
Miscellaneous

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Instagram as a participatory tool: A comparative analysis of six Spanish museums

Abstract

Digital media is usually understood as a tool that helps the social and participatory ideal of museums and cultural institutions to materialize. This ideal has its roots in the reflections that, since the 1980s, new museology and critical museology movements have developed around the renewal of cultural organizations: a transformation that places the visitor at the center of the institution, revises their stories about its collections and invites institutions to be more participative with the public. Seeking to identify the characteristics that these theories adopt in practice, this article investigates the forms of participation implemented on Instagram by six Spanish cultural institutions: Museo Nacional del Prado Museum, Museo Nacional Thyssen-Bornemisza, Museo Nacional Reina Sofía, Museo Guggenheim Bilbao, Museo de Arte Contemporáneo de Barcelona (MACBA) and Centro de Cultura Contemporánea de Barcelona (CCCB). By way of a content analysis of their publications over the span of 6 months, patterns and trends have been identified within the communication strategies of these organizations. The results indicate a clear predominance of minimalist participatory forms (those oriented towards access to practical information and the discovery of collections) over maximalist modalities related to collaboration or co-creation. In general terms, there is also a considerable presence of audiovisual formats in the publications analyzed, showing the great capacity of these institutions to adapt to the latest changes in Instagram.

Keywords

Institutions, museums, culture, Spain, social media, Instagram, participation.

1. Introduction

Since the 1980s –a decade in which new museology stressed the importance of reinforcing the social and democratic dimension of art museums (Desvallées, 1981; Rivière, 1989)–, cultural institutions have been adopting diverse strategies for approaching their audiences. The discourse around a paradigm shift in these organizations (Hooper-Greenhil, 2000; Witcomb, 2003; Anderson, 2004) was synthesized in the popular quote “from being about something to being for someone” (Weil, 1999, p. 229), that characterized the shift from a museum practice focused on conservation and research to an institutional perspective focused on visitors and their connection to the collections (Weil, 1999; Anderson, 2004; Ministry of Education, Culture and Sport, 2015). In the museological field, the arrival of digital media was accompanied by a

reflection on how institutions would progressively abandon the monologic communication style –typical of mass media– to adopt bidirectional and dialogic communicative forms (Hooper-Greenhill, 2000). The transformative potential attributed to technology was so relevant that terms such as “museum reinvented” (Anderson, 2004), “connected museum” (Drotner & Schröder, 2013), “museum 2.0” (Simon, 2010) or “transmedia museum” (Kidd, 2014; Moreno-Sánchez, 2015; Mateos-Rusillo & Gifreu-Castells, 2018) have accompanied the reflection of recent years on art centers and museums. In this sense, in both the academic and institutional spheres, there was a certain assimilation of the rhetoric of participation, which described the passage from an organizational model considered authoritarian (Dana, 1917; Hooper-Greenhill, 2000; Witcomb, 2003) to an open and social museum, characterized by its inclination towards dialogue and interaction with the visitor (Anderson, 2004; Gómez Vélchez, 2012). Organizations were challenged to listen, consult and engage in new forms of relating with their audiences (Di Milano, 2016), the size and characteristics of each institution would be fundamental in defining the features that this dialogic relationship would adopt in practice (Simon, 2010).

Although social networks were only timidly adopted in the cultural sector (López *et al.*, 2010; Stuedhal, 2011; Aznar, 2014), digital platforms have been seen as a unique opportunity to expand the institution’s mission beyond its physical boundaries (Stuedhal, 2011; Gómez Vélchez, 2012; Black, 2018), as well as an instrument to attract visitors (Zingone, 2019). Nowadays, the online presence of these organizations is practically taken for granted (Viñarás & Caerols, 2016): the COVID-19 healthcare crisis has accelerated numerous processes of transformation, digitization of archives and reinforcement of the strategy in social networks (Valtysson, 2022). In the case of Instagram, for example, the forced closure of museums’ on-site activity resulted in the commitment to more diverse media content directed at different types of audiences, created from a perspective oriented towards dissemination and learning rather than promotion (Fernández *et al.*, 2021).

Instagram is currently one of the most relevant platforms in the contemporary media landscape (Budge, 2017; Zingone, 2019). Founded in 2010, this social network whose predominant format was traditionally imagery is currently undergoing a clear shift towards video. The frenetic popularity that the social network TikTok has reached in recent years has promoted Instagram to generate the alternative, the so-called *Reels*: vertical videos of up to ninety seconds in length to which Instagram’s algorithm gives more and more prominence. The continuous changes imposed by these platforms challenge the ability of cultural institutions to adapt, while also demanding a high level of training for their professionals.

The purpose of this research is to analyze the participatory forms that are encouraged on Instagram by six cultural entities highly regarded in Spain: Museo Nacional del Prado ([@museoprado](#)), Museo Nacional Thyssen-Bornemisza ([@museothyssen](#)), Museo Nacional Centro de Arte Reina Sofía ([@museoreinasofia](#)), Museo Guggenheim Bilbao ([@museoguggenheim](#)), Museo de Arte Contemporáneo de Barcelona –MACBA– ([@machba_barcelona](#)) and Centro de Cultura Contemporánea de Barcelona –CCCB– ([@cccbb_barcelona](#)). These organizations have been included in our research on the basis of their prolific use of digital media, their dedication to the conservation and dissemination of art and due to their similarity in size within the Spanish institutional sphere. The aim of this research is to identify patterns and trends that might allow us to understand the characteristics of the communication used on this platform, as well as the willingness of these institutions to engage in dialogic relationships with their users.

