

**31-32**

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# **QUADERNS DEL CAC**

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**Technological  
and audiovisual  
convergence**



**Consell  
de l'Audiovisual  
de Catalunya**

**2009**

# QUADERNS DEL CAC

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*Quaderns del CAC* is a journal dedicated to analyze the big topics about audiovisual communication policies, and in general, the contemporary audiovisual culture. Edited by the Consell Audiovisual de Catalunya, the journal intends to be a meeting point to discuss about the audiovisual from a Catalan perspective with international vocation.

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## Introduction

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The era of technological convergence has begun. In all areas of life and society the convergence of communication services and platforms is increasingly a reality. The definition of convergence proposed by the British organisation Ofcom can act as a guide to our proposals. Ofcom sees convergence as "the ability of consumers to obtain multiple services on a single platform or device or obtain any given service on multiple platforms or devices". This definition clearly distinguishes between services and platforms, as well as focusing attention on the change in consumer initiative and satisfaction. But although consumers are the ultimate beneficiary of the services of the new online digital era, convergence phenomena have a growing impact on all sectors, activities and players involved: companies, operators, regulatory authorities, media, professional routines, distribution circuits, training, etc.

Given the importance of this technological and cultural transformation, *Quaderns del CAC* has decided to dedicate a double issue to the issue of *Technological and audiovisual convergence* in order to debate and evaluate the specific impact of convergence on the world of the media. This issue number 31-32 therefore provides a broad look at the state of affairs regarding the trends, perspectives, opportunities and also risks of the new era brought about by convergence. The different texts have been ordered from the most general to the most specific. The first block contains articles related to the transformations resulting from the processes of technological convergence, continuing with more specific contributions on areas or aspects of audiovisual communication that are particularly affected by these processes.

**Javier Echeverría** starts off this double issue ("The two main processes of technological convergence") with a general essay on the two broad processes of technological convergence currently underway, namely that of ICTs (information and communication technologies) and the NBIC system (Nano-Bio-Info-Cogno). **Enric Plaza** provides an analysis of the new intelligent systems of social mediation, going from a content-based model of content distribution to a network-based model ("Overcoming Babel: social mediation and intelligent systems in discovering, filtering, accrediting and personalising digital content").

**Josep Ramon Ferrer** provides an overview ("Technological convergence: a state of the art on the issue") of convergence infrastructures and networks, as well as the perspectives for audiovisual consumption. **Joan Majó** ("Future trends in audiovisuals") concentrates on detecting the main developments involved in the evolution of audiovisuals, focusing on three areas: technologies, consumption habits and economic and political pressures.

**Emili Prado** ("The challenges of digital convergence for television") systematically analyses the most relevant transformations of media digitalisation and its three basic processes: the production of content, transmission and reception. **J. Ignasi Ribas** argues the intrinsic properties of interactive discourse ("Integrating media within interactive discourse: the case of cultural dissemination") and highlights the unlimited capacity for integrating media, as well as the difficulties in incorporating new applications. **Hugo Pardo**, **Joel Brandt** and **Juan Pablo Puerta** investigate the new culture of mobility ("Mobile Web 2.0. The new mobile communication industry") and provide a theoretical and technical panorama of the evolution of mobile telephony towards collaborative internet applications.

**Ángel García Castillejo** provides an overall legal review of audiovisuals in Spain ("Convergence and general audiovisual legislation in Spain") given the convergence between the telecom and media sectors, and argues that an audiovisual authority is required within the Telecommunications Market Commission (CMT). **Pere Vila** closely examines ("Content convergence") the adaptation of an audiovisual public corporation to the new demands of convergence, especially concerning content production policy.

**David Sancha** explores the impact of convergence on traditional journalism ("The convergence of newsrooms in the era of the open garden"), which has been forced to redefine new strategies of technological development and to consider integrated newsrooms and polyvalent journalists. **Pere Masip** and **Josep Lluís Micó** precisely evaluate the figure of the polyvalent journalist ("The polyvalent journalist within the framework of business convergence") based on the different experiences and perceptions of professionals themselves. **Genís Roca** tackles the challenges posed by media convergence from the market point of view ("Media convergence and the battle for the audience") and notes strategies to increase audience loyalty, with multiple platforms on different media.

**Sonia Livingstone**, **Uwe Hasebrink**, **Carmelo Garitaonandia** and **Maialen Garmendia** present the initial findings from an extensive comparative study on the levels of risk in internet use for children ("Comparing online risks faced by

European children: Reflections on youthful internet use in Britain, Germany and Spain" with proposals for lines of research and public policies. And **Núria Almiron** and **Josep Manuel Jarque** close the issue with a critical look at the dominant "digitalist discourse" ("Myth, digitalism and technological convergence: hegemonic discourses and political economics").

Finally, in addition to the specific theme, this double issue also includes the usual sections. In the *Observatori* we include five notable contributions from recent Catalan research: "The emergence of new imagery in quality television fiction", by **Anna Tous**; "Television fiction on TV3 and Catalan cultural identity: case study of the situation comedy *Plats bruts*", by **Luisa Martínez García**; "Analysis of information sources and respect for professional ethics in crisis situations: the media treatment of Barcelona's Carmel case", by Carles Pont; "The effectiveness of product placement on children: an experiment", by **José Fernández Cavia**, **Assumpció Huertas** and **Mònika Jiménez**, and "Analysis of comprehension by deaf pupils of captioned television documents and criteria for improvement", by **Cristina Cambra**, **Núria Silvestre** and **Aurora Leal**.

