Social and mobile TV in Catalonia. Audience and interaction in Catalan TV broadcasters' corporate mobile apps and social networks' profiles

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Abstract
This study explores the characteristics and user behaviour of 53 Catalan TV broadcasters' corporate mobile apps and profiles in social networks, including TV3, 8tv and local TV stations taking part in the Audiovisual Local Network (XAL). A quantitative methodology has been applied with content analysis, a comparison between linear and mobile consumption and the analysis of key performance indicators of interactivity in Facebook and Twitter. The results show that mobile apps have been developed for a passive user and that the audience profile of these apps is mainly composed of men between 25-34 years old. The networks' communities are rather inactive with a greater interactive level on Facebook and a level near to 0% on Twitter.

Keywords
Television; Social Audience; Facebook; Twitter; Mobile Apps.

Resum
Aquest estudi aborda les característiques i el comportament dels usuaris de les aplicacions mòbils i dels perfils de xarxes socials corporatius de 53 televisions catalanes: TV3, 8tv i les televisions integrades dins la Xarxa Audiovisual Local (XAL). S'aplica una metodologia quantitativa amb una anàlisi de contingut, el creuament de dades de consum lineal i mòbil i l'anàlisi d'indicadors de desenvolupament del nivell d'interactivitat de les comunitats d'usuaris a Facebook i Twitter. Els resultats mostren que les aplicacions mòbils han estat desenvolupades per a un tipus d'usuari passiu i que el perfil d'audiència d'aquestes aplicacions està format majoritàriament per homes de 25-34 anys. D'altra banda, les comunitats en xarxa es mostren força inactives, amb uns nivells d'interacció majors a Facebook i propers al 0% a Twitters.

Paraules clau
Televisió, audiència social, Facebook, Twitter, aplicacions mòbils.

Introduction

As García Torres (2015) explained, the latest changes in the media environment have not been progressive and have created a quick hybridisation of media towards new formats and platforms. This transformation affects radio, television and the Internet, although we can state that the latter two have suffered the most significant change - TV becoming *social TV.* This phenomenon brings new rationales into content production, media communication with the audience and, more specifically, the transformation of public consumption habits (Lin, Sung and Chen 2016).

Consequently, major opportunities have been created for TV broadcasters. Financially, it is worth highlighting the distribution by over-the-top (OTT) systems and the growth of new digital native services. From a production point of view, new ways are open for the development of interactive products and platforms (Gómez-Uribe and Hunt 2015). In terms of promotion, social networks allow the (1) opening of a direct communication channel between the media and the public and (2) the channelling of on-line discussions about content in order to obtain data on audience preference (Bonini i Sellas 2014).

Optimising audience measuring systems, together with the new generations' multi-platform consumption, drives TV broadcasters to create or renew web spaces, mobile apps and social network presence and usage. Thus, public corporations, with the British Broadcasting Corporation (BBC) and the Finnish Yleisradio (YLE) at the forefront, have shown a great capacity to adapt to this new paradigm (Van Dijck and Poell 2014). Conversely, public initiatives related to the social TV phenomenon in Spain are reduced to the innovation and interactive labs of Radio Televisión Española (RTVE) and, at a local level, to the strategies and products developed by the Corporació Catalana de Mitjans Audiovisuals (CCMA).

In this context, a social TV study recently published by the Observatori de la Producció Audiovisual (OPA) opened a line of research due to the lack of investigations applied at a national level and, more specifically, to the Catalan environment (OPA 2016). This study analyses in depth the integration of the Catalan TV system into the social TV model in web pages, social networks and mobile apps. The OPA reaches the conclusion that Catalan TV broadcasters show a low integration level, particularly when developing participation tools for web pages and mobile apps, compared to other corporations whether in the European arena or privately owned.

The results of the study show the need for this article, whose aim is to compare the characteristics of the corporate mobile apps and profiles of TV3, 8tv and TV stations in the Audiovisual Local Network (XAL) with their user consumption and characteristics with a view to establishing the relationship between the TV broadcasters' low integration in these platforms and public usage.

Conceptual Framework

Social TV is a recent phenomenon, both in professional and academic environments, and the model definition is still an open discussion depending on the study field used to approach it (González-Neira and Quintas-Froufe 2015). From a technology point of view, authors such as Krämer et al. (2015) consider social TV as a set of physical and digital tools enabling communication between audience and media. On the other hand, Carpentier (2012) or Hallvard, Poell and Van Dijck (2015) understand that this phenomenon must be defined according to the socialisation processes facilitated by the digital tools, connecting and organising user communities around the TV content. Finally, there is also a current trend towards a definition where Twitter is the ultimate social TV tool, with no consideration for other environments (Harrington et al. 2013; Deltell Escolar 2014). In any case, social TV is ultimately defined as a set of physical and digital tools that allow the audience to participate or interact with the media or the content through web platforms, social networks or mobile apps, and that operate as second screens, parallel or asynchronous with live broadcasting.