2. Theoretical framework

Despite the potential of digital media, some voices from the academic field have insisted on the distance between the possibilities offered by these platforms and their effective use by museums and art centers (Watkins & Russo, 2007; Kidd, 2011; Kelly, 2013; Barrio-Fernández,

2014; Capriotti & Losada-Díaz, 2018). The notion of *control* is often included as a premise or condition of possibility within this discussion, considering that in order for one to participate a certain degree of control over the issue or process is required (Carpentier, 2012, 2015; Holdgaard & Klastrup, 2014). In his analysis of the online practices of the British Museum and the National Museum of Australia, Valtysson (2022) drew attention to the gap between the discourses of these institutions –whose reflections acknowledged their commitment to fostering dialogue and creativity in their spaces– and their practical use of platforms such as Instagram, where the author identified a certain resistance to giving control to users over the subject matter of participation.

In general terms, several aspects of the digital communication of Spanish cultural organizations are susceptible to improvement: firstly, their willingness to and attitude around listening, which is not active or constant on social platforms (Cordón Benito, 2016). Secondly, the lack of encouragement of user participation (Caerols-Mateo *et al.*, 2017), which is far from being a priority in their communication practices. Thirdly, the absence of long-term strategic communication plans (Viñarás, 2009; Cardona & Feliu, 2013; Claes & Deltell, 2014; Cordón Benito, 2016), which have deteriorated the potential impact and reach of institutional messages. Furthermore, the tendency to prioritise practical information on social networks –related to the activity carried out at the physical headquarters– has also been highlighted, adding to the detriment of new ways of discovering the heritage collection to the users (Gómez-Vílchez, 2012; Oliveira & Capriotti, 2013; Viñarás & Caerols, 2016).

In parallel, content analysis has allowed numerous researchers to identify and evaluate the characteristics of the online publications shared by these organizations (Caerols-Mateo *et al.*, 2017; Capriotti & Losada-Díaz, 2018; Zingone, 2019; Campbell *et al.*, 2022; Valtysson, 2022). Authors such as Bosello and van den Haak (2022) recently analyzed the Instagram posts published by eight European museums to conclude that, despite the innovative nature of their images and videos, their communicative forms continued to adopt an authoritative attitude that was far from being inclusive or participatory. In a similar way, Jensen (2013) argued that the participatory possibilities of these environments were essentially focused on connecting users with heritage objects. Therefore, the author questioned the limited capacity of contribution granted to online followers and the rare occasions in which a participatory process had an impact, in any way, on the institutional practice. In fact, these limitations have led some researchers to question the very existence of a paradigm shift in the cultural sector (Taylor & Gibson, 2017; Holdgaard & Klastrup, 2014).

In recent years, several studies have analyzed the user's relationship between the institution's physical headquarters and its digital platforms (Vassilakis *et al.*, 2017; O'Hagan, 2021; Campbell *et al.*, 2022). As they remain outside of institutional control, mobile devices have been considered the drivers of a certain user autonomy, allowing them to select parts of the visit, upload them to social channels and create individual narratives from their own personal experience (Weilenmann *et al.*, 2013). According to Villaespesa (2019), ephemeral formats such as Instagram stories (only 24 hours long) enable an interesting role reversal between user and institution: the institution ceases to be the agent which allows the visitors to become an object included in their own personal narrative –an idea that also fueled the debate on institutional policies around the prohibition of taking photographs (Budge, 2017; Villaespesa, 2020). In this sense, our study aims to analyze the characteristics adopted by the institutional communication from six big and medium sized Spanish museums on Instagram.

3. Methodology

This article is constituted around two research questions, linked to the most relevant issues detected after reviewing the academic literature on the subject:

RQ1. What forms of user participation does each institution promote on Instagram?

RQ2. To what extent are these institutions willing to establish a relationship with their users on this social network?

In order to answer both questions, we carried out a content analysis of these institutions' posts on Instagram. Content analysis has been a fundamental tool in twentieth century social research –especially in communication studies (Tinto Arandes, 2013)– due to its guarantee of diligence and systematicity. For its development, the works of Krippendorff (1990), Bardin (1996) and Andréu Abela (2002) were taken into account. The units of analysis selected in our study were the publications made on Instagram by the institutions during a period of 6 months. We also established a system of categories linked to the research questions: on the one hand, “Active presence,” “Forms of participation” and “Resources” (linked to RQ1) and, on the other hand, “Effective relationship” (associated with RQ2). This study is built on the basis of Capriotti, Zeler and Oliveira's (2021) model of dialogic participation on social platforms, adapted to our own understanding of participation in digital media as a broad-spectrum term that contemplates minimalist and maximalist forms (Carpentier, 2012, 2015) depending on its degree to influence and transform aspects of museum practice.

