The Role of Public Service Broadcasters in the Era of Convergence
A Case Study of Televisió de Catalunya

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Abstract: The development of the convergence process has several implications in the reconfiguration of the media landscape. Public services broadcasters have new opportunities to fulfil their public service duties in a new competitive environment, which involves developing new applications on new platforms. Televisió de Catalunya, the public service broadcaster (PSB) of Catalonia, has developed a clear strategy in this new convergent environment, applying its traditional know-how to new interactive and digital media according to its public mission and getting positive feedback.
Key words: convergence, public service broadcasting, interactive TV, bandwidth, 3G services, multimedia and digital divide.

Convergence in the television industry is continuing at a steady pace. Although we are in a period of transition, some of the features that will characterise the future can clearly be seen through the windows of today. Convergence represents the second major transition for public service in Europe. The first transition was the drastic change in its identity caused by the break-up of monopolies and the establishment of mixed systems.

The television system has been shaped by the tension between regulation and technological innovation. From a technological perspective, television was conditioned in its early days by the limitations of the radio spectrum and the technical characteristics of transmission by Hertzian waves. It consequently began its activity with a reduced number of channels available and with coverage that could be adapted to state borders.

From a regulatory perspective, the medium was modelled according to the government's general conception of television. As television was an instrument of extremely high strategic value, the state established the conditions of its usufruct. The prevailing trend in Europe was followed in Spain. This involved establishing a model to offer a public television service

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in the form of a state monopoly. These public companies coordinated one, two or three channels, depending on the country and the period. Such channels were guided by three principles: to inform, to educate and to entertain.

Solid public systems were formed out of these raw materials. Television took on a highly central role as an ideological apparatus of the state. It played an important part in processes of socialization, education and political participation. Television became the backbone of the modern state due to its functions in creating consensus and cultural homogenization; and in constructing and defending national identities.

Europe, distribution of offerings 2004-2005 (%)
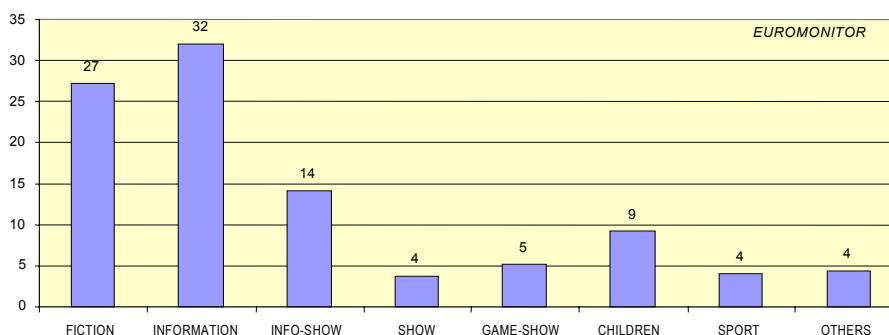
Source: Euromonitor [1]

Technological innovation eliminated the constraints that had prevented the number of channels from increasing. Television was seen to be big business on the other side of the Atlantic. Pressure from economic sectors interested in operating in the television sector consequently led to a process of deregulation. This brought about the introduction of mixed television systems in which public and private operators coexisted, or rather, competed.

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[1] EUROMONITOR is a permanent observatory of television in Europe. It has been in operation since 1989 and was set up by a group of European researchers (Paolo Baldi, Ian Connell, Claus Dieter Rath and Emili Prado) at the request of the VQPT service of the RAI. Until 1995, its headquarters were in Geneva. In 1995, it relocated to the Autonomous University of Barcelona where it has been managed by Emili Prado. The team at the headquarters includes the lecturers Matilde Delgado, Núria García and Gemma Larrègola as researchers. The observatory undertakes regular reports for the main television operators in Europe and North America, scientific publications and academic seminars, programming workshops with the industry and advises the regulatory authorities.

The resulting increase in the number of channels led to a situation of high audience fragmentation - which is not the same as segmentation. This was due to the fact that the increase in supply under market law did not lead to greater variety in contents. Instead, in general terms, a high degree of uniformity of offerings was registered. This was due to the same weapons being used in competition between operators. EUROMONITOR data on the combined offerings of the general-interest, public and private channels in the five main European television markets (the United Kingdom, France, Germany, Italy and Spain) is conclusive. Almost three quarters of the offerings are concentrated in only three macro-genres.

The identity crisis in public service broadcasting began to emerge and the debate over the role of public television in a mixed model came to the fore. A short time later, digitalization and the convergence that ensued, burst onto the scene; leading to a redefinition of the role of public service in the digital era.