The development of social TV programmes is linked to innovation as a key foundation for the new content offered. This spirit of renewal has been historically related to public services, particularly during the monopoly stage before the deregulation that took place as of 1980. Currently, both public and private broadcasters face the need to offer communication channels and contents as well-adapted as possible to new audience needs. According to Cesar and Geerts (2011), in terms of social TV, this means creating and using social network profiles where the target audience is concentrated, as well as using web spaces and mobile environments to offer tools to:

- **Deliver the content**
- **Synchronise and update content** simultaneously with user consumption
- **Facilitate internal communication** between users on the same platform by tools such as chat
- **Drive a reaction or the participation of user communities** around specific contents or programmes

In the Catalan environment, authors such as Bonet et al. (2013) state that the CCMA has been at the forefront of web space renovation, social network strategy approaches and mobile app offerings. Despite this, the situation at a national level is still in its budding stages and we can only find isolated experiences of adaptation to the social TV model. Galindo, Fernández and Alameda (2014) analyse the case of the second screen apps *Atresconecta*, *MiTele* and *RTVE,* amongst others, and reach the conclusion that they do not attract the user's attention and generate an exhaustion effect when used daily. According to the authors, this is due to the lack of novelties in the apps or the low quality of extra content offered. Lastra (2016) talks about other experiences integrating web, mobile apps and social networks, such as that related to the historical fiction programme *El Ministerio del Tiempo,* that, according to the author, confirm the interest of producers and RTVE in creating attractive content for the digital public, even if she clarifies that such products are still at an integration stage in the Spanish audio-visual industry. Finally, the OPA (2016), in the first part of its report on social TV in Spain and Catalonia, also notices that web platforms and media versions from corporations such as Mediaset, Atresmedia, or even CCMA, are easier to find at a second screen integration stage because of their Video on Demand service functionalities. Having said that, it should be noted that CCMA made considerable investments for the development of interactive contents (e.g. *Amb Títol*) and transmedia (*Em dic Manel*) in order to reach multi-platform consumers.

Along this line, TV hybridisation has driven important changes in audience conceptualisation. Enli (2008) and Livingstone (2013) state that new media gave rise to new audiences and, they add, we have moved from being passive audiences to active users, from a broadcasting model to a multimedia one and from unilateral to bidirectional communication that feeds back through the networks. In turn, Syvertsen (2004), Siapera (2004), Meijer (2005) and García Avilés (2012) define a new classification of media demographics. The new types group the audience or users according to their TV content and platform usage and their relationship with the media. More specifically, 10 different user profiles are defined based on their own characteristics, as show in the table below.

Other studies, like the one conducted by Gómez-Domínguez, Besalú-Casademont and Guerrero-Solé (2016), demonstrate in their social audience analysis that there are significant differences in audience participation too, depending on the media system (Hallin and Mancini 2004). Thus, in line with Buschow, Schneider and Ueberheide (2014), the study concludes that the English-speaking public shows a greater tendency towards *social* participation than the Spanish or Catalan public. On the other hand, more active audiences seem to be associated with specific genres such as news and entertainment and, more particularly, with TV reality formats (Gonzalo Berrocal et al. 2014). Data obtained from the annual directory *A year in the life of TV and Twitter in Spain* (Kantar 2015) confirm this fact too, sustaining that up to 25.1% of the activity is concentrated around reality shows (*Gran Hermano VIP* or *Mujeres, Hombres y Viceversa*), and up to 34.1% corresponds to the factual genre (*Al Rojo Vivo, La Sexta Noche or 7D: El debate decisivo).*

In short, Segado, Grandío and Fernández-Gómez (2015) stressed the importance of increasing social TV phenomenon studies, a growing field of research. Likewise, authors such as Hallvard, Poell and Van Dijck (2015) and Lin, Sung and Chen (2016) insist that the subject of study should not only focus on the media, but it should also include the users-audience. This is the reason why we have decided to make a double analysis in this study.

Table 1. Classification of user profiles based on activity level (action) and their defining characteristics

Action	Profile	Characteristics
Passive	Consumers	The media establishes a passive exchange relationship of linear and/or digital content with the audience. This relationship does not consider any involvement or interaction of the users with the platform, app or network that the media makes available to them. In any case, this is the most common and classic audience profile.
Active	Players	User whose interaction is based on leisure. This considers, beyond the game options that the different programs offer to the public, the classic vote as a participation tool. Voting allows the audience to establish a direct relationship with what is decided (e.g. evicting a contestant). On the other hand, expanding contests to the web spaces creates a wide range of possibilities, allowing the public to feel part of the “game”.
	Fans	This demographic is defined as an individual or a group that follows specific contents, presenters, actors, collaborators, etc. This relationship is driven by the operators, as the users generate great visibility of those things they admire. Participation is channelled through interview programmes, extra content or using social networks as a second screen programme.
	Commentators	Users that act using specific tools or platforms provided by the programmes, operators or others to comment, criticise, suggest or share their point of view, self-generated contents or qualifications. Social networks play a middle-man role for this audience profile. Some programmes insert the networks comments directly (section) or indirectly (titles). This profile provides valuable information for the media about the content acceptance level.
	Citizens	User participation in programmes broadcasting content related to public affairs topics. It can be classified as a profile linked more closely to the news genre than to entertainment. Includes direct participation in formats where the viewer is a core part of the programme development and, externally or indirectly, the viewer participates through specific platforms or tools (e.g., sending questions to a guest being interviewed)
	Collaborators	The public plays the role of the content producer in any type of format or topic. In this profile, the information sent (photos or video clips recorded by amateurs) is used in key sections of different programmes.
	Benefactors	Users that participate in solidarity-related stations or programmes. This interaction promotes a social responsibility relationship between the collaborating viewers and the media as a result of a social need.
	Activists	This profile is related to the association of viewers with protection and defence collectives watching over the contents in order to safeguard the quality standards, pluralism and diversity specified as consumers. A key concept used to define this profile is the “mobilisation” capacity.
	Educational audiences	This profile can access, through a web platform, large amounts of educational material which may or may not be related to the station or programme content. This type of audience matches that of public service media more closely, and it is usually associated with children or young demographic segments.
	Cybernauts	Multi-user profile encompassing the main activities that the audience may carry out on the media web platforms or mobile apps. It includes activities such as downloading add-ons, using search tools or sharing content in social networks.

