Content and interactivity of the mobile apps launched by Spanish television channels

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Abstract
Introduction. As a result of the changes that have taken place in the media landscape, it is necessary for traditional media to be present in the new platforms and in this sense, the use of mobile applications is key for their adaption to the new forms of audiovisual consumption. **Methods.** This study involves the review of the main research works related to our object of study and the quantitative content analysis of the IOS and Android smartphone applications launched by Spanish mainstream television corporations and channels. **Results and conclusions.** The analysis indicates that all Spanish television corporations are betting on the integration of interactive content in their smartphone apps because they are aware that this type of content is fundamental to engage with users.

Keywords
Television; mobile applications; audiovisual content; interactivity; smartphone.

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1. Introduction
1.1. The value of mobile communication

Mobile communication has become the paradigm of a new stage in the way of consuming audiovisual information and entertainment content. Mobile telephony and the Internet are the main elements of the digital age in which we are immersed, causing changes that affect the social, economic and cultural development of our societies (Igarza, 2009). Our every-day activities cannot longer be conceived without the use of mobile devices, in the workplace,in personal relationships and leisure activities, to such an extent that it is probably the most important technological device for humans in the current age (Márquez, 2015). Mobile phones are part of the identifying features individuals; they are almost part of people's personality and appearance, and their morphology and useare related to the way we see ourselves and the way we want to be perceived.

Sectorial and specialised reports that periodically analyse the evolution of the market reflect the relentless penetration of smartphones, which emerged in 3 April, 1973. That day, the director of Motorola, Martin Cooper, made a call from New York to his competitor from AT&T, Joel Engel. Almost thirty years later, in 2004, a film produced in Bollywood, *Rok Sako To Rok Lo*, was screened via mobile phones for the first time in several Indian cities.

As Jenkins (2008) points out, the mobile phone is one of the icons of the media convergence because they easily concentrate the ability to receive and produce all kinds of contents. Nobody uses these devices only for making calls. It has become an instrument for integrated audiovisual and written communication. The evolution of the smartphone has accelerated in the last ten years and in this process its production costs and retail prices have been reduced while its performance has improved exponentially. People now have access to audiovisual and multimedia devices with Internet access, which serve as small computers, with an average size of 5 inches (Márquez, 2015). The transformation of the mobile phone has affected the way we name it: we no longer talk about mobile phones but smartphones, which has altered the role of the user: the receiver is also producer, can create content and make it immediately available to others by means of mobile applications, also known as apps (Cebrián Herreros & Flores Vivar, 2011).

As mentioned, the results of the analysis of the market and consumer behaviour are revealing. The Mobile 2015 reports by Ditrendia and the VII Annual Study of Mobile Marketing, carried out by the IAB, indicate that Spain is a leader in the use of smartphones: 87% of all mobile lines in the country are smartphones, and 85% of their owners use them to access the Internet.

The average daily time dedicated by people to surf the Web via smartphone in 2015 was 3 hours and 23 minutes, while in 2014 the average was 2 hours and 32 minutes. The most common uses given to smartphones are social-chat, social networking, email- and ludic, which include the consumption of audiovisual contents.

Deloitte, in its predictions about the telecommunications market, expected the sale of 1000,000,000 smartphones in 2015, with a turnover of more than 300,000 million dollars (Predicciones de Tecnología, Medios de Comunicación y Telecomunicaciones, 2015: 50). In other words, as Scolari, Aguado and Feijoo have pointed out, mobile devices "in addition to being a channel for the

ubiquitous consumption of audiovisual content, are one of the most powerful interactive platforms in the current media ecosystem" (2013: 87).

The integration of 3G and 4G technologies in mobile communications have turned smartphones into small-screen terminals that accompany people at all times and facilitate access to contents. The manufacturers of these devices have responded to the demand with a progressive increase in the size of the screens, while content distribution platforms, particularly television stations, have shown an increase in content supply.

Content was initially accessed via the Internet, but apps have gradually gained ground as tools of mobile content reception and consumption. The effect of apps on the communications sector has been very strong, not only because they have facilitated and popularised content consumption but also because they have allowed the monetisation of content through micropayments.

The production, distribution and consumption of audiovisual content has experienced a permanent transformation in the last decade in which technological developments have opened up new consumption possibilities for users, who in turn have changedtheir traditional role in the content exploitation chain, and can act now as promoters of the products they consume. Importantly, the accelerated pace of change that users are experiencing does not seem to be stopping any time soon.