■ Challenges for public television in the framework of convergence

Public television had to redefine its role during the first transition from a monopoly to a mixed system. However, most of the changes were brought about in what can be called the traditional functions of public service. There is already ample European doctrine on the mission of public television. Several organisations (the European Broadcasting Union, the European Commission, the European Parliament and the Council of Europe) have issued or promoted reflections and guidelines in this field. Since the nineties, this reflection has been combined with new requirements, arising from the prospects presented by digitalization. Some of this doctrine is included in: the Delors White Paper (1993), the Bangemann Report (1994), the Tongue Report (1996) and the High Level Group of Experts Report (1998).

Obviously, each transition stage presented different kinds of challenges. In the first transition, the challenge consisted of defining public television's function in the context of competition. However, the prevailing model of television still followed the traditional template, with the channel predominating. This distribution system involves a flow of contents. Regulations can be applied to this system, to determine the menu available for consumption by a regional population. The second transition involved

digitalization, leading to total technological convergence. The television was to be integrated with "everything digital and the internet". During this transition the traditional template became blurred. Contents were to predominate. Users would be able to access stores to obtain the contents they liked. This represents a move from flow television to stock television. In other words, users surf to find cultural products - in this case television products - rather than the products being transmitted directly to the users.

This change in perspective affects the entire communication system. However, it is most clearly evident in public television. Public television has to readapt its strategies so that it can continue to fulfil the functions of a public service, in the context of a much wider range of offerings. In addition, it now has to readapt to a complete change in the rules of the game. It can no longer depend on the support of national communication policies regulating the circulation of products or establishing the characteristics that such products should have. Moreover, it has to become an active agent in the communicative context. Now it not only coexists in this context with other operators from its own market, but also with operators from all markets. The context not only includes television, but all the other media that make up the convergent communication system.

MORAGAS & PRADO (2000) drew up a list of the functions that public television needs to undertake if it aims to bring its democratic legitimacy up to date in the digital era. Below are the functions that can be considered updates of traditional functions:
- guaranteeing democracy (and defending pluralism),
- stimulating citizen participation (a political function),
- a cultural function,
- guaranteeing identity,
- ensuring the quality of scheduling and contents,
- an educational role,
- a social and social welfare function,
- maintaining regional balance,
- promoting economic development,
- acting as a driving force for the audiovisual industry,
- providing a source of creative innovation and experimentation,
- a humanist and moralistic function,
- spreading and socializing knowledge.

The functions listed above are fairly conventional. From now on, we need to add other functions derived from the new situations that have arisen due

to the technological transformation and globalisation of the Information Society. Among these functions, we can highlight:

- Mediation and credibility in the face of the many available channels and sources. To play the role of mediator, public television must be protected from external interference and guarantee its credibility democratically.

- Guaranteeing universal access for everybody. In a context where everything is digital and online, there is space for both free access information and for a sizeable proportion of conditional access. In addition, the internet does not reach all segments of the population. Public television should guarantee universal access to important information and major communication products. Such products should not be exclusively reserved for users who can pay for them or people with online access.

- Producing information that is socially necessary. In market conditions the production of socially necessary information is not guaranteed. Instead, information that is economically viable is produced. Therefore, if we want an Information Society for everyone, public communication systems need to produce socially necessary information.

- Acting as a guide and mediator in the face of the wide variety of information on offer. The user has access to a vast amount of information that makes it difficult to carry out an effective selection from all of the programmes and services available. The electronic programme guide has arisen as a public service function to provide people with the information needed to make an informed choice.

- Balancing and curbing new communication-telecommunication oligopolies. The public sector should counterbalance the extraordinary concentration in the audiovisual system. This concentration is caused by convergence. In the face of this situation, public television should be a guarantee of plurality. Thus, public television stations should be financially, technologically and professionally solid. In addition, they should guarantee the plurality of their contents and democracy in decision-taking.

- Acting as a driving force in the processes of convergence between the communication sector and other social sectors, such as: culture, education, health, social welfare, etc. Public televisions should expand their communication activity beyond television to respond as multimedia communication institutions. They will only be able to fulfil their mission in this way: without being restricted in the increasingly narrow space kept for the medium of television in a context where "everything is digital and on line".

To fulfil these functions, public television needs to organise its activities to attain at least the following objectives:

• Offer a wide range of varied, high quality programmes that reflect the common denominator of good taste and provide unbiased information with educative, cultural or entertaining contents that are of interest to the public.

• Ensure that all types of programmes can reach everybody. In no case should services and programmes of cultural and national importance be limited so that they only reach well-off groups.

• Coordinate offerings of programmes that reflect the tastes of both the majority and the minorities. This will contribute to creating social cohesion, regional balance and a sense of belonging, particularly among minorities.