Source: Personal compilation from Syvertsen (2004), Siapera (2004), Meijer (2005) and García Avilés (2012)

Objectives

The study has set itself the general objective of examining the level of correspondence between the adaptation of Catalan TV channels to the social TV model and the user consumption and interaction level in these fields. This general objective is based on the following specific objectives:

1. To analyse the configuration of corporate mobile apps of Catalan TV channels as participation tools, in order to classify them according to their target user profile.
2. To examine audience data from Catalan TV channel corporate mobile apps.
3. To compare the user profiles of mobile apps and linear audience data from TV in Catalonia in order to identify similarities and differences.
4. To analyse how users utilise corporate social networks to check the level of interaction with production (Facebook entries and Twitter Tweets).

Methodology

Sample

The study applies to two territorial levels of the Catalan TV system, the national level and the local level. The selection of this set of Catalan television channels ahead of others belonging to the Spanish State responds to diversity and reference criteria. Thus, the Catalan TV system is the one having a greater number of local TV channels in Spain, which brings a wide diversity of business, budgeting, programming and target audience models (Bustamante 2013; Micó and Masip 2014). In addition, experiences in the development of new community and local TV channels caused Catalonia to become a benchmark within the European environment as well (Garcia Reguero and Sáez 2012). On the other hand, TV3 is the mostly watched regional TV channel in Spain, and corporation media have a guarantee of content quality in the ratings given by the audience (CCMA 2015).

Equally, the sample has been selected from the map *Televisió de Catalunya, 8tv i la Xarxa de Televisions Locals* prepared by the OPA. The map shows a total of 53 TV channels, including Televisió de Catalunya (TV3), 8tv and TV stations taking part in the Audiovisual Local Network (XAL). With regards to ownership, there are 31 private and 22 public TV channels. In terms of adapting to new media, it should be noted that only 24 offer live broadcasting, on demand service or VOD and streaming.

Within this sample of TV channels, we selected two of the three typical areas of social TV: social networks and mobile apps. We left websites aside, as we consider that most studies on TV and new media have already focused on this area (Meso Ayerdi and Larrondo Ureta 2010) from analysing image files, covering aspects of usability and technical quality, to the interaction and participation possibilities (Rodríguez-Martínez, Codina and Pedraza-Jiménez 2012, OPA 2016). On the other hand, the relationship between social networks and TV from the point of view of users and the relationship between available participation tools on mobile apps and the characteristics of the audience continues to be a research field being explored (Van Dijck and Poell 2014).

It should be also noted that corporate mobile apps only available on the Android system are analysed, instead of programmes, as, with 1.4 billion users (Barr 2015) they are the most widespread. With regards to the type of app, the corporate app acts as the main Web portal (*home*) or official profile in the mobile environment. Therefore, it is the app that contains the content produced by all programmes of the different channels grouped under the same broadcaster. We have also examined the official corporate profiles of TV channels available on the massive Facebook and Twitter networks. We should add that 46.7% of Spaniards accessing the Internet used social networks in the past six months and, out of these, 91.5% use Facebook regularly and 18.3% use Twitter (CIS 2016). The relevance of these profile types, as opposed to theme accounts, lies in the fact that publications gather information on all media programs and channels, creating a reference framework and a method of public communication with users.

Data collection and processing

The methodological implementation of this study is based, firstly, on a content analysis of mobile apps to classify the target audience based on the interaction and participation options offered to the user. Audiences are classified according to the classification of users added and defined by Syvertsen (2004), Siapera (2004), Meijer (2005) and García Avilés (2012) as detailed in the previous section. Even though one user can be classified into several profiles, our analysis selects only one, considering first the primary target audience of the corporate mobile app according to the content offered and, secondly, the features offered by the app to users (e.g. use of VOD, participation in contests, communication with the media and other users, etc.).

At that point, corporation social and mobile audience data are captured and compared. Captures were made between 4th and 10th April 2016 from the website MOBBO to ensure its validity. MOBBO belongs to a company specialised in data processing and business solutions, Big Data Technologies Ltd, whose aim is to show updated data on age, gender, the user's access device, downloads traffic and app ratings to developers and managers of mobile environment companies.

Social audience data have been extracted from the Fanpage Karma web portal for the period between 13th March and 13th April 2016. Fanpage Karma is a start-up or emerging company offering social network services to media (such as the German TV *RTL* or the newspaper *Frankfurter Allgemeine*). The company has generated Key Performance Indicators (KPI) reporting on user behaviours with specific profiles and/or posts. Using KPIs to measure the level of systematic achievement of complex objectives is common in the field of social sciences, as demonstrated by authors such as Fernández-Cavia et al. (2014). This study used two KPIs to measure the users' level of interactivity with the posts from the corporate Facebook and Twitter profiles of Catalan TV channels. The elements and the calculation of each one of them are summarised below:

- Facebook post interaction, calculated as an average of all interactions where the Likes, Share and Comments are added per follower or post.
- Interaction with Twitter posts or tweet interaction, calculated by dividing the total number of reactions (tweets, retweets and favourites) by the total number of comments posted by the profile of each TV channel and finally by each follower.