As seen in Table 1, the category “Active presence” (RQ1) allowed us to define two conditions for the possibility of participation on Instagram: on the one hand, the fact that the institution has an account on the platform (“Presence”), where the presence or absence of this institutional account was identified. On the other hand, that the organization makes active use of it (“Activity”), where the average daily publication during the established period of time was analyzed.

Table 1: Categories and dimensions of analysis for “Active presence” (RQ1).

Category	Dimension	Indicator
Active presence	Presence	Ownership of the institution's Instagram account
	Activity	Average daily publication

Source: Own elaboration.

In “Forms of participation” (RQ1) a set of practices susceptible to be encouraged within Instagram posts were included. To achieve greater precision, a distinction was made between “Minimalist forms of participation” and “Maximalist forms of participation.” The former is characterized, according to Ryan (2017), by not leaving a trace in the system: the feedback or the product of user participation would have a limited capacity to be integrated into museum practice (for the purposes of, for instance, improvements in the museum or the design of exhibitions). This would include the following categories: “Connection” (the institution facilitates access to practical or promotional information, mainly related to its programme), “Circulation of content” (the institution encourages users to share certain materials, promoting the circulation of information), “Exploration” (the institution encourages the discovery of its collections through different types of informative resources), “Competition” (the institution proposes playful or competitive dynamics on its publications) and “Contribution” (the institution asks the user to create some type of contribution, usually in the form of user-generated content. On platforms such as Instagram, these actions usually take the form of contributing with a photo, using a hashtag or leaving a comment).

The “Maximalist participatory forms” (Table 2) are defined, on the contrary, by leaving an imprint on the system (Ryan, 2017): the result of the user's intervention in the participatory process is integrated, to a certain degree, in the institutional action (through initiatives that usually need, from the beginning, the intervention of the public in order to be completed). Inspired by the reflections of Mayfield (2006) and Simon (2007, 2010) on different forms of

participation in digital media, we proceeded to distinguish between “Evaluation” (the institution invites the user to give their opinion on a certain issue, with the intention of incorporating this feedback into future actions), “Collaboration” (the institution promotes the creation of networks of mutual help between users and the organization, either financially through micro-sponsorship projects or through the outsourcing of tasks –*crowdsourcing*– that are part of an institutional project) and “Co-creation” (the institution asks users to participate, usually from very early stages, in the design and development of a given project, creating a relationship of partnership with the institution).

Table 2: Categories and dimensions of analysis for “Forms of participation” (RQ1).

Category	Subcategory	Dimension	Indicator
Forms of participation	Minimalist forms of participation	Connection	Information about activities and exhibitions
			Promotional content
			News
		Circulation of content	Invitation to share
			Invitation to mention
			Exploration
		Exploration	Stories and descriptions
			Carousels
			Curiosities/Ephemeris
		Exploration	Tutorials
			Interviews
			“Behind the scenes” of the museum
	Competition	Contests	
		Giveaways	
		Games	
	Contribution	Contribution	Invitation to create user generated content (UGC)
UGC Presentation			
Maximalist forms of participation	Evaluation	Voting	
		Surveys	
	Collaboration	Consultation of opinion/suggestions	
		Invitation to collaborate	
		Submissions of user contributions	
	Co-creation	Co-creation	Generation of debate
Co-creation	Co-creation	Calls for proposals	

Source: Own elaboration.

The category “Resources for presenting information” allows us to determine whether there are pronounced patterns or trends in terms of the morphology of the information on Instagram. As Table 3 shows, a distinction is made between “Graphic resources” (including images and photographs), “Audiovisual resources” (made up of audio and video elements) and “Hypertextual resources” (containing hashtags, links and mentions of other users). In order to aid in the usability of the analysis, text resources have been omitted since they are present in all Instagram posts.

Table 3: Categories and dimensions of analysis for “Resources” (RQ1).

Category	Subcategory	Indicators
Resources	Graphics	Images and photographs
	Audiovisuals	Audio and video
	Hypertextual	Mentions
		Hashtags
Links		

Source: Own elaboration.

The parameter “Effective relationship” (RQ2) connects with our second research question and allows us to peek into the relationship between the institution and their users: although it is impossible to measure the effect generated by the Instagram posts (user’s commitment does not necessarily translate into likes or comments on their end), it is considered relevant to examine certain metrics as a glimpse –always incomplete– into the institution’s interest in connecting with their followers. As Table 4 shows, three dimensions were defined for this category: “Engagement” (obtained through the so-called engagement rate, the quotient of the sum of likes and comments by the number of followers, multiplied by 100), “Intensity” (calculated from the rate of comments, the quotient of the average number of comments per publication by the number of followers, multiplied by 100) and “Reciprocity” (percentage of the distribution of comments made by users and comments made by the institution).

Table 4: Categories and dimensions of analysis for “Effective Relationship” (RQ2).

Category	Dimension
Effective relationship	Commitment
	Intensity
	Reciprocity

Source: Own elaboration.