**Josep Gifreu**  
Director

# The two main processes of technological convergence<sup>1</sup>

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## Abstract

*From a systemic point of view, technological convergence can be considered a consequence of the progressive formation of technological systems. Furthermore, it could also be compared with the composition of individual and collective human actions, which broaden the respective scope of capabilities and activities (A. Sen). This paper applies these three philosophical hypotheses: on the one hand to convergence between several information and communication technologies (ICTs) and, on the other, to NBIC (nano-bio-info-cogno) convergence, in both cases focusing on the social appropriation of these convergent technologies and on the role of users in processes of socio-technological appropriation. Consequently, technological convergence depends on social convergence among users of different technological systems.*

## Key words

*Philosophy of technology, Converging Technologies, social appropriation.*

## Resum

*Des d'un punt de vista sistèmic, la convergència tecnològica es pot considerar una conseqüència de la formació progressiva de sistemes tecnològics. A més, també es podria comparar amb la composició d'accions humanes, individuals i col·lectives, que expandeixen els corresponents espais de capacitats i acompliments (A. Sen). Aquest article aplica aquestes tres hipòtesis filosòfiques a la convergència entre algunes tecnologies de la informació i la comunicació, d'una banda, i a la convergència NBIC (Nano-Bio-Info-Cogno), de l'altra. En ambdós casos se subratlla la importància de l'apropiació social d'aquestes tecnologies convergents i del paper dels usuaris en els esmentats processos d'apropiació sociotecnològica. Per tant, la convergència tecnològica depèn de la convergència social entre usuaris de diferents sistemes tecnològics.*

## Paraules clau

*Filosofia de la tecnologia, tecnologies convergents, apropiació social.*

## 1. Technological systems and human actions

Human techniques have very different origins and are usually studied separately, according to the atomist paradigm that has predominated for decades in the studies of science and technology. However, a systemic approach has been adopted more recently and this article is based within such a context. In his book *Tecnología: un enfoque filosófico* (1989), Quintanilla established the foundations of the systemic conception of technologies, which states that they shape technological systems rather than working in isolation. Throughout technology's history, examples abound of techniques that have continued to come together and link up, therefore resulting in mixed artefacts. The cart is a good example of this because it combines the wheel, the box or body of the vehicle and the action of the animal, but so are a ploughman's tools, the objects needed to make a stable, the tools for basic carpentry or mining, or the equipment of a fishing boat. These technological items, each with their own particular job, unite to form technical systems in which technologies from different origins combine. Some of

these technical systems have been around for a long time and have characterised entire cultures, helping to ensure survival in certain environments. However, many inventions have come about because ideas or technical resources have been transferred from one system to another (Edgerton 2007, p. 270). For example, electricity proves that, once something is invented and becomes established as a technological system (electric power stations, transport systems, accumulators, voltage regulators, power plugs, connections, etc.), many innovations will be generated as a result, from the light bulb to an oven's electrical element, electrical engines and trolley buses and trams and other methods of transport that rely on electrical energy. Combining has always been a rich source of invention, as Leibniz realised, and the history of technology is no exception.

A second idea proposed by Quintanilla is also of great importance, because it forms the basis of this integration of different tools into long-lasting and stable technological systems. According to him, technologies are "systems of human actions intentionally orientated towards transforming concrete objects

in order to efficiently achieve valid results."<sup>2</sup> Therefore, it is not tools that are important but what human beings do with them that matters.

Once technologies have been defined in this way, it is very easy to explain why they converge and how they shape technological systems. Because they are human actions, insofar as such actions can be combined and integrated into one activity, either individual or collective, then the corresponding technologies will converge into technological systems. As a single person or various people coordinate their own actions and compose complex actions (cooperation, collaboration), the tools that facilitate these actions will gradually become integrated as mixed complex objects and, ultimately, technological systems.

As a second hypothesis, we can say that technological convergence occurs because human actions can be combined and give rise to complex actions. In particular, human actions generate collective actions, insofar as they synchronise their individual actions in such a way that a joint action results, something that has often occurred since prehistoric times (hunting cultures). There are technological systems for individual use (a carpenter), but also for collective use (a team or a group of workers). Some of these collective systems have significantly influenced the make-up of specific methods of production, distribution, supply, usage or storage of different types of goods and, therefore, the shaping of stable economic, cultural and social systems. Even opponents of technological determinism must acknowledge that technological systems form an important part of many other systems, including scientific, artistic, literary and educational, as well as military, legal and administrative systems, which also function with the help of specific technological systems. A laboratory, an orchestra, a book, a classroom, a bomber aircraft, a courtroom and an office can be seen and analysed by how their technological systems operate in the aforementioned spaces, which require specific tools and skills, both on an individual basis (know-how) as well as knowing how to integrate them into a joint action or project. We can therefore say, rephrasing Quintanilla, that *the composition of human action forms the basis of various processes of technological convergence, which end up generating technological systems*.