Comparative data for Catalan linear audiences were obtained from Kantar Media (a company authorised and audited in Spain to provide this measurement service) via the Gabinete de Estudios de Comunicación Audiovisual (GECA). Specifically, information was collected for the study comparisons during March 2016 on the TV audience profile in Catalonia with regards to the gender and age variables.

Results

Mobile apps. User profile and space configuration

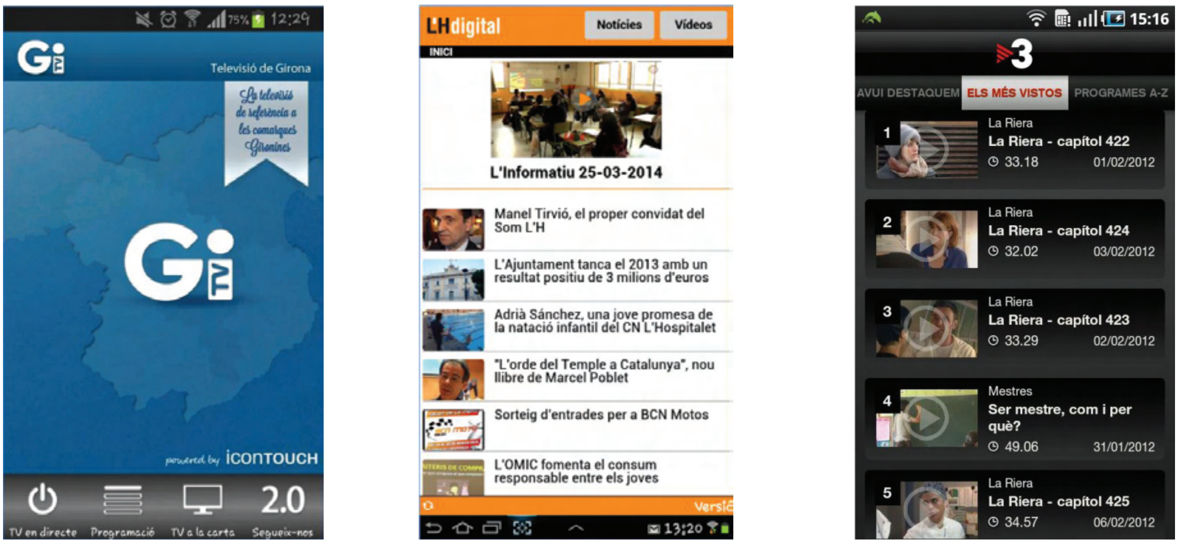
Only 10 TV channels out of 53 were found to have their own app. In addition, it would be necessary to add the app developed by the Audiovisual Local Network (xip/tv), which provides access to content from all local TV channels affiliated to the network. As the following images show, the mobile app settings and features they offer users are intended for a passive audience of a consumer nature. Opportunities to participate with the contents or with the media are virtually non-existent, except for the TV3 audience assistance section or links to the social networks of Girona Televisió or Mola TV.

The images confirm that they are container-apps designed as an extension of TV broadcasters' VOD services. None of the mobile spaces analysed show tools for interactivity. In all of them there are options to share content on social networks, but it is not possible to find features associated with a greater participation, such as communication with other users, the creation of a community or content sync.

Moreover, looking at the information on downloads in the Android system (see Table 2) it is possible to observe how the TV3 app is the most downloaded (according to Mobbo, more than 500,000 have been registered), followed by that of 8tv (with over 50,000 downloads). Among the local TV apps, BTV stands out (over 5,000 downloads). Conversely, HDigital, TV de Vilafranca and Teleb apps registered less than 1,000 downloads each. It should be noted, again, that we refer to corporate apps, not to apps of specific programmes that belong to any of these TV channels.

The information provided by Mobbo indicates that the age of the people who downloaded corporate apps from Catalan TV channels through the Android system stands, on average, in the range of 25 to 34 years old and this includes approximately 30% of the downloads. The age brackets of 18 to 24 years old and 35 to 44 years old represent around 25% of the downloads each, while the remaining age groups (excluding underage youths, as there are no data available for them) show much lower download levels (gradually lower as the age gets higher) (see graph 1) Regarding the gender profile, almost two-thirds of downloads were carried out by men.

Image 1. Fom left to right, app of Televisió de Girona, L'Hospitalet TV and TV3



Source: personal compilation from the apps.

Table 2. Downloads of mobile apps of TV channels in Catalonia (Android systems)

TV Broadcaster	Downloads
TV3	> 500,000
8tv	> 50,000
BTV	> 5,000
xip/tv	> 1,000
TV Girona	> 1,000
VOTV	> 1,000
Televisió de Vandellòs	> 1,000
Mola TV	> 1,000
L'HDigital	> 500
RTV Vilafranca	> 500
Teleb	> 50

Source: Personal compilation based on MOBBO data.