To develop our study, we monitored these institution’s Instagram content for a period of 6 months: from October 30, 2021, to April 30, 2022. We worked with a total of 1536 publications: by *publications* we refer to those usually known as *posts* (content in the form of images or video) and *reels* (short videos created with a musical base, of great popularity within this social network). Following the guidelines of Bardin (1996) and Andréu Abela (2002) regarding content analysis, we proceeded to quantify the frequency of appearance of publications with the characteristics described above, understanding that the importance given to each modality increases as its frequency does. *Stories* were excluded from this analysis because of their

ephemeral nature, being impossible to retrieve them retrospectively. The online tool Fanpage Karma was used to obtain and codify the publications, while Excel was used to process the data obtained.

4. Results

In order to provide greater clarity, the results are organised according to the research questions established in our study.

4.1. Forms of user participation promoted on Instagram (RQ1)

As mentioned above, the first condition necessary is that the institution has its own Instagram account. In this regard, the results for “Active presence” (100%) confirm that all the organizations have an account on the platform and, therefore, are able to encourage participation on it (Table 5). In terms of “Activity,” the first differences were established: although the overall daily average is 1.4 publications (which indicates a considerable commitment to the dynamization of institutional networks), the data showed variations according to each organization. The Museo Nacional Reina Sofia has a significantly higher volume of publications than the average (2.5 daily publications), which is symptomatic of its notable predisposition to user interaction. At the opposite end is CCCB (0.9 publications per day), although this metric also suggests a strong commitment to the platform. Next to the Catalan center are the MACBA (1 daily publication) and Museo Nacional del Prado (1.1 daily publications). Close to Museo Reina Sofia, but without reaching its intensity, are the Museo Guggenheim Bilbao (1.5 daily publications) and Museo Nacional-Thyssen Bornemisza (1.6 publications).

Table 5: Results for “Active presence” (%).

	Museo del Prado	Museo Reina Sofia	Museo Thyssen	Museo Guggenheim Bilbao	MACBA	CCCB
<i>Presence</i>						
Yes	100%	100%	100%	100%	100%	100%
No	0%	0%	0%	0%	0%	0%
<i>Activity</i>						
Daily average	1.1	2.51	1.6	1.5	1	0.9
Weekly average	7.7	17.57	11.2	10.5	7	6.3

Source: Own elaboration.

As Table 6 shows, results indicate that “Minimalist forms of participation” (99.84%) definitely have a higher presence than “Maximalist forms of participation,” which in this study are practically non-existent (0.16%). Within the eight minimalist modalities defined, two practices have a clear predominance over the others: “Exploration” (48.37%) and “Connection” (40.82%), which together describe the vast majority of the publications analyzed. On the other hand, “Contribution” (3.91%), “Competition” (3.91%) and “Circulation of content” (2.8%) have a considerably smaller presence, which can be considered symbolic. “Evaluation” (0.13%) and “Collaboration” (0.07%) show a practically insignificant frequency of appearance, while Cocreation (0%) is absent in all the publications analyzed (Table 7).

Table 6: Results for “Forms of participation” (%).

	Museo del Prado	Museo Reina Sofía	Museo Thyssen	Museo Guggenheim Bilbao	MACBA	CCCB	TOTAL
Minimalist forms of participation (%)	99.49%	99.56%	100%	99.99%	100%	99.99%	99.84%
Maximalist forms of participation (%)	0.51%	0.44%	0%	0.01%	0%	0.01%	0.16%

Source: Own elaboration.

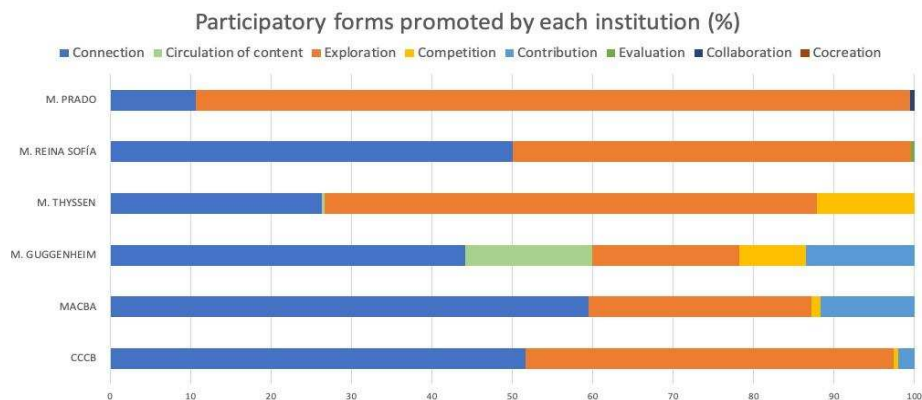
Table 7: Breakdown of results for “Forms of participation” (%).

	Museo del Prado	Museo Reina Sofía	Museo Thyssen	Museo Guggenheim Bilbao	MACBA	CCCB	TOTAL
<i>Minimalist forms of participation</i>							
Connection (%)	10.71%	50.11%	26.3%	44.19%	59.44%	51.63%	40.82%
Circulation of content (%)	0%	0%	0.35%	15.73%	0%	0%	3%
Exploration (%)	88.78%	49.45%	61.25%	18.35%	27.78%	45.75	48.37
Competition (%)	0%	0%	12.11%	8.24%	1.11%	0.65%	3.91%
Contribution (%)	0%	0%	0%	13.48%	11.67%	1.96%	3.91%
<i>Maximalist forms of participation</i>							
Evaluation (%)	0%	0.44%	0%	0%	0%	0%	0.13%
Collaboration (%)	0.51%	0%	0%	0%	0%	0%	0.07%
Cocreation (%)	0%	0%	0%	0%	0%	0%	0%

Source: Own elaboration.