We can also add a third to these two hypotheses (the system approach and the conception of technologies as human action). For this, we can look to Amartya Sen's idea of wealth and poverty relating to areas of capabilities and functionings. Reinterpreting this author's theses, it can be seen that technologies broaden human beings' capabilities and, depending on the extent to which these capabilities are possessed and how they are used, they also increase and enrich people's ability to function. In simple terms, many technologies have been designed precisely to increase and improve human abilities; for example, their ability to move about (cart, canoe, bicycle, motorbike, car, lorry, train, aeroplane, boat, etc.), or perceive (glasses, hearing aids, microscopes, telescopes, etc.). Whoever has a car or uses buses or the underground can work at dis-

tance from their home, as millions of people do every day in large cities. These technologies, which are in part industrial and in part social (organisation of the service, signposting, etc.) increase people's ability to move about and, ultimately, other basic ways of avoiding poverty, as they can earn a living through paid work. Urban and industrial culture is based on a range of technical systems that the majority of city-dwellers use on a daily basis: for example, the transport subsystem. This does not just mean cars, trains, roads or rail networks. What's important are the human actions that can be carried out thanks to this multiplicity of intricately linked technical systems and, particularly, the increase and improvement of human abilities that, as a whole, make it possible. This hypothesis works not only for individual abilities and activities but also for collective ones.

This justifies both the usefulness and the importance of technological convergence which, in the first instance, consists of the linking-up of two or more different objects in such a way that the increases brought by each to the area of capabilities add together. When a chain, a pedal and a wheel are joined together, a new technological system emerges based on the convergence and integration of earlier technologies. Once other technical problems have been resolved (balance, direction, braking, etc.), convergence leads to a breakthrough, the bicycle, which afterwards continues to improve thanks to accumulative improvements (tyres, lights, mudguards, etc.). The convergence and integration of several previously existing technologies into a new technological system is one of the main sources of technological innovation, and that is because such combining enables new compositions of human capacity.

Technological convergence deals with systems, actions and human capabilities, both individually and collectively. Certain great social changes have been accompanied by parallel technological changes. Technology is never the cause of social change in terms of objects and tools, but when these are part of systems brought about by both individual and collective human action, it is easier to understand why technological changes are of considerable importance in many processes of social change.

## 2. Convergence of information and communication technologies

Today, information and communication technologies constitute one of the main examples of technological convergence that has brought about profound social change, normally summarised as the emergence of a new type of society, the *informational society* (Castells 1995-97).

The informational society is often identified with the internet but, in our opinion, it is vital to distinguish between them. Firstly, because the internet is a remote space made up of interconnecting networks and computers and is not a society. Secondly, because the ICT (information and communication

technology) technological system is much more extensive than the internet. Television, radio and digital sound (MP3, MP4, electronic music), electronic money, videogames, multimedia technology, digitalised databases and metabases, virtual reality objects, telecommunication towers and satellites and, of course, remote networks that are integrated within and connected to the internet, go to make up a *new technological system*, the ICT system. This has radically transformed the production, distribution, supply, use and storage of information, facilitating the emergence of a new form of society, the information society, in which information flows become a new kind of wealth. The ICT technological system is not only the internet, although the web is deployed throughout the world. It goes without saying that the network per se is based on the functioning of a highly complex technological system that interconnects computers and flows of information worldwide, and, subsequently, individuals, institutions and different social and economic agents. Both the internet and the ICT system have enormously increased human capability in the fields of information and communication, and their success stems from this, both individually and collectively.

The different technologies integrated into this system have very different origins and functions. What is important is that they have all gradually become compatible with each other over the last few decades. Nowadays, it is possible to watch television on a computer screen or on a mobile telephone, to edit texts and digital photographs, carry out bank transactions through an electronic cashpoint or on a home computer, play videogames, visit virtual museums, attend concerts, chat and access the great depositories of scientific and humanistic knowledge of our age (magazines, digital libraries, etc.). The origins of all these technologies are very different. Many had a military beginning, which has not stopped them from evolving and becoming useful in many areas of civil life. The creation of symbolic technologies (HTML, URL codes, Unicode, jpg, compression, zip, etc.) has played a vital role in these technologies becoming mutually compatible in spite of their heterogeneous origins and designs. Both the internet and the ICT system are the result of many technological convergence processes.

The emergence of an information society has therefore been accompanied by a complex technological convergence that has managed to integrate and make compatible the most relevant information and communication technologies, such as film, photography, radio, television, computing and telecommunications. Each of these was an economic sector in itself and had significant presence in society. Consequently, convergence has not only affected the design of devices but has also involved a process of convergence among many different economic and social agents that have now placed themselves in the same social space, an electronic space or third environment (Echeverría 1999). The media, for example, strenuously resisted the internet in the last decade of the 20th century, giving the web negative publicity. Nowadays, they almost all have their own digital versions and, in particular, many different

forms of journalism have arisen (blogs) maintained by individuals and small groups of *communicologists*. ICT technological convergence has therefore not only generated a technological system but also a new social space; this is our basic thesis. In the electronic field, human capacity for action has grown thanks to the fact that long-distance and internet actions are possible, something that earlier technological systems were not capable of achieving.

In short, ICT convergence has all the characteristics we discussed in the previous section: on the one hand, it generates a new technological system, and on the other it broadens the space of human capabilities, on both an individual and collective level, and, finally, it generates a new social space in which no less than a new kind of society emerges and develops. Technological convergence is in direct correlation with a social convergence that has been occurring all over the world and has ended up consolidating a new space for individual and collective relationships. This process is entirely comprehensible if we see technologies as systems of human action, in this case as new capabilities for individual and collective action regarding information and communication.