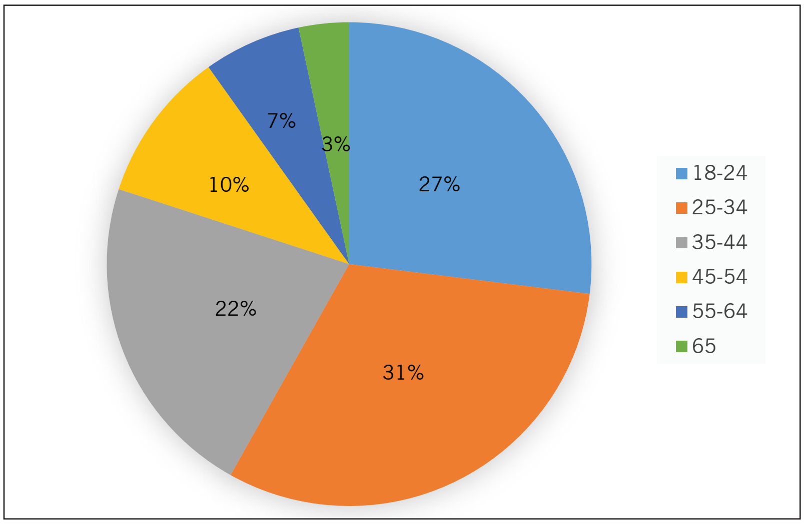
If we compare the data related to the profile of the audience downloading apps from TV broadcasters with the profile of the audience for conventional TV broadcasters in Catalonia, it becomes clear that there are significant differences. According to Kantar Media data, in March 2016, viewers between 13 and 44 years old accounted for just 29.3% of the TV audience in Catalonia, compared to the 65.7% of viewers exceeding that age. With regards to gender, 53.3% of the viewers were women. Therefore, this profile is actually the opposite of that for viewers downloading apps from the TV channel. In addition, considering the two stations with data available on the specific profile of their audience (TV3 and 8tv) it can be observed that the ageing of their viewers is even greater, with almost 50% of their audience over 64 years old in both cases during March 2016; while the presence of the female audience is also greater than that of TV as a whole (over 55%) (Data from GECA-Kantar Media). However, according to Mobbo, the age profile of people downloading apps from these stations corresponds, by more than 60%, to men under 45 years old. Thus, and despite the precautions necessary to compare data from very different sources and collection techniques, it seems evident that there is a clear opposition between the type of people mostly watching TV using the conventional means and people downloading apps from TV stations (consequently, it can be assumed that they will be more likely to consume TV in this way).

Finally, with regards to the ratings made by users of the apps analysed, it should be noted that they were very good in general. Thus, most of the ratings stood between 4 and 5 (on a scale of 1 to 5) for all apps, with only one exception: 8tv app, rated at 1 by 41% of the users. The best rated apps were those of TV Girona (70.6% of the users rated it 5) VOTV (66.7% of the users rated it 5) and xip/tv (60% of the users rated it 5) (see graph 2). However, it should also be taken into consideration that it is expected that the most downloaded apps, such as that of TV3, have a lower rating in comparative terms, as the fact of having a wider audience obviously causes higher criteria differences in the ratings. In this sense, the poor rating of 8tv is surprising.

Social audience. Community interaction and features

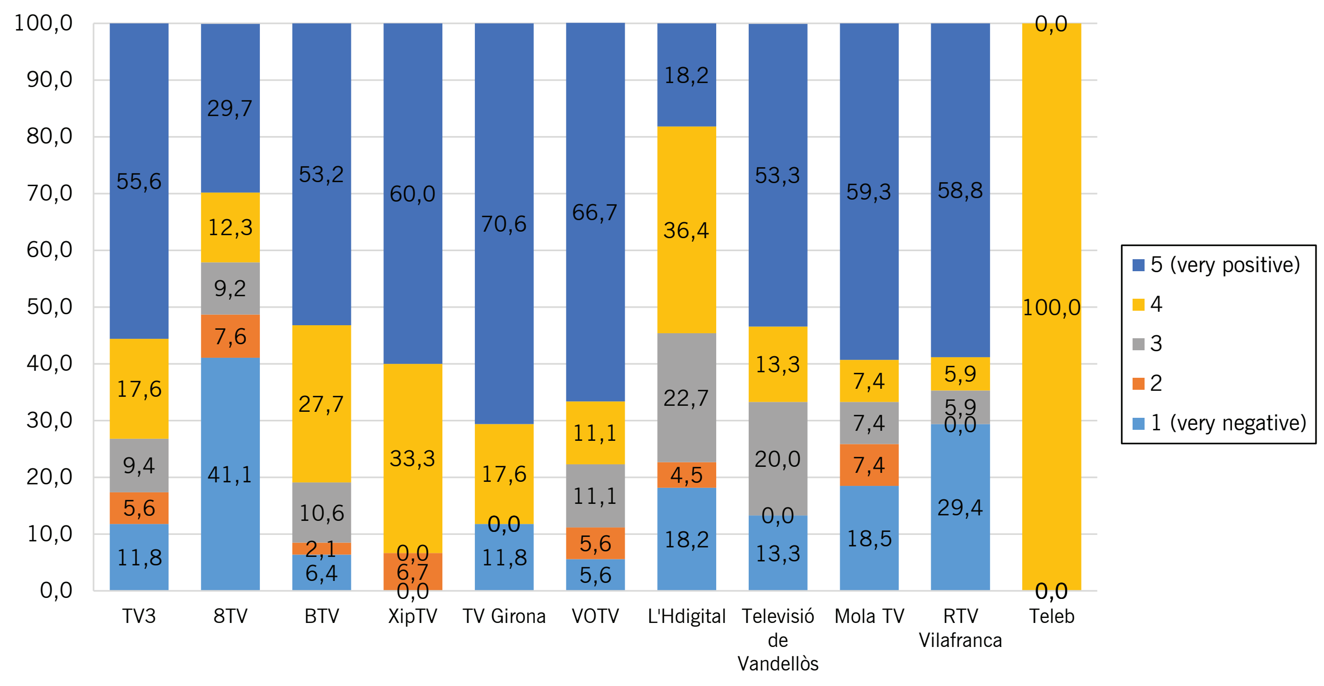
The presence of the analysed TV broadcasters in social networks stands at 86% on Facebook and 90% on Twitter. If we take the number of followers of each corporate profile as a factor of audience measurement, we find out that most TV channels do not have more than 500 followers on Twitter (17%) and between 1000 and 1500 on Facebook (25%). These figures can be considered low when compared to the potential audience (population) in the area where TV channels broadcast. For example, 25 Televisió (25TV),