As can be seen in Figure 1, Museo Nacional Thyssen-Bornemisza presents a greater balance between minimalist forms of participation in relation to Museo Nacional del Prado, although contrasts are still present. “Exploration” also has a greater weight (61.25%) than Connection (26.3%), although the differences are less evident than those of the Prado. In this aspect, Thyssen’s commitment to educating about its collections coexists, simultaneously, with the presence of publications of a commercial nature aimed at advertising products from the museum store. “Competition” (12.11%), on the other hand, is manifested in proposals related to contests, games or sweepstakes: this participatory form has a symbolic role, which is nevertheless considered part of the institution’s communicative strategy. While “Circulation of content” (0.35%) has a minimal presence, the totality of maximalist forms of participation established for this study are absent (0%).

Figure 1: Participatory forms promoted by each institution (%).



Source: Own elaboration.

As far as Museo Nacional Reina Sofía is concerned, there is an equal distribution between the forms “Connection” (50.11%) and “Exploration” (49.45%), which almost define the entirety of the museum’s communication. The data also revealed that their use of Instagram to disseminate information about their programming possesses an importance equivalent to the dissemination about their art collections. The results showed the absence of other minimalist forms of participation –“Circulation of content” (0%), “Competition” (0%) and “Contribution” (0%)– as well as 2 of the 3 maximalist ones: “Collaboration” (0%) and “Co-creation” (0%). Symbolically, “Evaluation” (0.44%) is the only exception, manifested through a very small number of publications where the user is invited to vote or give an opinion on a given topic.

All minimalist forms of participation are present in the Instagram posts of Museo Guggenheim Bilbao, thus offering an exceptional diversity in comparison to other institutions. It is surprising to note that “Connection” (44.19%) has a higher weight than other modalities: “Exploration” (18.35%), “Circulation of content” (15.73%), “Contribution” (13.48%) and “Competition” (8.24%). This lower frequency of appearance suggests the idea that this institution gives priority to promotional content (ticket sales, products from its store, etc.), which combines with the involvement of followers through different minimalist participatory strategies. Furthermore, it is noted that the invitations to share content are explicit on the part of the institution, as well as the calls to create content through hashtags such as #photooftheweek, where people are invited to share images of Frank Gehry’s building. The data also showed that maximalist forms are completely absent: “Evaluation” (0%), “Collaboration” (0%) and Co-creation (0%).

In the case of MACBA, there is minimal diversity amongst minimalist forms of participation. In this respect, “Connection” is dominant (59.44%) over “Exploration” (27.78%), in line with what was identified in Museo Nacional Reina Sofía and in Museo Guggenheim Bilbao. It is interesting to note the frequency of appearance of forms such as “Contribution” (11.67%), with a relatively higher weight than would be expected in an institution where promotional purposes predominate. Paradoxically, this makes MACBA the second organization after Museo Guggenheim Bilbao in promoting practices associated with user-generated content (UGC). While “Competition” (1.11%) has a presence that could be considered anecdotal, maximalist forms are absent in this case too: “Evaluation” (0%), “Collaboration” (0%) and Co-creation (0%).

CCCB presents a distribution between “Connection” (51.63%) and “Exploration” (45.75%) similar to that of the Museo Nacional Reina Sofía, conforming almost the totality of its publications on the platform. Efforts are thus combined between providing informative content about on-site activity and the publishing of informative videos. Lacking a permanent collection, the institution tends to mobilize its digital repository on a continuous basis: this

implies that, on numerous occasions, the CCCB produces publications that help to discover aspects of an exhibition (videos, fragments of interviews or lectures) also aimed at promoting the center’s activities or exhibitions. On the other hand, the results of the study showed that only two additional forms of participation enjoy an anecdotal presence: it’s the case of “Contribution” (1.96%) and “Competition” (0.65%). Finally, “Circulation of content” (0%), “Evaluation” (0%), “Collaboration” (0%) and Co-creation (0%) were absent in the publications analyzed.

4.2. Resources (RQ1)

The high frequency of appearance of “Interactive” resources (100%) indicates a general circulation of these types of elements (hashtags, links or mentions to other Instagram accounts). That said, table 8 shows how “Hashtags” (67.36%) have a notably higher presence than “Mentions” (17.56%) or “Links” (15.08%). The abundant use of these elements is symptomatic of the degree of maturity reached in the use of the platform, with hashtags being a fundamental tool for categorizing content and mentions a useful resource for involving users of the social network in the conversation.

Table 8: Results for “Resources” (%).