When the United Nations organised the World Summit on the Information Society (Geneva 2003 and Tunisia 2005) and managed not only to get all the countries of the world to participate but also to agree on an extensive joint declaration and action plan, technological convergence was defined as a process of social convergence of international importance but of slow and difficult development, even though it continues to occur. ICT convergence has many different aspects: it is clearly technological but is also economic, social, cultural, legal (it is necessary to make internet legislation compatible) and political.

### 3. Technological convergence and civil society

As an instrument is used over and over, we can verify whether it's suitable for the function for which it was intended and think of improvements. Many experienced users of certain tools have come up with different ways to ensure these tools fulfil their function more quickly, with greater accuracy or efficiency, with greater ease or at a lower cost. Using technological objects means that users not only evaluate the advantages provided by these instruments but also the potential inconveniences and faults (bugs). Some of these users, the 'experts', come up with possible improvements and, in some cases, design them, implement them and put them to the test. This shows how important users are in processes of technical innovation, particularly expert users (leading users). According to Von Hippel (*Democratizing Innovation*, 2005), and as a fourth hypothesis, we can say that technological innovation is not just generated by factories and R&D departments. Suppliers, distributors and users are also sources of innovation and the latter in particular generate a very important type of social innovation, 'distributed

innovation'. In other words, once technological convergence has been accepted by society, it is users who will improve the system and generate different forms of social innovation (e.g. SMS messages, Linux, Wikipedia, social networks, etc.).

Since technologies are systems of human action and not just objects, cooperation and interaction between people lead to new actions and therefore new technological instruments to carry them out. Society not only receives and accepts (or rejects) the innovations proposed by firms and other R&D actors, it also generates innovations itself. The small or large improvements introduced are tested by many users and innovations spread very quickly because users themselves make them fashionable. As a result of these *human processes of technological convergence*, new tools and new practices ultimately appear, some of which become standards in the corresponding social or professional sector. For an innovation to be accepted socially and become a instrument of current use, it must be widely used, so that its usage becomes generalised and the corresponding object becomes a social norm. We can therefore say that *users themselves give rise to technological convergence*. Moreover, users of technology that has been previously tested through habitual use can be sources of technological innovation. This has been the case with the internet, as Manuel Castells has often highlighted, and it continues to be the case at the end of the first decade of the 21st century, as Web 1.0 gives way to Web 2.0 (Benkler 2006). The latter is characterised by a strong impulse called bottom/up, since users contribute the content and generate particularly active social networks.

We won't insist on this point, preferring instead to merely point it out, but it could be said that ICT convergence is entering a new phase in which users are the ones who promote convergence. This involves an important step towards the democratisation of the information society, although a lot still remains to be done, which can be summarised in one: it is necessary to build a "telepolis" in electronic space, affirming the primacy of *res publica* (public property) in remote networks as a whole. Web 2.0 users have started generating authentic civil spaces where a lot of people converge on the internet to meet one another and this is the beginning of constructing a global remote city. As systems of governance arise in these public networking spaces, the "telepolis" will gradually adapt.

#### 4. Nano-bio-info-cogno technological convergence

Inherent to the start of the 21st century is a new process of technological convergence that primarily affects nanotechnologies (*nano*), biotechnologies (*bio*), information technologies (*info*) and cognitive sciences (*cogno*). One of the novelties of this new integration of technological systems concerns the scale at which the aforementioned convergence can be achieved: in a nanocosmos, that is to say, at a nanometric scale. The technological system we hope to develop, namely

the NBIC (nano-bio-info-cogno) system, will not only be microcosmic but also nanocosmic and, therefore, imperceptible to view. The nano-objects/tools that go to make up the NBIC system cannot be manipulated by just any human being, since it acts at a scale of the world that, albeit real, only very recently became accessible to human perception. And this is due to the invention of tunnelling and atomic force microscopes, which have improved our perceptive capacity and enabled the representation of phenomena taking place at a nano level, as well as being able to handle small particles, altering the structure of atoms, molecules, DNA and cells by engineering materials in the nanocosmos. These two microscopes, and other complementary technologies, have made it possible to manipulate material at both an atomic and molecular level, something which no other technological system had managed. Nanotechnology has therefore broadened human capabilities, expanding them from the usual mesocosmos, where we normally perceive and act, to this nanocosmos we could not perceive before and now we can, and where we could not intervene before and now we can. NBIC convergence supposes a new example of expansion in the scope of human capabilities. Needless to say that nanotechnologies offer huge possibilities for innovation since different types of matter, both alive and inert, can be artificially reinvented on this scale.

Technologies don't just try to understand the world (observing, analysing and explaining it, and predicting phenomena and events...), as has always been the objective of modern science. They also try to transform it. The North American NBIC programme clearly states this in the title: *Converging Technologies for Improving Human Performance*.<sup>3</sup> What we want to understand is what the world is like at a nano level and, to do so, much basic research is required. That said, the ultimate aim is not knowledge but the improvement of human performance. "Converging technologies could produce enormous improvements in human abilities, such as social benefits, improving the nation's productivity and also the quality of life".<sup>4</sup> Therefore, supporters of NBIC convergence intend, right from the start, to increase human capabilities (e.g. perceptive, cognitive, communicative), as well as corporate productivity and competitiveness.