• Undertake to have a strong national production base. This will provide programmes that reflect national values and the near environment better than foreign products. This will help to contribute to sustaining and revitalizing national culture and the characteristics of its identity. Furthermore, it will help to promote the audiovisual sector and the economy.

• Form a complex communicative institution that acts on all available platforms.

To fulfil these objectives, public television needs to be viewed by a large enough audience to be able to exercise a social influence, to influence its competitors by example and to justify the investment that it receives.

■ The specific case of Televisió de Catalunya

Specificities of the Catalan market and the position of Televisió de Catalunya

Identity is a key factor in Catalonia. This is reflected in the region's cultural idiosyncrasies and, in particular, in the region's own language, Catalan. This language shares both the social and communicative space with Spanish.

Catalonia is an integral part of the Spanish television market, which has been established on a national scale since its beginnings in 1956. However, regulations did not bring about the emergence of Televisió de Catalunya

(TVC) until 1984. In fact, the channel started its experimental transmissions in September 1983, a few months before a law [2] allowing the creation of public regional broadcasting corporations controlled by Spain's autonomous governments. TVC finally started regular transmissions on January 16th 1984, a few days after the law was approved (PRADO & LARRÈGOLA, 2005). This is a public channel that has coverage in the Autonomous Community and is broadcast entirely in Catalan. In addition, the public state television makes regional broadcasts in this language. There are also other examples of local television, which are mainly in Catalan. The total number of broadcasts in Catalan currently accounts for less than 30% of the television market.

Convergence has occurred at the same time as globalisation, which represents both a considerable challenge and an opportunity for small, stateless nations like Catalonia. It is a challenge because it leads to a huge increase in the communicative opportunities of citizens. However, it also represents an opportunity as the cultural proximity factor, the main asset of media such as TVC, acquires strategic importance in the sector.

Convergence involves the emergence of new production and transmission methods, as well as new consumer practices to which the media have to adapt. In addition, public television must adapt in accordance with its mission and functions. Its boundaries are extended in the digital era. All of this is occurring in an environment that is hostile towards public TV due to pressure from the private sector to increase deregulation; and the restrictions on public TV's participation in the advertising market.

This process coincides with the transition to a totally digital environment, the starting point for convergence and for a reconsideration of the role of public service television. As a result of convergence, this role has broadened in content and form. New functions have been added and it has been extended via new platforms. This involves a change of environment, as some of the initial barriers in traditional analogue television, such as the lack of radio spectrum, disappear when competing in a market with bigger audiences.

Catalonia also has a unique characteristic in the framework of the Spanish TV market. This is the presence of a regulatory authority, the

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[2] *Ley 46/1983, de 26 de Diciembre, reguladora del tercer canal de televisión*, Boletín Oficial del Estado n. 4, de 05.01.1984.

Consell de l'Audiovisual de Catalunya (Catalonia Broadcasting Council), with broad competences in this territory. This authority was created in 1996 [3] and its remit was reinforced in 2000 [4]. This represents the most advanced example of an independent authority, since there is no national authority and only a few regions, like Navarre and Andalusia, have a similar institution, although with a minor degree of competences.

The spread of convergence

Convergence today is based on the technological opportunities provided by digitalization. This is expressed in many ways. Some of these are clearly reflected in the case of TVC. We should therefore examine the role of technological convergence in the process of transforming TVC and its parent company, Corporació Catalana de Ràdio i Televisió (CCRTV). We should take into account that: technological convergence is a necessary, but non-sufficient condition by itself, because the 'present and the future of any communication technique depends less on the characteristics of each particular technique than on a series of different variables including economic factors (installation cost, subscription cost), political factors (the degree of intervention by the state as an agent) and social factors (habits and uses)' (DE MIGUEL, 1993: 54). Technological convergence must therefore be combined with other perspectives such as economic, regulatory and social convergence. In the specific case study dealt with in this paper, our analysis focuses on technological convergence and the convergence of services, corporate convergence and processes of social convergence that TVC is involved with in its role as a public service. Finally, it is also necessary to show the financial framework of all these processes.

Technological convergence and the convergence of services

Four factors are of central importance within the wide field of activities covered by technological convergence. Digitalization is the first of these factors, as it affects both internal production processes and signal transmission. The second factor is the level of interactivity developed in the

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[3] *Llei 8/1996, de 5 de juliol, de regulació de la programació audiovisual distribuïda per cable*, Diari Oficial de la Generalitat de Catalunya n. 2232, de 19.07.96.

[4] *Llei 2/2000, de 4 de maig, del Consell de l'Audiovisual de Catalunya*, Diari Oficial de la Generalitat de Catalunya n. 3133, de 05.05.00.

different products. The third aspect is the extent of the services' coverage. This is an essential condition if a service has to reach a considerable proportion of the population. Finally, bandwidth is an essential condition for using advanced convergent services.