Since the computer screen ended the monopoly of the television screen as the source of domestic audiovisual entertainment, there have been a series of technological innovations that have affected the entire business chain and have caused profound transformations in the way in which audiovisual companies exploit their content, both in terms of distribution and reception, breaking the rigid structures that existed prior to the digital revolution (Vila Fumas & Fuentes Cortina, 548).

Audiovisual-content distribution companies are subjected to strong competition, which has been aggravated in recent years by the economic crisis. With this immediate panorama, mobile consumption appears as a window of opportunity. Commercial multiplatform exploitation and the new consumption habits have finally become the norm, although, as we have mentioned, we are immersed in an ongoing evolutionary process.

Television companies have become large libraries that offer their contents through different reception platforms: smart TV, computer, smartphone and tablet. This process has not advanced in the experimentation with new formats that are specific to mobile consumption since television channels fundamentally resort to the programming and formats of conventional broadcasting to feed their mobile offer, as Pérez Rufí and Gómez Pérez (2013: 183) have pointed out. However, in recent years, television companies have created content specifically to be consumed in mobile devices in order to reach a young target that cannot be reached through conventional devices (Formoso, 2015: 110).

With regards to access, we must consider that users carry out several tasks simultaneously not only in different devices, multi-device, but also use multiple sources of content in the same device, multi-window (Fernández-Planells & Figueras Maz, 2014). Empirical research has shown that's

martphones are mostly used to watch content that lasts less than 10 minutes (Televidente 2.0 2014: February, 2015).

The study *Televidente 2.0* has confirmed that the main reason for watching videos on smartphones is the freedom of access and immediacy these devices provide, i.e. the possibility of having the device always on hand. The study has also confirmed that video consumption occurs mostly outside home, followed by the moments in which television is not available, on holidays or weekends away from home.

The report by Telefónica, a Spanish broadband and telecommunications provider, on the Information Society in Spain (*Teléfonica Sociedad de la Información en España*) indicates that video consumption is ceasing to be an activity tied to a single device. The 2013 report indicates that payment platforms launched multi-device access services for paid-for contents (Movistar Go, Yomvi, ONO TV online). Meanwhile, the 2014 report confirmed that almost three of every four users (72%) of paid-for platforms consume content through various devices and use smartphones, personal computers, and tablets with almost the same frequency: 60.7%, 58.8% and 55.6%, respectively (p. 6).

With regards to the possibilities of interaction, it has been confirmed that the receiver remains fundamentally a passive person. Users are not audiovisual prosumers who are given opportunities to disseminate their creations related to the programmes they consume. They are considered to be users of a pre-established offer, but the platform is not made available to them to distribute their creations.

Finally, smartphones have facilitated the development of the so-called social television, especially through second screen applications, which enhance interactivity during the broadcasting of content, and the use of social networks, as a tool to build communities of followers who share content and make comments. Interactivity is, ultimately, a currently process in which the producer dominates over the consumer.

1.2. Theoretical framework

The research community has tried to identify the reasons for the success of mobile telephony even before their confluence with audiovisual content. As Igarza points out, "the mobile phone, always at reach, is the one device that best fits the interstices of daily life, these temporary limited leisure spaces in which fruition requires brevity" (2009: 127).

This is the first explanation of the constant penetration of mobile telephony as a channel to gain access to the Internet and audiovisual products, whose morphology is influenced by the brevity of consumption, the size of the device and the environmental conditions in which the reception occurs. This type of device has become a basic tool of communication and consumption for the so-called digital natives, who perceive it as a personal screen (Navarro Güere, García Jiménez & Roel, 2013: 289).

Studies on mobile communication gainrelevance as this type of access to content becomes consolidated among users of all social and cultural levels. The areas of interest have been the economy, with a special orientation towards business models, and the actors involved in the mobile phone market (Costa-Sánchez, Díaz González & Videla-Rodríguez, 2012; Ortega, González Ispierto & Pérez Peláez, 2015).

