, etc.) to consider, but an important factor to take into account is the decrease in cultural consumption by the tourists visiting Catalonia in the last few years. In order to improve this situation, the Picasso Museum appears to be betting on a “top” exhibition for 2015 about the relations between Picasso and Dalí, with the purpose of attracting two kinds of visitors: both tourists and locals.<sup>5</sup>

But, should attracting new audiences be the only or the main goal of using social media? How do museums know about the tastes and preferences of their visitors? Šola (2012) has argued that the needs of “the people” (meaning the specific community the museum supposedly cater to) have to be met. The museum has to know all the details regarding the past and present of its culture, so that it appeals to the complex identity of the particular community being addressed, including immanent forces of change. As the Conseller de Cultura of the autonomous government claimed in a museum guide from 2013, identity is both a feature and heritage of the Catalan people: “Our museum heritage is extraordinary. This is quite surprising, since the Spanish State has not contributed to create any Catalan facilities. Everything we own is the best representation of the creative effort [made by] inventors, artisans and professionals, because the civil society is convinced that the collective memory has to be preserved; this is Catalonia’s charm and virtue. The museums in Catalonia are the best representatives of Catalan wishes and desires throughout its history. Nowadays museums are spaces of identity, cohesion and progress. They are the spaces where we meet ourselves, where we meet our roots and our cultural reality”.

The results of this study have also highlighted that the lack of adoption of technology is particularly dramatic. In addition to some infrastructures and innovative projects, the lack of well-known latest generation tools (such as augmented reality, QR codes, geolocation systems or applications for mobile devices.) is widespread. To succeed at this challenge is one of the key aspects for the future of Catalan museums. A digital transformation is ongoing. As Tasich (2014) notes, a process of change must be put into motion, leading towards the use of digital technologies (and social media platforms are a great formula for that), by considering the following questions:

What does the organization want to achieve?

Why is a digital transformation needed?

How might change affect the organization?

How would this process be in a real situation?

What could go wrong?

The digital transformation will be a long and deep-seated change answering the previously asked questions should guarantee that the right path is being followed to transform the institution for the digital era. The digital transformation involves providing museums with real spaces to co-create and co-curate exhibitions and activities with their audiences (Martínez-Sanz, 2012).

## 5. Conclusions

Should we not be asking ourselves whether the full potential of social media is being fulfilled? This was one of the key questions asked by Catalan professionals of the museum sector in a meeting organized by the Centre de Cultura Contemporània de Barcelona (CCCB), before the celebration of the European congress *MuseumNext* in Barcelona (2012).

The answer to this question must involve taking greater advantage of the singularities of the Catalan museum system: having the different public administrations involved work together (Tasich, 2014), as in the *Museus en línia de Catalunya* project, which currently has 80 participating centres; in the MNAC and the Museu Episcopal de Vic participating in Google Art Project with other Catalan museums expected to join soon; using Wikipedians in residence as is already happening in some centres; or, more recently (as of October 2014), the creation of an online collaboration project between 14 art museums. These are examples of dissemination to show that collaboration between museums in social media is essential. For a museum to have a successful online presence it has to create a thriving network structure (Kotter, 2011) wherein flexible and multidisciplinary teams work together to achieve common goals. Also, the current government funding system has to be reoriented: most times it focuses on helping organize individual activities and projects, but it has to be channelled towards a planned system which takes into account the priorities of the centres in technological and digital developments.

Social media should be considered as both an opportunity and a challenge to improve museum services, as stated by Dawson (2008) in his suggestive title: "Facilitating innovation: opportunity in times of change". Online interconnection and digital omnipresence make it hard, if not impossible, to plan digital activities in traditional, hierarchical organizations. The former director of the CCCB, Marçal Sintes summarizes the idea as follows: "...The crisis has also highlighted the need to rethink our public cultural institutions in these three, fundamental aspects: their governance, their funding and how they are organized within the museum system".<sup>6</sup>

The future debate in Catalonia might follow the following general lines taken from the Pla Estratègic de Cultura 2011-2021:

- Agents have to be understood as an integral and future-looking revitalization of the system
- Management has to be focused on improving efficiency
- Preservation has to consider the digitization of collections and the strategies to preserve heritage
- Research has to give priority to actions which straddle the discovery of forgotten heritage and emergent heritage
- Dissemination has to be carried out with information technologies and digital dissemination as the main channel

The previous analysis regarding the adoption of social media by Catalan museums opens up interesting research lines regarding the needs of museum audiences: which kinds of audiences, which behaviours and tendencies are conditioning their visits, either to the museums or the virtual spaces? It is most likely that researching these aspects will prompt museums to consider how they are present on social media platforms. “Being there” is not enough, and it could be even counterproductive if the museums do not understand the new communication and interaction mechanisms these platforms provide.

## Notes

1. Source of information IDESCAT (Oficial Statistics Website of Catalonia) <http://www.idescat.cat/en> (2013)
2. Elpais.com, 13/12/12
3. Ara.cat, 23/01/2015
4. <http://www.oed.com/> (Oxford English Dictionary), <http://www.oxfordreference.com/view/10.1093/acref/9780199571444.001.0001/acref-9780199571444> (A Dictionary of the Internet), <http://www.oxfordreference.com/view/10.1093/acref/9780199646241.001.0001/acref-9780199646241> (A Dictionary of Journalism), <http://www.oxfordreference.com/view/10.1093/acref/9780199568758.001.0001/acref-9780199568758> (A Dictionary of Media and Communication), 23/01/2015
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