The overall aim is to modify the atomic, molecular and cellular structure of various already inert or alive materials and generate nanoparticles and nanotools that carry out functions that can be biological (attacking the DNA of carcinogenic cells), informative (to store gigas of information on a nanochip) or cognitive (using nanosensors and nanotransmitters, without giving up on improving more complex cognitive abilities). For this, a lot of basic research is necessary, since the laws of quantum mechanics apply on a nano scale and the properties of nanomaterials and nanoparticles are therefore very different to those of their counterparts at a meso- and microcosmic level. Some of these properties can be beneficial for people, while others can be harmful. It is a matter of exploiting this knowledge that must be generated and produce technological breakthroughs and innovations. On our part, we can say that the society will

always have the last word, either accepting or rejecting the innovations proposed. At the moment, there are signs of a lack of confidence and the first risks from NBIC convergence have been noted. In any case, and without exaggeration, nanotechnologies have allowed us to discover new dimensions of the material world, so that NBIC convergence will have a similar or greater importance than the aforementioned ICT convergence.

Nanotechnologies allow us to modify the basic properties of matter (cohesion, weight, duration, electrical conductivity, light absorption, etc.). The way in which they converge with biotechnologies means that the structure and properties of cells and organisms are modified, with implications for medicine, pharmacology, genetics and life sciences in general. Nano-info convergence opens up the possibility of numerous innovations in the ICT sector: quantum chips, nanosensors, nanodetectors, etc. The programme's final objective, related to cognitive sciences, consists of no less than the *conquest of the brain*, by implementing, among others, perceptive, cognitive, communicative and mnemonic capabilities of the human brain. If it were possible to implement neurone capabilities by inserting nanodevices to stimulate them, the different abilities of the human brain would be modified and, hypothetically, improved. NBIC convergence is one of the great objectives of contemporary technoscience because, if it is accomplished, it will bring radical changes to the capabilities of human action, as well as new objects and tools resulting from such convergence. NBIC convergence from the US is particularly Faustian. The ideology of transhumanism can be found everywhere but we will analyse these aspects here.

The technological convergence programmes that have been developed in different countries since 2001 have *innovation* as their general goal. The innovations promoted by the North American NBIC have governments as their ultimate goal (defence, administration), markets (efficiency, productivity), nation (worldwide leadership), society (improvement of different services) and people (better sensory and cognitive capabilities, direct communication between brains, increased life expectancy, treatment for physical and mental decline, etc.). It is not about investigating how the world is but rather transforming and improving it. On a global level, the NBIC programme has been designed to radically change markets and societies, introducing innovations that are extremely competitive and acceptable for all clients and consumers. Ultimately, the aim is to modify the habits and behaviours of individuals so that they incorporate the innovations generated by the different NBIC programmes into their daily lives. It is in this area that a new difference between science and technoscience lies. The latter surpasses the Baconian programme, which merely advocated the control and command of nature. Technoscience, however, is aimed at the transformation of people and society. That is why the relationships between technoscience and society are complex. Some technoscientific innovations are well received, others not. It is vital to identify, analyse, assess, prevent and manage risk in technoscientific policies. It is especial-

ly important to pay attention to users' criteria. Since they use NBIC technologies, much knowledge will be gained and social innovations will appear in the corresponding sector, as was the case with the ICT technological system.

The European report on NBIC convergence (2004) also leans towards a deep social transformation, but of a different nature. It has been called "Converging technologies for the European Knowledge Society"<sup>5</sup> (CTEKS), already highlighting the main goal that must be attained to promote technological convergence: to contribute towards the construction of a European knowledge society that, in line with the strategy *e-Europe 2003*, *e-Europe 2005* and *i2010*, converts the European Union into a worldwide leader of knowledge in 2010 (Lisbon Agenda 2000). Irrespective of the difference in their ultimate objectives, the EU and the US share this basic thesis: innovation is essential. In the document entitled: "Towards a European strategy for nanotechnologies"<sup>6</sup> it clearly states that "European excellence in nanosciences must finally be translated into commercially viable products and processes."<sup>7</sup>

Despite innovation being the priority, the European documents, more than the North American ones, insist on the need to investigate the risks:

"Nanotechnology must be developed in a safe and responsible manner. Ethical principles must be adhered to and potential health, safety or environmental risks scientifically studied, also in order to prepare for possible regulation. Societal impacts need to be examined and taken into account."<sup>8</sup>

Many other countries are promoting similar initiatives: Japan, Korea, Taiwan, China, Russia, Australia, Canada, India, Israel, some Latin American countries, New Zealand, the Philippines, Singapore, South Africa, Thailand, etc. Each country has its own strategies. The same can be said of the companies that fund research, development and innovation in the NBIC sector. *Converging Technologies programmes* not only try to revolutionise scientific and technological activity but also scientific policies and business and industrial activity. To carry out these programmes, a large dose of interdisciplinary work in the research teams, as well as the intervention of many other economic, political, social and legal agents, not forgetting the military, is necessary. The Nanotechnology National Initiative, approved by the US in 2000, had been requested by various US defence agencies that had been at the forefront of research, technological advances and innovation throughout the 20th century. In this case, technological convergence requires the integration of very different social and economic agents into a same technoscientific agenda, which is clearly defined in the US and EU's Converging Technologies programmes.