As mentioned, the last ten years have experienced an acceleration in technological innovations in mobile telephony. This has resulted in the corresponding interest to examine their relationship with the dissemination of news content and, in general terms, with social communication. A review of the latest research studies allows us to establish four work areas in this regard:

Mobile devices as a new medium of communication, and as a theory of mobile communication, are still in "construction phase". According to Scolari *et al.* (2009), these authors, "from the perspective of communication studies, mobile devices can be considered the *new* new media, with all the consequences that derive from this, be they theoretical (because of the reformulation of the classical models of communication that it entails), epistemological (because of the new social uses they generate open up new areas of research) or methodological(because their empirical observation requires designing new research procedures)" (p. 181).

Uses and gratifications theory: user preferences towards technological ergonomics, distribution dynamics, economic value of the service, and consumption patterns and scenarios (Méndiz, De Aguilera and Borges, 2011).

From a market perspective focused on the productive actors, both in its offer of contents and services and their perception of the trends, problems and characteristics of mobile communication.

Cultural industries. Impact of mobile communication on cultural industries, with special attention to the music and publishing industries (Vacas Aguilar: 2010). The first profound transformation has been "the privatisation of the cultural consumption that occurred with the appearance of the first devices intended for leisure in households" (Vacas Aguilar, 2010: 73), and in that context, in the first decade of the 21[st]century the media, whose offer and distribution system was dominant in the 20th century, gave way to a system of fundamentally individual consumption and distribution.

New business models. Analysis of the business models that have been developed in mobile communications. Mobile device operators and manufacturers are committed to a model of applications or apps, an extension of the "walled garden" model, according to Cerezo (2010). This model contrasts with the open navigation model, in which the user has direct access through URLs and search engines.

Meta-research in communication sciences. Notably, the article by Qiu, Jack Linchuan (2010), who carries out a thematic review of research on mobile communication in Asia and by Asian researchers in other countries since the mid-90s. "This article is designed to be first an overview, before more systematic discussions are provided on selected themes of research. The purpose is to piece together the big picture and raise key questions about the development trends" (Qiu, 2010: 214).

With regards to research and projects at universities, Spanish universities are developing several lines whose point of departure is the overall concept of mobile communication and its development in different devices. In Galician universities, the Interactive Culture and Communication Group of the University of A Coruña has applied the global concept of interactivity specifically to mobile communication, although this has not been the only object of research in this field: other research works have addressed audiovisual and journalistic mobile contents. In this sense, we can include the works on the smartphone platform (Costa-Sánchez, 2014 and 2013), the IOS environment (Sanjuán *et al.*, 2013), radio apps for smartphones (Videla-Rodríguez & Piñeiro-Otero, 2013; Piñeiro-Otero, 2014 and 2015) and television apps (García-Torre, 2014).

The University of Murcia funded the eCOM group, which has worked on research projects on the implications of mobile telephony in Spanish society from a cultural, social and technological point of view (Aguado & Martinez, 2006 and 2008). The Digital Interactions research group of the University of Vic examines the mobile telephony from several points of view. Cobo Romaní and Pardo Kuklinski (2007) have played a crucial role in the dissemination of this line of research with the publication of *Planeta Web 2.0: Inteligencia colectiva o medios fast food* ("Collective intelligence or fast-food media").

At the European level, it is worth noting the different research lines and centres. Firstly, the works of Oscar Westlund on the new paradigm of mobile communication and its implications for journalism. His doctoral thesis, titled "Cross-media News Work - Sensemaking of the Mobile Media (R)evolution" (2011), is a key reference in this field of research.

Labcom of the Universidade da Beira Interior (Covilhã) also occupies an outstanding role in research on mobile communication. Studies led by Professor Joao Canavilhas have paid special attention to the IOS environment and platforms (Canavilhas, 2009; Fidalgo & Canavilhas, 2009; Canavilhas & Santana, 2011; Canavilhas, 2012; Fidalgo, Serrano Tellería, Carvalheiro, Canavilhas & Correia, 2013).

In the North of Europe, it is worth mentioning that the VTT Technical Research Centre of Finland is a pioneer in the study of mobile platforms as a tool for communication. In Sweden, the Mobile Life Research Centre (http://www.mobilelifecentre.org/publications) has specialised since 2007 in the studyof interactivity, apps and new mobile devices.

Outside the European continent, stands out the research led by Professor Gerard Goggin (from the University of Sydney), who is a pioneer in mobile communication and media studies. He is also the editor of the Studies in Mobile Communication series (Oxford University Press, with Rich Ling), and a member of the editorial team of Mobile Media and Communication (Sage).