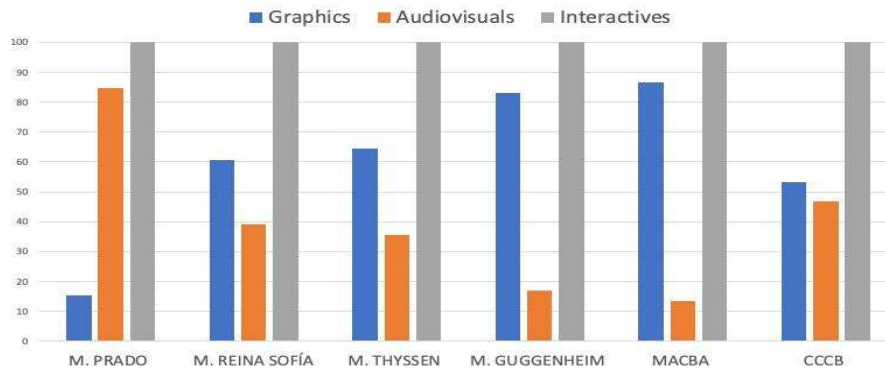
	Museo del Prado	Museo Reina Sofía	Museo Thyssen	Museo Guggenheim Bilbao	MACBA	CCCB	TOTAL
Graphics (%)	15.31%	60.75%	60.75%	83.15%	86.67%	53.33%	61.83%
Audiovisuals (%)	84.69%	39.25%	39.25%	16.85%	13.33%	46.67%	38.17%
<i>Interactives (%)</i>							
Hashtags	84.18%	47.15%	47.15%	79.4%	65%	61.33%	67.36%
Links	2.55%	45.18%	45.18%	5.62%	1.67%	2%	15.08%
Mentions	13.27%	7.68%	7.68%	14.98%	33.33%	36.67%	17.56%

Source: Own elaboration.

Regarding graphic and audiovisual resources, the data indicate that “Graphics” (61.83%) has a higher frequency of appearance than “Audiovisuals” (38.17%). While the difference between the two suggests that images (Instagram’s usual format since its foundation) are still predominant, the weight of audiovisual resources is far from negligible and shows a considerable relevance of the video format, especially in the context of the growing popularity of Reels.

As shown in Figure 2, Museo Nacional del Prado has the lowest frequency of appearance of “Graphics” (15.31%), thus evidencing the way in which “Audiovisual” resources (84.69%) are key for the institution. Prado is the only organization where video resources outnumber images. CCCB, on the other hand, presents the most balanced distribution with “Graphics” (53.33%) and “Audiovisuals” (46.67%), revealing the institution’s firm commitment to the video format. CCCB is followed by Museo Nacional Reina Sofía, with a ratio between “Graphics” (60.75%) and “Audiovisuals” (39.25%) with more pronounced differences. At the Museo Thyssen-Bornemisza this gap is even more noticeable, with “Graphics” (64.36%) at a considerably higher percentage than “Audiovisuals” (35.64%). The greatest divergence occurs at the Guggenheim Museum Bilbao and the MACBA: in the case of the Guggenheim, “Graphics” (83.15%) are clearly dominant with respect to “Audiovisuals” (16.85%). The same happens at MACBA, where the ratio between “Audiovisuals” (13.33%) and “Graphics” (86.67%) confirms the peripheral role of the video format.

Figure 2: Type of resources included in the publications of each institution (%).



Source: Own elaboration.

4.3. Effective relationship

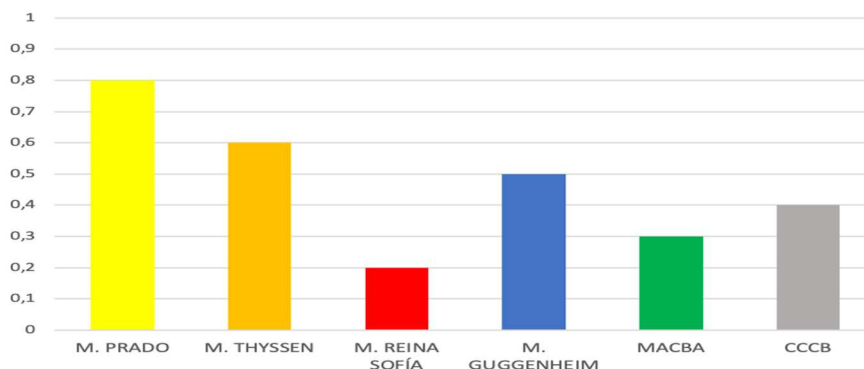
Our second research question explores the characteristics of the relationship between the institution and the user based on certain metrics generated with data from Instagram. “Effective relationship,” therefore, addresses three dimensions: “Engagement,” “Intensity” and “Reciprocity.” In the first dimension, the volume of reactions (likes and comments) for each publication in relation to the number of followers of each institution has been analyzed. This ratio is usually known as the engagement rate. As shown in Table 9, the Museo Nacional del Prado has an engagement or support rate of 0.9%, placing it at the top of all organizations. It is followed by the Museo Thyssen-Bornemisza (0.6%) and the Guggenheim (0.5%) with a noticeably lower rate. The organizations with the lowest volume of reactions are the CCCB (0.4%), MACBA (0.3%) and the Museo Nacional Reina Sofia (0.2%), whose engagement rate is symptomatic of the lower reactions their publications receive (Figure 3).

Table 9: Results for “Commitment” (%).