Digitalization

The digitalization process for television has several different levels. The first level is the digital production of TV contents, including the filming and recording of information, and the subsequent editing of this material. Secondly, digitalization is involved in transmission through the different platforms available. Finally, the reception of a broadcast is a stage that involves the user's response to the requirements of the media and of the electronics industry. We will discount this final stage, in which the role of one TV network has a secondary - though present - role. This section of the paper therefore focuses on the digitalization process involved in production and transmission.

In terms of production, TVC is at an advanced stage of updating all of its analogical equipment and replacing it with new digital-based hardware. This process is occurring at different speeds in most of the television networks in the main television markets worldwide. Interestingly, TVC is developing its own integrated system of production and digital archiving. The software for this system is called DigitionSuite. It was developed by TVC's technological subsidiary, TVC Multimèdia. After group restructuring, this subsidiary was renamed Activa Multimèdia Digital. This software combines content recording, video editing, asset management, archives and play-out all in a digital format and in one programme. TVC therefore works with its own production software. It has also marketed this software to other companies in the sector such as IB3, the Balearic Islands' regional television station. In this way TVC has also promoted technological transfer.

Due to digitalization, which made convergence possible, there are now many technological platforms for transmitting audiovisual signals. Catalan public television was one of the first suppliers of thematic channels for the two digital satellite channels, Canal Satélite Digital and Vía Digital, which appeared in the Spanish market in 1997. These thematic channels arose in the context of an emblematic business project for the development of the Information Society in Catalonia: Media Park. This is a benchmark audiovisual production centre in the region. TVC has provided funding, and acted as a partner and content company for Media Park since it was

founded in February 1996. Originally, TVC had a 17.59% share in Media Park.

In this respect, TVC has always maintained the importance of contents as a key element in the framework of convergence. It demonstrated this stance in its clear strategic positioning during the "football war" between Spanish television networks from 1996 to 1997. This battle was fought to acquire the rights to broadcast the Spanish football league matches, which are a guaranteed way of increasing audience share. TVC ended up controlling 20% of shares in the company Audiovisual Sport, which ultimately became the manager of these property rights. Other shareholders included: Sogecable, the owner of Canal Satélite Digital; and Antena 3 Televisión, one of the Spanish free-to-air private television networks. In the end, this gave TVC a notable position in controlling a key content. However, it also represented a sharp drop in the company's value, when the market prices of football rights were rationalized after hyperinflation in Spain at the end of the 1990s.

TVC made its first Digital Terrestrial Television (DTT) broadcast in 1998, despite the lack of adequate DTT set-top boxes in the market. In 2002, it moved onto a simulcast stage, combined with the analogue transmission required by Spanish Law on DTT introduction. When the pay platform Quiero TV went bankrupt, in situations similar to those of On Digital in the UK, Spanish DTT was left in limbo. Only about 200,000 set-top boxes for DTT existed, which Quiero TV had distributed. However, boxes could not be found in the shops, even though the law required operators to begin their DTT broadcasts using this technology. Within six months of On Digital going bust in the UK, the BBC led the launch of a new platform called Freeview. Spain, on the contrary, lacked the response and leadership of such a strong national public service broadcaster. The DTT situation in Spain at this time involved some simulcast broadcasts of the programs transmitted in analogue. These had very little audience potential. In this context, TVC, as a public service broadcaster, assumed part of the responsibility for DTT and headed the project *TDT Micromercats* (DTT Micromarkets). Between 2003 and 2004, this project analysed a series of new technological services, both for contents and interactive services, through a pilot test carried out with 70 families in the Barcelona area.

The central Spanish government gave impetus to DTT when it approved the *Plan de Impulso de la Televisión Digital Terrestre*, DATA (Plan to

Promote Digital Terrestrial Television) in June 2005 [5]. This plan included distributing the frequencies that were originally attributed to Quiero TV among the current operators of analogue television. In addition, the analogue "switch off" was brought forward from 2012 to 2010. Towards the end of 2005, the operators began to offer new contents. This coincided with Christmas sales campaigns, in which DTT set-top boxes were one of the top presents. By the beginning of 2006, there were around a million units in Spain [6]. In this context, TVC started up a new broadcast, Canal 300, which uses its archive of contents, adding to its analogue offerings, namely the general-interest TV3, K3/33, a complementary channel that has a combined content of programmes for children and young people, culture and sports programmes; and 3/24, a channel providing 24 hour news. Thus it has made an effort to develop new contents. The regional, private multiplex concessionary, the Godó group has not made a similar effort. It only broadcasts the programmes from its analogue channel, City TV, in simulcast and consequently only uses 25% of its concession.