## 5. Conclusions

The hypotheses we proposed at the beginning are valid for interpreting these two great processes of converging technologies that are already in full development: the ICT system,

already consolidated, and the NBIC system, which has provided us with significant results but whose medium- and long-term future still remains to be seen. It is necessary to analyse each of these technological systems, the majority of which have appeared in converging processes and many of which have been promoted by the same users. It is also necessary to study the converging processes among technologies and existing systems, as will be the case with ICT (YouTube and digital television, for example), or what NBIC convergence will be like. From the above comments, although too brief and succinct in many cases, we may conclude that, in general, technological convergence always has other facets (e.g. social, economic, culture, of companies and institutions, of users, etc.), because technologies do not limit themselves to being merely tools and objects but also consist of systems of human action. Converging technology entails a convergence of human action and therefore a collaboration or cooperation between corresponding agents, be they individuals or collectives.

Technologies are never separate from the societies that promote or use them. In fact, many of the changes, improvements and innovations of technological systems come from society itself, in particular from users. With ICT and NBIC technologies, what is important is the social appropriation of the aforementioned technologies, i.e. their incorporation into people's daily lives. When this happens, a technological system integrates into a culture and influences it, but without determining it at any point. Because they are systems of human action through which the aim is to achieve valuable results, technologies and their future depend on the value that human beings apply to these actions, both in carrying them out and also in assessing their results. Ultimately, the essence of the different converging technologies consists of a confluence of opposing values and, if necessary, the integration and generation of new value systems. Each technological system has an underlying system of human values, both individual and collective. Technologies are therefore social entities. In terms of social technologies and technosciences.

## Notes

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- 2 Quintanilla, *op. cit.*, p. 34.
- 3 M. C. Roco and W. S. Bainbridge (ed.), 2001.
- 4 M. C. Roco and W. S. Bainbridge, *op. cit.*, p. IX.
- 5 A. Nordmann (coord.), 2004.
- 6 Brussels, 12.5.2004, COM(2004) 338 end.
- 7 *Ibid.*, pàg. 3.
- 8 *Ibid.*

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# Overcoming Babel: social mediation and intelligent systems in discovering, filtering, accrediting and personalising digital content

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## Abstract

*The convergence of digital content is transforming the distribution model from the centralised distribution of content to a more symmetrical model of network communication. This transformation also affects the production of content, this now being within the scope of any citizen with a computer and internet connection. The so-called Babel objection criticises this democratising effect. In this article we analyse the different mediation processes that relate content with recipients that are present both in the centralised distribution model as well as in that of network communication. The aim of this article is to show that it is viable to develop the discovery, filtering, accreditation and personalisation processes of a network communication model where consumers are also contributors.*

## Key words

*Artificial intelligence, personalisation, search, mediation.*

## Resum

*La convergència de continguts digitals transforma el model distribució: d'un model de difusió centralitzat de continguts a un model de comunicació reticular, més simètric. Aquesta transformació també afecta l'elaboració de continguts, que és a l'abast de qualsevol ciutadà amb un ordinador i connexió a internet. L'anomenada objecció Babel critica aquest efecte democratitzador. En aquest article analitzem els diferents processos de mediació que relacionen els continguts amb els destinataris i que són presents tant en el model de difusió centralitzat com en el de comunicació reticular. L'objectiu de l'article és mostrar que és viable desenvolupar processos de descobriment, filtratge, acreditació i personalització en un model de comunicació reticular on els consumidors són també contribuïdors.*

## Paraules clau

*Intel·ligència artificial, personalització, cerca, mediació.*

## Introduction

The convergence of digital content is transforming the distribution model from centralised distribution of content (from few centres to many users) to a model of network communication (from many to many). This transformation also affects the production of content, this being within the scope of any citizen with a computer and internet connection. In principle, the network communication model is symmetrical, in the sense that any node can be both consumer and creator of content at the same time, be it data, information, knowledge or culture. This democratising effect has been criticised by the so-called *Babel objection*: if everyone can talk, no-one can listen because of the resulting cacophony (information overload). If the Babel objection is right, democratisation will fail and internet citizens will stop being active contributors and become passive consumers. However, if a schema can be organised that efficiently and easily relates content and its recipients, we will be able to overcome the Babel objection.

In this article we analyse the different mediation processes that relate content with its recipients, i.e. discovering, filtering,

accrediting and personalising. These processes are present both in the centralised distribution model as well as in that of network communication, the latter merely adding a quantitative difficulty in carrying out these processes. The aim of this article is to show that it is viable to carry out processes of discovery, filtering, accreditation and personalisation in a network communication model where the consumers are also contributors. In particular, we will analyse two basic elements: a) information content provided by contributors themselves on mediation processes, and b) the use of artificial intelligence techniques in handling large amounts of data in discovery, filtering, accreditation and personalisation processes.

## Network symmetry and ownership of the material means of production and distribution

The transfer involved in any change in paradigm - currently the transformation from a distribution model (from few to many) to a network communication model (from many to many) - leads to two kinds of opposing responses: the response given from

an apocalyptic perspective and that from an integrated perspective. Umberto Eco (1964) characterised these two opposing theses (apocalyptic and integrated) with regard to the mass media of the 1960s and today we can detect some similar responses. On the one hand, that of the apocalyptic/reactionary perspective, that sees only problems in the new paradigm of internet information: cacophony, information overload, lack of credibility, etc. On the other hand, that of the integrated/revolutionary perspective, that stresses only the positive possibilities: better access to information, democratisation of the information distribution process, more potential for criticism/monitoring actions of the groups established, ease of coordinating large numbers of people, etc.