	Museo del Prado	Museo Reina Sofía	Museo Thyssen	Museo Guggenheim Bilbao	MACBA	CCCB	Media
Commitment (%)	0.9%	0.2%	0.6%	0.5%	0.3%	0.4%	0.5%

Source: Own elaboration.

Figure 3: Engagement rate of each institution on Instagram (%).



Source: Own elaboration.

Within the “Conversation” category, the dimensions “Intensity” and “Reciprocity” were established. The former is calculated on the basis of the comment rate (quotient between the average number of comments per publication and the number of followers, multiplied by 100). The results show that the comment rate is significantly low, with an average of 0.01% (Table 10). The most outstanding cases are those of the Museo Nacional del Prado (0.02%), the CCCB (0.02%) and the Museo Thyssen-Bornemisza (0.01%), where users show very low interest in commenting on their publications (taking into account the number of followers). In contrast, the rate of comments for the Reina Sofía Museum, the Guggenheim and the MACBA is 0%, conveying that the communities formed around these institutions are completely inactive.

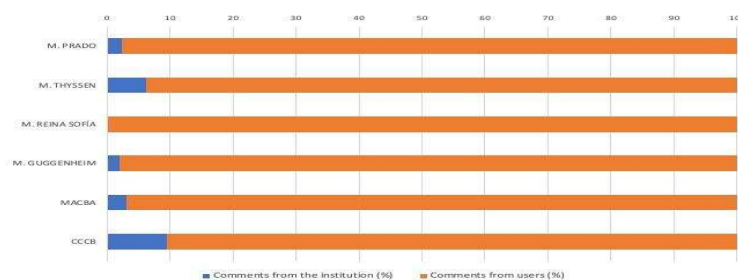
Table 10: Results for “Intensity” and “Reciprocity” (%).

	Museo del Prado	Museo Reina Sofía	Museo Thyssen	Museo Guggenheim Bilbao	MACBA	CCCB	MEDIA
<i>Intensity (%)</i>							
Intensity from institutions	0%	0%	0%	0%	0%	0%	0%
Intensity from users	0.02%	0%	0.01%	0%	0%	0.02%	0.01%
<i>Reciprocity (%)</i>							
Reciprocity institutions	2.33%	0%	6.29%	2.06%	3.1%	9.55%	3.89%
Reciprocity users	97.67%	100%	93.71%	97.94%	96.9%	90.45%	96.11%

Source: Own elaboration.

“Reciprocity” allows us to identify how balanced the conversation between the institution and the user is, based on the percentage of comments made by each agent in relation to the total. In general terms, Instagram users are responsible for 96.11% of all comments on the posts analyzed, revealing a particularly low institutional presence (3.89%). Looking at each organization (Figure 4), it became clear that the highest balance occurs between the CCCB and its followers, where 90.45% of the comments correspond to the users and 9.55% to the cultural center. The Museo Thyssen-Bornemisza (93.71%–6.29%) is also among the best performers, with the other institutions showing an even more pronounced imbalance, as is the case of MACBA (96.9%–3.1%), Museo Nacional del Prado (97.67%–2.33%) and the Museo Guggenheim Bilbao (97.94–2.06%). With regard to Museo Nacional Reina Sofía, a complete imbalance is revealed (100%–0%), showing that the institution did not respond to any of the comments on the platform during our period of analysis.

Figure 4: Reciprocity between the comments of institutions and users (%).



Source: Own elaboration.

5. Discussion

Although every one of these institutions has an Instagram account and makes regular posts on it, doing so does not imply that the communication proposal adopts a participatory nature (Capriotti & Oliveira, 2021). The results reveal a clear dominance of “Minimalist forms of participation” (99.84%) over “Maximalist forms of participation” (0.16%), which suggests that most user interactions have low or no impact on initiatives or projects from these organizations, making them primarily symbolic forms of participation. Despite the above, the higher frequency of occurrence of “Exploration” (48.37%) over “Connection” (40.82%) suggests an interesting role reversal in terms of the relationship between promotional and divulgative content, thereby showing a strong commitment to Instagram as a divulgative channel. Although in recent years the conservative use of social media by cultural organizations (Watkins & Russo, 2007; Kidd, 2011; Barrio-Fernández, 2014; Capriotti & Losada-Díaz, 2018) as well as the excessive predominance of advertising content has been implied (Viñarás, 2011; Oliveira & Capriotti, 2013), the abundance of materials found that are aimed at facilitating the discovery of collections suggests a change of mentality regarding the possibilities of such media.

Despite the fact that informative publications have been considered a continuation of the authoritarian scheme of the institution as a guardian of knowledge (Bosello & van den Haak, 2022), from this study we see a qualitative difference between the materials that inform about the museum’s agenda and those that create value through the description and narration of works of art. In the second case, the institution does not consider its followers as potential visitors, but provides them with an experience equivalent to (and at the same time specifically different from) the physical visit. It is here where we see the materialization of the ideal of the museum expanded beyond its physical limits (Black, 2010; Stuedhal, 2011; Gómez Vílchez, 2012). On the other hand, the significant absence of practices that encourage maximalist participatory forms –“Collaboration” (0.07%), “Evaluation” (0.13%) or “Co-creation” (0%)– confirms the ideas of Jensen (2013), Taylor and Gibson (2017) and Valtysson (2022) on the lack of implementation of initiatives that allow audiences to influence, collaborate or make decisions on certain aspects of the cultural proposal.