However, public Catalan television has not stopped at the traditional concept of television. Early on, it established its presence on the internet. The first TVC web site was set up in 1995 (www.tvcatalunya.com). This was one of the first Spanish state media to become established on the Net. Subsequently, the project was reformulated. From 2002, its objectives and approaches were expanded. Specific portals were created for the following areas: news (www.telenoticies.com), sport (www.elsesports.net), music (www.ritmes.net), and children's content (www.3xl.net). The main framework was kept for the rest of the network's contents. This involved incorporating both audio and video format contents. Advantage was taken of the synergies created by the integration of the online newsroom in the workflow of the public television and radio newsroom (FRANQUET *et al*., 2006). Most of these contents are available online since 2004, using the service '3 a la carta' (www.3alacarta.com). This service won the Promax 2005 World Gold Award for the best interactive service of a television channel.

After transferring the experience from the television to a web environment, another step forward was taken. This involved integrating

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[5] *Ley 10/2005, de 14 de junio, de medidas urgentes de impulso de la televisión digital terrestre, de liberalización de la televisión por cable y de fomento del pluralismo*, Boletín Oficial del Estado n. 142, de 15.06.2005.

[6] "Vendidos ya en España un millón de descodificadores para la TDT" (A thousand DTT decoders sold already in Spain), *La Vanguardia Digital*, February 21st 2006. See: http://www.lavanguardia.es/web/20060221/51234268973.html

these and television services with the mobile phone through an SMS alert service. After this first contact with the mobile telephone, the next step was natural: to adapt and develop contents for third generation mobile telephones. Such contents were developed from August 2004 through the mobile operator Amena, which offers the programming for TVC's main channel, TV3, live to its 3G telephone clients. TVC is the first television operator to offer this service in Spain. This experience is due to be expanded on in 2006 with a new project that has the following partners: the telecommunications operator Tradia, the technological company Nokia, and Telefónica Móviles, the leading mobile phone operator in the Spanish market. In addition, TVC plans to develop interactive applications using this platform. It also plans to adapt the on demand internet video service '3 a la carta' for third generation mobile platforms.

Interactivity

The development of interactive systems that can be applied to television has also been of interest from the outset; since the creation of TVC Multimèdia in 1998. TVC Multimèdia has been functioning under the CCRTV Interactiva (CCRTVi) umbrella since 2001. It was specifically created to develop new distribution media. The objective was to ensure: "the presence and competitiveness of the Corporació Catalana de Ràdio i Televisió, as well as its content and mission, in the new interactive media in existence today. These interactive media include: the internet, interactive digital television channels, teletext, mobile telephones and all those media that technology will allow in the future" (CCRTV, 2002: 101). From the beginning, the corporation committed itself to applying interactive systems to its first thematic channels, which are described above. This occurred as these channels were being created. TVC differentiates between three lines of activity in this field. The first involves interactive meteorology services. The second involves those services that fall under Automatic TV and the third business includes remaining interactive television services.

The meteorological services are developing applications that are both multiplatform (TV, Internet, WAP, SMS, PDA and UMTS) and multi-format (Flash, Real, Windows Media and Quicktime). Such applications are used in connection with a climatic database from which the service's own digitalised file is created, containing data obtained via satellite. Thanks to the European Union's MLIS project, these services are available in eight different languages. TVC Multimèdia participated in this project, alongside partners such as TV Cabo, World On Line, Weather World Prod. and Alice Prod. (PETIT & ROSÉS, 2003).

Automatic TV is a hardware and software platform that automates content publication for television head ends. These include the SMS messages that the channel receives from viewers. Automatic TV created the first interactive television experience on channel TVRL in Lausanne, Switzerland.

Other interactive television services involve the conceptualisation, development, editing and maintenance of content. In contrast to the majority of companies in this field, TVC Multimèdia is part of a television group. This gives it a greater degree of knowledge about the medium in which its applications will subsequently be implemented. Its projects include electronic programme guides (EPG), TV sites and interactive thematic channels.

The company has also developed its own interactive service, HandData. This is a managing and broadcasting system for digital television. This software has been sold to other operators and has therefore contributed to obtaining financial returns. TVC's early and determined commitment to interactivity is not comparable to that of the British giant, BSkyB. However, generally speaking, its commitment has been pioneering and noteworthy in the realm of Spanish television, which even today appears to shy away from the development of added-value services. This enterprising spirit has aided the acquisition of know-how, which has enabled these services to be supplied to other national and international telecommunication companies. National companies include: Vía Digital, Canal Satélite Digital; Digital+, a product of the merger between these two companies; the cable platform Ono; and TV Castilla La Mancha. International companies include: Canal Plus Technologies in France, Mediaset in Italy, and NTV or TV Cabo in Portugal, for whom it developed a thematic meteorological channel with related interactive services. This is a field in which it has acquired extensive experience and in which it developed its latest project, Sam, a virtual weather reporter (www.meteosam.com). This virtual meteorologist is already being shown on television, the internet and the mobile telephone services of companies such as Telefónica Móviles.