The answer is not the happy medium but accepting that there are both negative and positive aspects and analysing how we can help achieve these positive possibilities and with what mechanisms, and how we can do away with the negative effects. Technology is not neutral in this respect, nor is the legislation that limits its possible options: the mechanisms employed may destroy some of the positive possibilities or preserve some of the more negative effects.

For this reason we must first analyse the effects of the technological change not only in the sense of society and customs but also in economic and productive terms. From the most abstract point of view, this change in paradigm gives rise to a medium more similar to the telephone network (where everyone can communicate with everyone) than to the model based on publishing firms/content providers. Symmetry is a characteristic of the network structure: all the nodes are equal members of the network, all receive and transmit content. This symmetry can also be found on the network of networks, the internet, but this is not enough to explain the change in paradigm. The second factor is the personal computer that, unlike the telephone, is a medium for creating, elaborating and producing content (be it data, information, knowledge or culture) and is particularly a highly decentralised medium of production, i.e. owned by individual citizens and not by companies or the state.

It's the combination of the digital production medium (computers) and the digital distribution infrastructure (internet) within a context of decentralised ownership that transforms the political economy from an industrial information economy into a *networked information economy* (Benkler 2006). A historical example of economic change is the cost of creating newspapers at the start of the industrial economy era. According to Benkler (2006), starting up a new newspaper in the United States in 1835-1850 initially cost 10,000 dollars (in today's terms), a cost that went up to 2.5 million dollars (in today's terms). This sharp change in costs wiped out an ecosystem of small newspapers with different kinds of organisation and funding (with a weekly circulation higher than Europe in a United States of only 17 million inhabitants).

According to our experience, gained under an industrial information economy, it seems that the only two alternatives for content production are (large) market-based firms and state

companies: it's difficult for us to imagine "serious" alternatives beyond these two models. In spite of this, the ownership and financial costs of producing and distributing content have fallen extraordinarily (computers plus internet connection). This is what Yochai Benkler (2006) calls "social production", which is added to market- or state-based organisations. Consequently, the ecosystem of creating, elaborating and producing content we can expect in the near future will be much more decentralised in comparison with the industrial system.

## Discovering and filtering

Finding new content has always been carried out "formally" with guides and catalogues but also "informally" by using social networks: a friend or acquaintance tells us that such and such a radio programme plays music we might like. The internet has added the proactive possibility for a person to use search engines (like Google) to find new content. It must be noted that the first proposal for discovering content was "formal" and developed by Yahoo, attempting to make a website guide/catalogue. This catalogue was carried out manually and was not scalable because of the large number of websites in existence.

The alternative was to use web search engines, applications based on information recovery techniques adapted in order to analyse, index and recovery websites, e.g. Aliweb in 1993 and Altavista in 1995. Today Google is the most popular search engine but we must analyse the technological reason for its success: the analysis and use of user-provided content (UPC). The central idea to the PageRank algorithm used by Google is based on an analysis of particular content provided by the user: hyperlinks that relate two websites. In effect, the user declares that (the content of) the page he or she is writing is related to (the content of) the pages it is linked to. PageRank analyses the network of relations provided by users as links to assign to each page  $P$  a specific degree of importance determined by (the importance of) the pages  $P_1 \dots P_n$  referring to page  $P$ . This algorithm is based on previous work carried out in bibliometrics on citation analysis: the innovation of PageRank is that it focuses on the analysis and exploitation of a specific kind of UPC, hyperlinks, to filter or distinguish more "important" content from less "important" content.

The techniques of artificial intelligence can improve discovering and filtering processes within the context of the so-called Semantic Web. The Semantic Web, proposed by Tim Berners-Lee, the creator of the first website, is based on the "annotation" of web content using ontological terms, so that the content produced by humans can be understood by automatic intelligent systems. However, this new web technology is "sectorial": each sector requires its own ontology (a formal description of the meaning of the terms used in this sector). For example, content of a legal nature would have a legal ontology defining terms such as *fraud*, while content of a medical nature

would need a medical ontology. With regard to musical multimedia content (<<http://musicontology.com>>) this is the most developed at present and the BBC has started to apply it to its website.

Another way of improving discovery and filtering is to analyse the behaviour of user communities when they search and to learn to filter more intelligently, so that we can discover which content is really interesting for that community. University College Dublin is working on this area: instead of developing an ontology for each theme, the system learns by observing what user groups interested in football or photography or iPods do. The techniques employed are similar to those of recommendation systems, like the simple but well-known systems to recommend books on Amazon or music on AppleStore. Analysing the actions of users, when discovering and selecting what they are interested in, provides a much more personalised result for each user.

### Accrediting and personalising

While discovering and filtering are mainly concerned with the relevance of certain content for the user, a second dimension that is also important is the credibility of the content and the reputation of its origin (or sources). Without doubt, the supposed "lack of accreditation" of content, in addition to the large amount of information, is one of the most important factors within the pessimistic opinion concerning the Babel hypothesis. This pessimism concerning the possibility of a decentralised, efficient mechanism to distribute content comes from the model established by the large mass media, where these big organisations consider it their role to classify content into hierarchies, for example which content is for the front page and which should have a small or zero space allotted to it. In this model, the large number of organisations provides both diversity of hierarchy and accreditation of content (based on the reputation of the organisations). However, a criticism of the current situation is clear: the number of mass media organisations is small in order to guarantee diversity, and content is often published without much comparison with reality for reasons of immediacy.