In the United States, the Center for Mobile Communication Studies (founded in 2004 in Rutgers University), directed by James E. Katz, analyses the consequences of the social, psychological and organisational revolution of mobile communications.

In Brazil, the School of Communication of the Federal University of Bahia has developed the Convergent Journalism Lab Project, which has carried out research on the new mobile journalism paradigm (Barbosa & Seixas, 2013).

1.3. Objectives

This paper explores the evolution of the contents of the mobile applications launched by mainstream television operators. It continues and complements the objectives of the Interactive Culture and Communication research group of the University of A Coruña on the mobile news content offered by Spanish television channels.

The general objective of this work is to characterise the contents of the smartphone apps developed by the national TV operators in Spain (RTVE, Atresmedia and Mediaset).

The two main objectives are:

Firstly, to determine whether the contents of these apps are appropriate for the mobile device or are limited to the dissemination of programming broadcast on the TV channels of the national operators. Secondly, to establish whether the interactive possibilities of smartphones are exploited and, thus, to determine whether the user is treated as a content-generator or as a mere content-receiver.

The secondary objectives are to examine the resources used in the devices by the aforementioned operators and to identify differences across the IOS and Android operating systems. Another secondary objective is to evaluate the innovation and evolution of the mobile audiovisual content developed by the TV operators under analysis.

2. Methods
2.1. Methodological strategies

To achieve the aforementioned research objectives, we firstly carried out a review of the major studies on the evolution of television in recent years, in order to provide a contextual framework needed to delve into this topic. Secondly, we subjected the content of mobile applications to quantitative analysis in order to identify their main trends and obtain statistically reliable and comparable results (Van Maanen, 1982).

2.2. Sample

The sample is composed of the apps with interactive content that have been launched by the national public and private television networks in Spain. To be precise, we only examined the TV apps available for smartphones with Android and IOS operating systems. The following table presents the mobile apps included in the sample:

Table 1. Sample of mobile apps

National public and private TV networks	Apps for IOS smartphones	Apps for Android smartphone
-RTVE	-RTVE -+TVE	-RTVE -+TVE
-Atresmedia	-Atresplayer -Atresmedia conecta	-Atresplayer -Atresmedia conecta
-Mediaset	-MiTele	-MiTele

Source: Authors' own creation.

The sample focuses on the apps developed for the Android and IOS operating systems because they dominate the market of mobile telephony, reaching together 98.5% of the smartphone market in Spain: Android 86.3 and IOS 12.2%.**[1]**

2.3. Data collection instruments

The following table presents the variables taken into account for the analysis. As we can see, the main variables are content and interactivity.

Table 2.Variables considered for the analysis of content and interactivity

TYPE OF APP	Corporate
	Channel
AIM OF THE APP	Content distribution
	Interactivity
CONTENT	Sections of the overall offer of the app:
	Entertainment
	• Featured categories
	• Most viewed content
	• Alphabetically-ordered content
	• Recommended content
	Advertising
	• Video

	• Expandable, integrated and floating banners
	• Floating windows
	Video library (previously published content. Yes/No small/large)
	• Episodes
	• Programmes
	Extra content
	• Complementary information
	• Clips
	• Extras
	• Second screen
	• Surveys
	In-house productions
	Bought-in productions
	Live
INTERACTIVITY	Connection to social networks
	User-generated content
	Sharing of content
	Live interaction
	User participation (voting, comments, communities of followers, etc.)

Source: Authors' own creation.

The first item aims to classify apps into "Corporate" or "Channel", i.e., into apps that offer contents of the different channels of a TV corporation or and apps that only offer the contents of a specific TV channel. The following variable, aim of the app, seeks to differentiate apps according to their main attraction or purpose, into "content distribution" and "user interactivity", i.e. into platforms that offer content for consumption or a platform for users to interact with the content that is broadcast live.

The analysis involves the in-depth examination of the content library and interaction possibilities on offer. With regards to content, we begin by identifying the main content sections of the app, then focus on the structure of the entertainment section, verifying the existence of the categories featured content, most-viewed content, alphabetically-ordered content, and recommended content.

In order to complement the examination of the content catalogue, the analysis then moves to verify the existence of advertising in its different formats (video, banner, floating windows, etc.), video

libraries(of previously broadcast content), extra content (such as clips, interviews) and live content. In addition, the analysis involves the examination the content in terms of their origin (in-house or bought-in productions).