Since 2002, the commitment to interactive applications within the limits of DTT, in the framework of the *TDT Micromercats* project, has increased. The first applications for this platform have been introduced. These include: informative tickers, navigation bars, on line chatting, competitions and on-screen, navigable news and weather services. All these applications have been developed on Multimedia Home Platform (MHP). This platform was accepted in Spain as the standard protocol for interactive applications by virtue of an agreement among the main analogue TV companies and the

most important equipment manufacturers in February, 2002. Motivated by a desire to cover all of the market's technological niches, TVC Multimèdia has also developed applications for other technological platforms, such as: Open TV, Media Highway, Liberate or Microsoft TV. Additionally, the company is an active participant in groups that develop these systems, including MHP Implementers Group or Liberate Pop TV.

After this pilot project and following the momentum caused by DTT broadcasting since the end of 2005, TVC has already begun to offer certain services that were tested in the pilot study on its digital channel, TV3. These services include both autonomous interactive services, and interactive services related to high-interest programmes, such as broadcasting the games of F.C. Barcelona, Catalonia's flagship football team. The objective is to make these new, value-added services attractive and well-known.

Penetration

Televisió de Catalunya was founded to be a market leader and in order to attain its public service objectives. It has been largely successful in this endeavour. As regards public service, the objective of accumulating the highest audience share is not the only leitmotiv in TVC's development and programming strategies, although its programming is quite competitive. This is demonstrated by the fact that its general-interest channel, TV3, had the second highest audience share in the region in 2005, pulling in a 20.3% share. This was only one point behind the national private television channel, Telecinco, which has double the budget of the public channel, and is in line with that of other national broadcasters. The group of TVC channels with free-to-air broadcasting has a 25.7% share. Its market penetration is therefore quite significant in such a competitive market, which includes four national, free broadcast channels. Another channel, Cuatro, which is the old analogical Canal+, now offers free-to-air broadcasts. There is also an autonomous private channel operator, City TV, based on the Italian deregulation model i.e. it broadcasts a network of various local frequencies, and over one hundred local broadcasters in all of Catalonia, as well as the competition of digital platforms by satellite, cable and ADSL.

As far as the internet is concerned, TVC and its various brands have a solid and indisputable position in the Catalan-speaking market. In addition to having the highest market share, TVC is also the leader in product development (FRANQUET *et al.,* 2006), adding content leadership to technological improvements.

Bandwidth

TVC's role in bandwidth development in Catalonia is secondary, as it is not a telecommunications company. Nevertheless, it is important to highlight its participation in bandwidth development projects. One of these is i2Cat, a pilot project promoted by the Catalan autonomous government on the Internet2 network. TVC has become involved in the development and testing of advanced applications and high-quality audiovisual content across the latest generation of networks, through which it even broadcasts in high-definition. One of the most noteworthy subprojects within the i2Cat project is Dexvio. This is an experimental gateway that unites television through the Internet, with material from TVC and CCRTV Interactiva among others, and shared viewing spaces (ALCOBER, MARTIN & SERRA, 2003).

Some of the services described above also promote internet bandwidth. One of these is the video on demand (VOD) '3 a la carta' application, whose expansion to IP TV services is being considered. TVC's offer for the Microsoft Windows Media Center services should also be mentioned as one of the most recent company applications.

Corporate convergence

The process of corporate convergence follows the logic of services convergence. A competitive position, offering essentially similar services or products in the same market, leads to convergence among different players. Players are expanding constantly due to this external growth. Thus, corporate convergence refers to alliances and unions between companies, by means of different cooperation processes, which can take different forms: vertical integration, horizontal integration, multimedia integration, acquisition, mergers, alliances, joint-ventures, etc. The concept can also be applied to the processes of organic diversification within a firm, to broaden its field of action field within the new convergent space.

This phenomenon is frequently claimed to be new. However, historically, 'the first characteristic of innovation in the communication field is that it is located at the crossroads of many industrial activities' (FLICHY, 1980: 31). This has been demonstrated by the history of the first cultural industries, like cinema, radio or record companies.