Graph 1. Age profile of people who download mobile apps from Catalan TV broadcasters (Android systems)



Source: Personal compilation based on MOBBO data for March 2016.

Graph 2. Rating of mobile apps of television channels in Catalonia, using a scale of 1 to 5 (Android systems)



Source: Personal compilation based on MOBBO data for March 2016.

which broadcasts in the region of Barcelonés, only has 108 followers on Twitter.

In any case, the results for TV channels with the highest number of followers show the same trend in relation to the population: TV3 profiles on Facebook and Twitter have 412,000 and 325,000 followers respectively. These are low figures considering that the potential audience of the station is the whole Catalan population. These results are generalised in the whole sample and that is why we can state that there are significant deviations between the social audience and the potential audience of the TV channels analysed.

The behaviour of these social audiences or network communities also shows significant differences between the profiles, both on Facebook and Twitter. It is important to clarify that the aim is not to rate the ways and quality of these communities' involvement, but their level of engagement with the station, which they demonstrate by means of a greater or lower interaction level with their posts. For this rating we applied the Fanpage Karma formulae mentioned previously.

The social audience of Facebook profiles has a low level of interaction. Thus, TV channels as a whole accumulated an average of 0.33% interactions. In short, this means that the interaction of all followers with the total posts does not reach 1%. In detail, VATV and Canal Camp are the stations with the best ratings, registering 2.3% and 1.79% respectively. This contrasts with the results of El Prat Televisió, Vallès Visió, 25TV, Molins de Rei Televisió, Canal Taronja Catalunya Central and Televisió de Girona, which have a null or 0% equivalent interaction. The following table shows the number of followers and the rate of interaction with TV posts.

Table 3 allows us to reach the conclusion that the number of followers is not indicative of a more active community. In this sense, it seems logical that TV channels with larger communities enjoy lower interaction, as one is more likely to find an occasional user profile. In this regard, TV3 is proof that despite having a large community with 423,505 users, a situation close to a null interactivity can occur, with a rate of 0.05%. This situation is also observed in BTV (10,674 followers) and in the private channel 8tv (7,653 followers) with an interaction of 0.1% in both cases.

As for the interactivity rates of Twitter users, it should be noted that they are similar to those of Facebook, that is, in this case the relationship between the number of followers, the potential audience and the interaction rate is not proportional. We can find cases such as Mollerussa TV (@mollerussatv, 0.57%) or RTV Cardedeu (@rtvcardedeu, 0.09%), which have greater interactivity compared to others with a larger potential audience and greater number of followers, as in the case of 8tv (@ 8tvcat, 0.03%) or TV3 (@tv3cat, 0%).

Finally, in order to look at the differences between the interactivity levels of both social networks, we prepared a combined graph that brings together the interactivity rate of Facebook (ITFB) and Twitter (ITTW), adding the variation bars. This allows us to clearly see the gap between the communities' activity on each network.

Table 3. Followers' rates of interaction with posts depending on the number of followers and the corporate profile on Facebook

Corporate profile	Followers	Rate of interaction
Vídeo Ascó Televisió	613	2.3%
Canal Camp	508	1.79%
Mollerussa Televisió	1,414	1.45%
Tàrrega Televisió	1,889	1.25%
RTV10-Ràdio i Televisió de Sant Esteve Sesrovires	563	1.25%
Aran TV	468	0.92%
Balaguer Televisió	4,504	0.64%
molatv	2,018	0.53%
TV Sant Cugat	508	0.48%
Etv	1,210	0.47%
EL9TV	698	0.3%
Canal 21 Ebre	1,769	0.29%
M1tv	2,508	0.27%
Televisió del Ripollès	1,532	0.27%
Canal Terres de l'Ebre	5,991	0.26%
Televisió Cardedeu	1,687	0.24%
Canal Taronja Anoia	1,238	0.23%
Ràdio Hospitalet Tv-Vandellòs	3,112	0.2%
Olot Televisió	4,866	0.2%
Canal 10 Empordà	1,128	0.17%
VOTV	3,762	0.16%
LHdigital L'Hospitalet	3,809	0.16%
LleidaTV	3,363	0.14%
TAC 12	3,224	0.14%
Banyoles Televisió	1,442	0.13%
Gavà Televisió	5,221	0.12%
Rtv El Vendrell	5,072	0.12%
Canal Terrassa	5,312	0.11%
Televisió del Berguedà	5,936	0.11%
El Punt Avui TV	3,080	0.1%
BTV	10,674	0.1%
8tv	7,653	0.1%
Televisió Costa Brava	5,811	0.09%
Canal Reus Televisió	7,476	0.09%
Despí TV	1,166	0.09%
Empordà Televisió	6,734	0.06%
RTV Vilafranca	2,510	0.06%
TV3	423,505	0.05%
Canal Blau	5,150	0.02%
Pirineus TV	1,363	0.02%
Vallès Visió	1,848	0.0%
25tv	115	0.0%
Molins TV - Molins de Rei Televisió	1,130	0.0%
Canal Taronja Catalunya Central	277	0.0%
Televisió de Girona	972	0.0%
El Prat TV	2,324	0.0%