The results also reveal that the relationship between the institution and the user rarely occurs and when it does it is unbalanced. The level of user interaction with the publications of these organizations is low (below 1%) despite their large volumes of followers. At the same time, the results regarding reciprocity of conversation are even more discouraging, showing that institutions respond to a miniscule proportion of users who comment on their posts. This forces us to question the enthusiasm with which certain claims about the end of monological communication in museums due to digital media have been spread (Hooper-Greenhill, 2000), as well as those related to the readiness of these institutions for dialogue and interaction (Gómez-Vílchez, 2012). The results also confirm that the dialogic possibilities of social platforms remain untapped (Capriotti & Losada-Díaz, 2018) as well as the absence of active listening by these institutions (Cordón Benito, 2016; Caerols-Mateo *et al.*, 2016).

6. Conclusions

The aim of this study was to analyze the forms of user participation encouraged on Instagram and the characteristics adopted by the relationship between the institution and the user. Regarding our first research question (RQ1), we found that these organizations mostly promote minimalist forms of participation, which facilitate the exploration of the heritage collection and access to practical information about the institution’s agenda. It is argued that the use of Instagram as a learning tool (a phenomenon possibly accelerated by the effects of the COVID-19 pandemic) is a great advance in the communication proposal of these institutions, even when it coexists with a more traditional use of Instagram as a promotional loudspeaker. Another sign of transformation is the notable presence of content in video

format, showing the organizations' ability to adapt to recent changes in the platform, as well as the technical competence of their professionals in audiovisual creation.

Although we detected a timid implementation of other participatory forms, "Connection" and "Exploration" modalities are clearly dominant: in this sense, the current museum Instagram practice –although correct– is insufficient as far as it limits participatory action to a set of individual actions, whose product is alien to the implementation of improvements in the institutions, the strengthening of their communities, collaborative creation or participation in projects. This becomes apparent in the scarce presence of forms such as "Contribution" (in which the user is invited to create content) or "Competition" (where individual or collective playful dynamics are proposed). The absence of maximalist forms of participation such as "Evaluation," "Collaboration" and "Co-creation" evidence the clear lack of interest of these institutions in involving users in a more significant way.

Our data shows that Museo del Prado is moving away from a promotional use of the platform and towards encouraging the exploration of the collections through video format. The deep understanding of Instagram demonstrated by the Madrid-based museum is also accompanied by the highest user engagement rate (0.9%). However, its implementation of alternative forms of participation is curiously low: this decision, while it may be conscious, could limit a potential for further interaction with other users willing to contribute or engage with the museum in a deeper way. At Museo Thyssen-Bornemisza there is a combination of content aimed at exploration, connection and competition (through contests such as *Versiona Thyssen*), as well as a relative balance between graphic and audiovisual forms that shape a consistent communication model, rewarded with the second highest engagement rate (0.6%). Museo Guggenheim Bilbao presents an exceptional diversity of minimalist participatory forms, although their publications are dominated by promotional rather than learning-oriented content. This, together with the strong presence of graphic content, weakens the overall value of its proposal, even though its engagement rate stands at 0.5%.

Paradoxically MACBA is, together with Guggenheim, the only institution that promotes user contribution in its publications: while this may suggest a certain vocation for innovation from the institution (with an engagement of 0.3%), there is a myriad of new strategies, currently absent, that could be implemented in this regard. In parallel, Museo Nacional Reina Sofía (with the lowest engagement rate, 0.2%) and CCCB (0.4%) publish a certain type of content mostly directed at exploration and connection: a positive phenomenon that, however, is accompanied by an anecdotal presence of the rest of minimalist forms of user participation –and an excessive bet on the part of Reina Sofía museum on graphic resources within a global context of a shift towards video–. In this respect, the CCCB stands out for its better balance between graphic and audiovisual resources.

Regarding our second research question (RQ2) the results are conclusive and characterize all the institutions in the sample. In relation to the others, CCCB presents the most active community with the highest balance of reciprocity in the conversation (90.45%–9.55%) although in general terms the data indicates that –in addition to limited support from users– the degree of reciprocity between the institution and the user is practically non-existent. The present study confirms the existence of a gap between the discourses on the contemporary cultural institution being bidirectional or dialogic in its digital communication and the lack of practical manifestation of this discourse on in social media such as Instagram, where a monological perspective of communication still predominates.

Regarding the limitations of this research, it is relevant to note that the present analysis focuses on the publications (posts and *reels*) of the institutions included in the sample. Therefore we recommend conducting additional research focused on the ephemeral format of *stories* to obtain a complementary view to the one presented here. Other lines of research derived from this study are the performance of content analysis with publications that include a longer time period and the development of studies formulated from the perspective of users,

promoting discussion around their preferences and motivations in the use of this platform. Finally, it is advisable to compare the results derived from this work methodology with other qualitative studies, where the perspective of those responsible for the communication or digital development departments regarding the strategy of these institutions in digital media such as Instagram is collected.

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