Convergence, in the form of alliances, has played an important role in TVC's development strategy. The Federación de Organizaciones de Radio y Televisión Autonómicas (FORTA - Federation of Autonomous Radio and

Television Organisations) is at the heart of strategic alliances. This federation groups together other Spanish regional channels and currently has eleven associated regional television stations that broadcast to over 37½ million Spaniards. According to the latest official statistics [7], this represents 85.2% of the country's population. The group's objectives are to achieve economies of scale that are not possible in their smaller regional markets. This enables them to compete with national television stations. The federation's work has included joint production projects, such as TV-movies, the sale of advertising packages, and, above all, the acquisition of audiovisual rights, especially broadcasting rights for the football league, the indisputable king of sports in Spain.

Moreover, national empathy with the other two historical Spanish communities, Galicia and the Basque Country, was reflected in the strengthening of an alliance with the autonomous channels in those regions and the start-up of the satellite channel Galeusca in 1996. This channel was distributed via PanamSat to Latin America, a historic destination for many Spanish immigrants. The channel included content in the languages of Catalonia, Galicia and the Basque Country and selected material from the programme schedules of the three autonomous, public television stations. Nevertheless, political interests redirected the project to the broadcasting of one of TVC's own channels, TVC Sat, through Vía Digital, a platform that uses the Hispasat satellite and thus enables it to reach the same target. The TVC Sat experience was also repeated with TVC Internacional, aimed at the Catalan communities in Europe and transmitted through the Astra satellite. This channel subsequently joined the offering of the Canal Satélite Digital platform using the same satellite.

Other alliances that were developed with the private sector made a fully-fledged entry into the convergence field. One example of this is the case of Vía Digital, the Spanish satellite platform created in 1997 with the backing of the leading telecommunications operator, Telefónica. Public Catalan television initially had a 5% share in this platform. It also contributed various television channels produced directly or through Media Park, a company that also had shares in the platform. This contribution included various channels: Teletiempo, the thematic weather channel; Club Super3, the children's channel; and TVC Sat, previously mentioned. This was a very controversial

step at the time given that, in spite of its public status, the company had opted to position itself - just like other public services, such as its own TVE, the State's public television – as one of the two contenders in the sky battle. TVC later pulled out of this project by selling its shares, resulting in a heavy capital loss.

On the other hand, its positioning with Vía Digital did not hinder its collaboration with Canal Satélite Digital, the competing digital platform. In addition to TVC Internacional, TVC produced the following programmes for Canal Satélite Digital: Sputnik, the music channel, Canal Méteo, the weather channel, and Fútbol Mundial, a thematic football channel produced from the Media Park facilities in collaboration with Canal+. The Sogecable group, controlled equally by Prisa, Spain's largest media group, and by the French group Vivendi, headed the Canal Satélite Digital platform.

In any case, the absolute maintenance of TVC's position in the value chain is what stands out from all these alliances. It did not want to enter into other close links of the chain through convergence, as it was convinced that its know-how lay in content production and management. Content had been highlighted by the Green Paper on the Convergence of Telecommunications, Media and Information Technology Sectors, and the Implications for Regulation as one of the bottlenecks in the process due to its scarcity. In fact, TVC's only incursions into outside fields have been in the area of technology, where technological systems and applications were created by its subsidiary, TVC Multimèdia, when the market was unable to meet company needs. Thus, this expansion of the original core business, which was brought about by the current situation, occurred in a timely fashion. The company's management has promoted organic growth, avoiding corporate culture management problems similar to those seen in other cases, including the paradigm of AOL-Time Warner (GERSHON & ALHASSAN, 2003).

Social convergence

Social convergence mainly consists of a model for applying the Information Society's policies, which are usually gathered under the label of the fight against the digital divide. This is one aspect of convergence that private participants tend to leave in the hands of the authorities. By extension, public broadcasting services are also involved in this process of social convergence.

As a public service, TVC promotes public access in the Catalan market to new converging services. It creates content for a familiar public and offers programmes in Catalan, whereas private initiatives in Catalan are unusually stifled by market limitations. It does this with its own vision and from a Catalan perspective on world events, while also featuring information about the Catalan reality. It has consequently become an online social reference, stimulating the creation of communities such as the one it has brought together around its various interactive services. These communities have over 600,000 subscribers, representing almost 10% of the Catalan population and about 30% of the region's entire online community.

From the individual perspective of citizenship, the web - which is seen as a new market by the economists and firms involved - takes the form of a new social space for connection and public expression. In this sense, one of the main characteristics of social convergence is the de-construction of communities, which are normally de-territorialized. Although the role of infrastructure is essential in a virtual community, it is important to remember that 'technological features do not ensure effective communication, and technological connection alone does not create a community' (HARASIM, 1993). In this sense, it seems that the feeling of community is also developed in another way in cyberspace, from the previous community, that is based on physical proximity (GOCHENOUR, 2006).