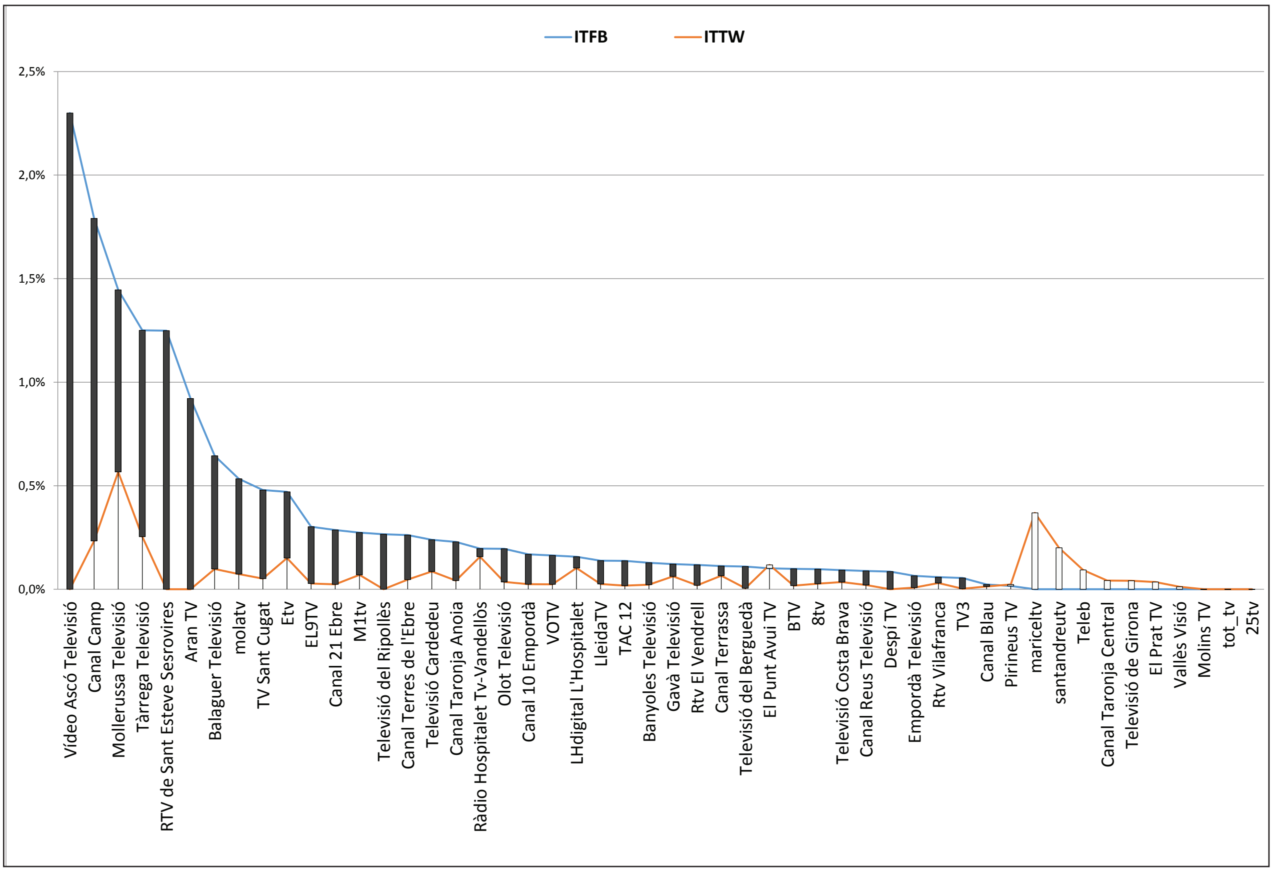
Source: Personal compilation based on Fanpage Karma data.

Taula 4. Índex d'interacció dels seguidors amb les publicacions en funció del nombre de seguidors i el perfil corporatiu a Twitter

Corporate profile (@)	Followers	Rate of interaction
mollerussatv	309	0.57%
mariceltv	1,206	0.37%
tarregatv	925	0.25%
canalcamp	370	0.23%
santandreutv	798	0.2%
tvvandellos	250	0.16%
etvllobregat	1,490	0.15%
elpuntavuitv	6,710	0.12%
lhdigitalh	3,968	0.1%
taronjaanoia	1,667	0.1%
balaguertv	2,089	0.1%
bdncom	4,223	0.09%
rtvcardedeu	1,475	0.09%
molatv	2,923	0.07%
_m1tv	4,930	0.07%
canalterrassa	6,110	0.07%
gavatv	917	0.06%
tvsantcugat	2,316	0.05%
canalte	3,630	0.05%
canaltaronja	1,497	0.04%
tvgirona	6,104	0.04%
olotelevisio	4,700	0.04%
tvcostabrava	3,140	0.04%
elprat_tv	2,210	0.03%
rtvvilafranca	4,976	0.03%
el9tv	6,060	0.03%
8tvcat	11,283	0.03%
lleidatv	6796	0.03%
canal10emporda	1,130	0.02%
canal21ebre	3,262	0.02%
vorientaltv	6,724	0.02%
pirineustv	3,158	0.02%
banyolestv	866	0.02%
canalreus	5,263	0.02%
rtvev	4,478	0.02%
btvcat	10,605	0.02%
tac12_tv	6,604	0.02%
canalblau	5,702	0.01%
vallesvisio	4,446	0.01%
tvemporda	3,377	0.01%
tvbergueda	2,297	0.01%
tv3cat	339,430	0.0%
molinstv00	298	0.0%
25televivisio	113	0.0%
tot_tv	466	0.0%
videoascotv	20	0.0%

Source: Personal compilation based on Fanpage Karma data.