With regards to interactivity, we investigate the presence of tools that enable user participation. The first item refers to the existence of tools that allow interaction with social networks without leaving the TV app. We also check whether the app gives users tools to send in content such as photos or video to the medium, to share content via email or social networks, to interact live, or to watch content live as it is broadcast. The last section of the table analyses the presence of tools that allow users to vote, make comments or be part of communities of followers.

The analysis of the apps was carried out in February 2016.

3.Results

3.1. RTVE

RTVE has a double offer on mobile devices. It offers two apps: *RTVE.es* and *+TVE*. The fundamental difference is that the second is intended to facilitate the exchange of content and conversation through social networks. These two apps are available for Android and IOS devices and their interface and content is the same across these two operating systems.

RTVE.es is a corporate app, i.e. hosts the mobile offer of all the brands and channels of the corporation. Its purpose is the dissemination of a wide selection of content, with interactivity tools, but it is much less developed than the previous app. The app has the following general structure: "News", "Sports", "International", "Culture", "Spain", "Economy", "Science" and "Technology". It also offers access to the different TV channels.

TVE a la Carta ("TVE on Demand") is the app that offers the audio-visual content of the media group as a whole. There is a first division to guide users, 'Categories' and 'Channels', before the presentation of the different sections: "Featured content", "Most popular" and "Now on RTVE".

Regarding the main object of this analysis, the audiovisual entertainment offer, the TVE section is sub-divided in the following categories: "Series", "Movies", "Documentaries", "Magazine shows", "Travel", "Science and technology", "Culture", "Education" and "Contests". Each of the entertainment categories is subdivided into: "Latest", "Live" and "All" (which includes programmes no longer on air).

The library of content available to users is wide, and includes episodes and programmes. Meanwhile, the extra content section features supplementary information of the programmes and links to the website of the show when it exists, clips of the programmes and contents of all types. All contents are in-house productions and there is no Live content section.

Interactivity is limited, but there are tools to share content on Facebook, Twitter, WhatsApp and via email.

+TVE is an app specifically oriented to enable user interactivity and participation. It is designed to be used at the same time users watch television. It is a TV channel app, only for the contents of the different TVE brands: *La 1, La 2* and *TDP*. The general content section is simple: 'Before', 'Now' and 'After', at the top, and "Latest" and "Popular" at the bottom. When users start a session a new tab appears to register their activity.

There contents offer is limited since the objective is for the user to interact with the most recent or live broadcasts. Complementary content is limited, but there are clips of the networks' own productions.

The social networks in which users can share clips of the programmes are Facebook, Twitter and Google+. The app also offers users the possibility to share comments in a section called "Comenta". This section is the only one that concentrates interactivity. Each programme section has a space for screenshots, comments, most popular content and programme-related videos sent in viewers, as well as links to the different social networks.

3.2. Atresmedia

With regards to Atresmedia, it has two mobile apps for smartphones: *Atresplayer* and *Atresmedia conecta*. Both are corporate apps since they show content or interactive options for the different channels of the media group. The purpose of *Atresplayer* is content, and the purpose of *Atresmedia conecta* is interactivity. The homepage of *Atresplayer* offer the following sections: "Enter", "Live" and "A-Z Search". In addition, it offers direct access to several programmes. The app has the following entertainment categories: "Series", "Programmes", "Soap operas", "Sketches", "Movies" and "More content".

Advertising is integrated in the form of video during the reproduction of content. In addition, advertising appears in some of the menu screens in the form of banners. The app offers a great variety and amount of on-demand content, including episodes and programmes. It should be noted that the app offers own and bought-in productions. Each programme's section offers extra content, like synopsis, special videos, interviews, making off, press conferences and virtual meetings. Live TV and radio broadcast are available in the app. In the case of television, the app offers the broadcast of *Antena 3, La Sexta, Nova* and *Neox*, but not 100% of their content due to copyrights limitations. In addition, live images of news events are offered at specific times. In the case of the radio, the app offers the live feeds of *Onda Cero* and *Europe FM*.

With regards to the interaction possibilities, users cannot send in content such as pictures or videos, but have the option of sharing content through Facebook and Twitter. In addition, the app gives access to the virtual community. Registered users can purchase content such as series previews and watch it from the web or straight from the *Atresplayer* app.