The creation of appealing content that transfers this ability to attract to one's own technological infrastructure is one of the ways in which TVC, as a public service, attempts to fight the digital gap. Its motivation lies in the fact that "the absence of online public services offering content and services that are viewed as useful by citizens will continue to limit the diffusion and adoption of the Web as a widespread household tool" (FRANQUET *et al.*, 2006). The group's latest internet development, *És a dir* (http://esadir.com/), is part of this effort. *És a dir* is a translation and consultation tool for the Catalan language that helps users understand much of the Web's content, which is primarily in English. Nor has TVC abandoned the promotion of all the converging tools that are part of the Information Society project via its traditional analogue transmission platform. One of the flagships of this project was the *Cataluny@XXI programme*. Manuel Castells was this programme's consultant and member. He is a prestigious sociologist whose trilogy, *The Information Age*, is key in understanding the web society.

In the course of its 20+ year existence, TVC has acquired extensive expertise in managing linguistic aspects of its content. It has consequently become a benchmark for the audience that uses Catalan as its reference

language. This community is not just limited to Catalonia, but extends to some areas of neighbouring Spanish regions, Andorra and the south of France.

Financial divergence

This panorama has its Achilles heel in the financial situation of the company. Since its creation, the financing model of TVC has emulated that of Televisión Española (TVE), the former state monopoly. Revenues come from two main sources: public funding and advertising rates. Those rates have been in decline since the introduction of private national channels in early 1990s and the rising competence of satellite and cable TV. In a political framework of budget adjustment, public funding did not grow sufficiently. Together, these factors led to a situation of deficit multiplication. By the end of 2004 TVC's debt amounted to over EUR 923 million, the highest deficit among Spanish autonomous broadcasters. It is granted by the autonomous government.

The public Catalan TV has responded positively to its new public service functions in the framework of the information society. However, its financing model has remained frozen since its origins, and has failed to adapt to the structural changes in such a dynamic sector. This situation has created a vicious circle in terms of rising debt levels since the financial costs of borrowing are continuously increasing the debt, independent of TVC's management skills. This vicious circle requires public intervention to eradicate the debt and establish a sustainable financing model based on a contract-program. Resources have not grown at the same level as the expenses derived from the new functions assumed in the digital environment, a new source of debt for CCRTV, despite the revenues generated by new segments of activity.

■ Conclusions

TVC's experience shows that public television can respond to the challenges arising from convergence. As it cannot respond in any other way, its response is partial, and conditioned by the regulatory situation that determines its manoeuvrability. Reforms to this legislation, such as the reform of the regulatory authority, the Consell de l'Audiovisual de Catalunya; or the creation of a Ley General del Audiovisual (General Audiovisual Law)

that puts together all the fragmented legislative texts, represent a step forward. However, the law for reforming the Corporació Catalana de Ràdio i Televisió is still pending. This law should provide public television with a mission that is adapted to the new challenges of convergence, a funding system that is sufficient and sustainable, a programme contract that details the objectives in a pluri-annual spectrum, and an organisational system that protects public television's political independence. The new challenges can only be effectively addressed in this way.

In the absence of this normative framework, the activity carried out on the converging front can be described as very positive. TVC has addressed the need to obtain a massive audience, with scheduling that in general terms reflects the parameters involved in quality television. Its offering has diversified to serve specific audiences. Thematic channels have been created to ensure the presence of public options within the proliferation of specialised channels. It has been a pioneer in software and hardware development, originally in response to new converging demands. In turn, this has enabled it to obtain new sources of funding from selling these applications to other companies. TVC has also been a pioneer in adopting digital terrestrial television technology. It has a proactive attitude to R&D and has implemented experimentation that helps it to design efficient services within the potential of this technology, and possibly to contribute to the non-discriminatory socialization of the Information Society's services. It began to undertake activities dedicated to internet applications, with and on the Net, from an early stage. In short, TVC has acted decisively in the converging industrial context, so as not to be left on the fringes of major concentration deals. It has participated in some of these operations to protect its interests as a public television broadcaster.

This public condition has allowed the CCRTV to play a pioneering role in this new process of convergence. In terms of the negative implications of TVC's transition to the digital era, it seems mandatory to mention the corporation's financial situation. Some of its high debt is part of the holding's attempts to promote the Information Society and push the audiovisual industry forward – creating a social benefit that can not be demanded of any private firm - and demonstrates the necessity of the public TV broadcaster as a driving force in the first steps of the process. However, this also calls into question its long-term development model. It is also the main reason for lobbying the autonomous government to pass a law designed to establish a definitive financing model to fulfil the functions of a public service.

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