Graph 3. Comparison between the user rate of interaction with corporate profiles on Facebook and Twitter



Source: Personal compilation based on Fanpage Karma data.

Graph 3 also confirms that there are significant differences between the communities of users of the same television channel, depending on the social network. The gap between Facebook and Twitter indices with TV channels such as VATV, Canal Camp, Mollerussa TV or Tàrrega TV reaches 2 percentage points. There are also cases such as that of TV3 and 8tv, where the difference is below 0.5 points, so communities have a similar interaction on both networks. In any case, the graph confirms that the user communities of corporate profiles of Catalan TV channels are, in general, more active on Facebook than on Twitter, although there are some exceptions such as the cases of Televisió de Girona or Canal Taronja Central.

Conclusion and discussion

This study allowed us to diagnose social and mobile audiences of the Catalan TV system. It is, together with the studies made by OPA (in 2016) or Navarro et al. (2012), one of the first analyses of the relationship between the Catalan TV system, social TV and the profile and behaviour of users. For this reason, throughout this discussion we suggest starting points for further studies that could expand our results.

Data on the mobile environment show that a minority of TV broadcasters in Catalonia have their own corporate application, and those having one register fairly low levels of downloads. The cause could be related to a lack of strategies to develop more interactive products in the mobile environment, which results in the audience not finding a complementary and differentiated product in the apps (Galindo, Fernández and Alameda 2014). In any case, the ratings given by users to the apps are very good in general. This indicates that users are satisfied with the service offered by TV stations through their apps and that, consequently, having apps is beneficial for the media image.

We also observed how the profile of the audience downloading corporate mobile apps from TV channels and the profile of conventional TV audience differs significantly. In this regard, the potential implications related to the disparity of interests and needs of television viewers who access the content by each of this ways should be taken into account (Navarro et al. 2012), a matter that would be good for TV channels to consider. However, while this profile disparity can be used to find a possible explanation for the low adaptation of the TV channels analysed to the social television model, having an audience with a profile unlikely to download mobile apps or participate in social networks, we may assume that broadcasters are not interested in making great efforts to develop such tools. However, it should be taken into account that commitment to innovation and adaptation to audience needs is profitable in the medium and long term, as it is also evident when looking at the good ratings received by those who have done so, as already explained above.

Data obtained from social audience analysis show low interactivity levels in both networks. This confirms that, regardless of the network, TV channels do not get a high commitment from the audience. In addition, the comparison of Facebook and Twitter communities opens the door to new questions about the subject of a greater interactivity in the first social network because, even though the characteristics of each network are essentially different in relation to their uses, this does not explain why, for the same TV channel profile, there is a difference of over 2 percentage points in the interactivity of its communities. In any case, a possible explanation for this widespread low interactivity could be related to the use that radios and TV channels make respectively, as studies by Sellas (2013) and Bonini and Sellas (2014) confirm. Thus, publications often have the primary objective of becoming an information reference framework for users, instead of being seen as an invitation to participate by commenting or sharing content. TV channels post content in their profiles without a strategy defined to generate interactivity and therefore communities are passive recipients of this production. On the other hand, the causes may be related to low on-line participation, a feature typical of Spanish and Catalan audiences versus other audiences such as those of the UK (Anstead and O'Loughlin 2011; Gómez-Domínguez et al. 2016).

With regards to more structural issues, we believe that beyond the TV broadcaster size, structure and budget, or the existence of specific innovation departments (Bonet et al. 2013), the Catalan TV system does not overcome interactivity barriers, which are also due to environmental factors. The social TV market in Spain is still in an early stage where broadcasters are assessing the risk of developing products for a traditional and apparently not very active audience (Franquet, Villa and Bergillos 2011). For this reason, we think that the role the CCMA, and specifically TV3, can play is essential when promoting a social TV market that becomes a reference for the whole Catalan TV system. Nonetheless, this does not mean that the role of local TV channels is not equally crucial. In this sense, new dissemination tools, cheaper mobile creation services and the fact that other services to manage and monitor social networks are free, are factors that can help them to avoid standing aside in a process of inevitable convergence.

This article also shows the need for new researches that expand on second screen apps and on social network profiles for the programmes, beyond the corporate profile. Even though the second-screen TV apps market in Catalonia and Spain shows little development, demographic data on their audience compared to corporate apps could help determine the suitability of further investment or production by the media in this market. In terms of social networks, information on the levels of interactivity of communities related to specific programmes may offer a useful comparison that would enable the contemplation of the development of differentiated strategies for corporate profiles and for programme profiles. Finally, in future studies it would be interesting to consider a mixed methodological app that takes advantage of quantitative treatment with an analysis of opinions from community networks to obtain a comprehensive view of the digital communication environment of TV channels in Catalonia.

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