On the other hand, the *Atresmedia conecta* app is intended for users to interact with programmes and series during their live TV broadcast. It is a corporate app since it offers the possibility to interact with the contents of the different channels of the media group. The main page of the app offers the "Interactive programme" option, whenever interactive content is by broadcast at the time. Otherwise, the "Upcoming broadcast" option will appear. When users participate in this app, they can watch extra content such as videos or images, or participate in surveys, contests, and interactive rankings. In addition, there is also second-screen options, since users can interact in real time on Twitter and Facebook. Moreover, users can share content from the app through these two social networks.

3.3. Mediaset

Mediaset Spain has the *Mitele* app forIOS and Android. In both cases its design, content and interactivity is exactly the same. This application has a corporate character, i.e. it offers contents of programmes that are broadcast on *Telecinco* and *Cuatro*. However, the app does not offer content of programmes broadcast in other channels of the media group, such as *Boing, Energy, FDF* and *Divinity*.

The audiovisual offer of the main page of the app has a menu with the symbols and names of the sections:"Home", "A-Z", "Sections", "The latest""Most-viewed", "Live""GHVIP 24 hours" ("Big brother VIP") and the search engine. The content in the home page vary throughout the day and there does not seem to be strict planning in terms of the location of these contents, although reality shows (like the Spanish versions of *Big brother* and *Survivor*) are given more importance in terms of location. In addition to the programmes, there is a section called *Momentazos* ("Big moments")which features memorable clips from the TV programmes.

The sections are structured according to genre: "Series", "TV-movies", "Programmes", "Movies", "Sports", "News programmes", "Big brother" and "8TV". Advertising is not permanent or invasive in *Mitele*. During the broadcast of programmes with large audience a full-screen add appears for five seconds. The format used to sell advertising on this app is inter-site, i.e., as hort-lasting full-screen advertising space whose duration, varies according to user's loading time.

Mediaset offers on-demand content service of great variety since it has the rights of many national and international fiction TV productions broadcast over the past years. It offers classic in-house productions such as *Los Serrano* (8 seasons), and current and on-going productions such as *El Príncipe* (2 seasons) and bought-inproductions such as *Grey's Anatomy* (11 seasons). Regarding the entertainment content, it is important to point out that it is also possible to watch in-house productions such as *La Voz* ("The Voice") (3 seasons), although it is not always possible to watch previous seasons.

When users select a type of content they are presented with the most recently broadcast episode at the top of the screen along with the title. Complementary information is always available in the icon "+ info", which includes synopsis and protagonists. The same screen shows the seasons that are available to watch and links to access Facebook and Twitter.

Some programmes and series have extra content. For instance, *El Principe* has *Los mundos de El Príncipe* ("The Prince's worlds") and previews; *El chiringuito de Pepe* ("Pepe's snack bar")has "How it was made"; and *Aida* has "The best moments of Dani Martínez". This complementary content is most common in recent productions since operators have become aware of their profitability.

The Live broadcasts sections shows the channels that offer this option: *Telecinco, Cuatro*, *Gran HermanoVIP* (or the reality show of that moment), *Mitele Football*, *8tv* and *Premier Casino*. The broadcast is not permanent so the broadcasting hours are advertised. Some of these channels have no live feed but offer a repetitive feed of content.

In terms of the interactivity of the programmes available in the *Mitele* app, it allows users to share links and content on Facebook and Twitter directly, although they need to be registered in the app.

Mitele does not allow different levels of access to contents, i.e., the possibility of watching paid-for or subscription-based content. However, this is possible on the website, for example, with the film The Boy, which was available the day after it won a Goya ward.

In 2013, Mediaset offered the interactive app *MioT V*which allowed users to interact with the contents of the media group. In 2015, when this app was taken out, Mediaset integrated an interactive service on *Mitele* (*On*). However, *Mitele* currently does no offer the possibility of interaction during live broadcasts.

4. Conclusions

Based on the analysis proposed in this study we have drawn conclusions that offe ra global perspective of the way in which television operators are developing their range of mobile content. This analysis has also shown that there are significant differences between the public TV operator, RTVE, and the two private/commercial operators, Mediaset and Atresmedia.

The first conclusion is that the smartphone apps of the three media groups are the same across the IOS and Android operating systems. This is a strategic and business decision that also occurs in the case of tablets and that is part of the media economy and management procedures. However, this situation reveals that TV operators have not advanced in the adaptation of audiovisual content to the diversity of devices.

The objectives of the apps are mainly two: dissemination of content and enabling user participation and interactivity. It is important to note that not all of the analysed operators have implemented both types of apps.

Atresmedia and RTVE offer different types of apps according to their purpose. On the one hand, *Rtve.es/Tablet* and *Atresplayer* offer contents while *+TVE* and *Atresmedia conecta* are interactive. The capabilities offered by these apps to users make them active subjects in the process and even a

tool of support in the dissemination and success of the contents. Communities of followers and the virtual meetings with the protagonists and actors encourage loyalty and engage viewers with their favourite shows. In contrast to what happens with these two operators, *Mitele* is oriented only towards content dissemination and there is no bet on interactivity on neither this or another specific app.

However, the difference in purpose of the apps does not mean that those dedicated to content dissemination do not have interaction possibilities, since all of them allow the sharing of a diversity of content through social networks (Facebook and Twitter). In addition, in the case of *Rtve.es*/*Tablet*, content can also be shared via email. Also outstanding is the fact that *Atresplayer* also has a virtual community, where users can view purchased content, while *Mitele* allows registered users to share content on Facebook and Twitter.

Users can find possibilities of interaction with live content and through social networks in the +*TVE* and *Atresmedia conecta*. In the case of+*TVE*, users can share clips of broadcast shows or series, while *Atresmedia conecta* asks questions and provides exclusive information during the broadcast of interactive content. Mediaset has no specific apps to interact with viewers.

All apps studied here offer content from the TV channels that belong to the same television operator, i.e., they have a corporate character. The applications dedicated to content: *Rtve.es | Tablet* and *Atresplayer* and *Mitele* offer a wide variety of audiovisual products, and facilitate access to in-house and bought-in programmes, series and movies, as well as live broadcasts. The study confirms that the concept of television network/operator as large container of products aimed at specific audiences has been consolidated. The concept of linear scheduled programming only has value for older audiences, while the penetration of customised apps is growing among younger audiences and people with higher cultural and economic level.

The way apps structure the contents they make available to users reflects their commercial and corporate strategies. In the case of *Rtve.es | Tablet*, it includes categories the categories: "Series", "Movies", "Documentaries", "Magazine shows", "Travel", "Science" and "Technology", "Culture", "Education" and "Contests". The structure of the contents on *Atresplayer* is classified in: "Series", "Programmes", "Documentaries", "Children's programming", "Webseries", "Soap operas" and "More content". Meanwhile, *Mitele* has the following sections: "Series", "TV-movies", "Programmes", "Movies", "Sports", "News", "Big brother"(or the reality show on air at the time) and "8TV". This structures indicate that some types of contents are present in the apps of the three TV operators: series, documentaries and movies. There is also a significant selection of content that reveals the particular interest of the TV operators. Outstanding cases in this sense is the interest of Mediaset in increasing the ability to attract the audiences of its reality shows and the presence of a specific section for webseries in *Atresplayer*.

"Extra content" (clips, textual information, footage, and unreleased scenes) is offered by all the analysed apps. It is one of the ways to make profits out of the production costs that has intensified the most among TV operators. This is what happens with *Rtve.es | Tablet*, *Atresplayer* and *Mitele*. In the specific case of *Rtve.es | Tablet*, it gives access to clips of programmes; while *Atresplayer* offers making-off videos and press conferences; and *Mitele* offers access to exclusive content, like press

conferences and memorable moments in the shooting of programmes. There is a section called *Momentazos* ("best moments"), which is used to feature interesting situations in the production of programmes and series.

Advertising is not integrated in the smartphones apps of RTVE, but it is present in *Atresplayer* and *Mitele*. In the latter, advertising adopts the form of a full-screen audiovisual ad that pops up after the user press play to watch any of the programmes available in the app. In *Atresplayer* advertising usually appears in the form of a video when the user access any of content, but this does not happen with all programmes, as in *Mitele*.

Based on the previous analysis we can argue that TV operators are betting on the inclusion of interactive contents in mobile apps and especially in apps for smartphones. The comparative study of the offer of entertainment content and interactive tools allows us to deduce that RTVE has developed a more advanced range of contents and interactive tool, although all TV operators see user interactivity with contents as an important element to connect with the audience.

5. Notes

[1]   http://www.kantarworldpanel.com/es/Noticias/Android-Samsung-combinacion-lider-Espana-2015-Ventas-de-smartphones(last visited on 2 February, 2016).

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