From a citizen's and user's point of view, the accreditation provided by the mass media is quite relative: there are people who trust certain organisations and not others. This trust is due to the reputation models assigned to specific organisations and people. To overcome Babel, it is therefore necessary to create and maintain systems that can evaluate the reputation of content authors/distributors via decentralised mechanisms that replace the hierarchical mechanisms of the mass media.

Given that social reputation and accreditation are also information goods, both can be treated like any other content. Social reputation and accreditation can therefore be created in a decentralised way by the very users/producers/consumers themselves (UPC). In fact, one example of this is the website Slashdot (<<http://slashdot.org>>), which allows precisely this

and has become, for the moment, one of the technological news bulletins (*News for Nerds*). Its operational principle is very simple: users provide the URL with a news item or content in general and add a comment regarding its interest. Other users also add comments, which often run into the hundreds. Slashdot uses *ex post* peer reviews to evaluate the credibility or quality of the comments. This method is a variation on the system of scientific publication (peer revision prior to publication), in which the revision is carried out *a posteriori*.

Slashdot does not try to stop irrational or erroneous content from being published but merely compares it with elements that corroborate or refute it. Habitual users accumulate "karma points" for their good actions (or have points docked for bad actions). Consequently, a reputation mechanism is created, neutrally and automatically, that helps users to weigh up the alternatives in conflictive situations. The result is the ordering of content, i.e. a hierarchy, which has been produced, however, in a decentralised way by the very community of those interested in technological news and content. Research is currently being carried out into more sophisticated reputation models at our Artificial Intelligence Research Institute (IIIA), among others, with the aim of creating far-reaching accreditation platforms.

Finally, personalisation is typically a process that relates certain content with the affinity (interests or preferences) of a user. One of the most widely used techniques is collaborative filtering, used for example by Amazon to recommend books, films and, as also done by AppleStore, music. Collaborative filtering makes a prediction regarding the elements that might be most closely related to a person, comparing the elements that are related to other "similar" people. The way to determine that two people are similar may vary, but essentially the registered behaviour of users is compared (in the case of Amazon or AppleStore, the elements bought by each person). Apart from this technique, there is currently quite a lot of research to develop more closely adjusted recommendation systems. For example, a spin-off company of the IIIA, MyStrands (<<http://www.MyStrands.com>>) develops social recommendation technologies particularly in the world of music. Recommendation and personalisation systems are a new and very active field within artificial intelligence, with the first congress held in 2007, and they are likely to become established in the near future as a technology as ubiquitous as content searches today.

### Conclusions

The processes of decentralisation and automation that act on the discovery, filtering, accrediting and personalisation of content will certainly have consequences we cannot predict, but to end I would like to mention the importance of the phenomenon known as "the long tail". This term was coined by Chris Anderson (2006) to argue that, in the new internet cost struc-

ture, products with few clients or sales, jointly, could achieve a greater market volume than products with more clients or sales. These curves are known in statistics as Pareto tails but are often called 80/20 curves in mail order sales. This means that 20% of the products account for 80% of the sales and “the tail” is the remaining 80% of the products, which account for 20% of the sales. Current studies show that, on the internet, this curve becomes 72/28, a considerable change in practical terms. So, for example, Amazon can have an extensive catalogue that includes a lot of products with relatively low sales, i.e. niche products, but which, as a whole, generate a large part of its business.

This is relevant because the so-called “fragmentation” of content is a phenomenon that will continue to grow due to the long tail effect: increasingly more content will be created for niches, i.e. for markets that are not mass markets. The mass media is currently changing into a myriad of services and content aimed at medium or small-sized interest groups and this will continue due to the action of new technologies and cost structures. Those with an apocalyptic view may fear Babel but I have attempted to show that there are ideas and techniques that can organise this new internet galaxy in a new, decentralised and social way. However, uses and habits will change and, admittedly, this will lead to anxiety. I personally believe that nostalgia for the time when we used to all watch the same film on a single TV is mistaken.

## Note

- 1 For an example of the use of ontology in searches see <http://www.cognition.com>.

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# Technological convergence: a state of the art on the issue

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### Abstract

*The audiovisual industry is one of the country's major assets. Convergence of networks and terminals and ubiquity of access is leading to an intensive use of audiovisual media in electronic communications, whether in their traditional or new formats. In this regard, next generation networks will generalise high capacity access, leading to new uses and new ways of acting.*

*To bring about this new scenario and to maintain and establish the audiovisual sector we have today, the country must be able to offer it a sufficiently attractive environment in which to experiment with and apply these new uses and then export them elsewhere. There must be new networks if we are to generate markets where these new environments, modes of consumption, options and tools can be tried out. To allow local industry to conceive, experiment with and validate models. This is where governments can also help by carrying out projects that help to consolidate the sector.*

### Key words

*Technological convergence, telecommunications network, interactivity, IPTV, mobile TV, audiovisual consumption.*

### Resum

*La indústria audiovisual és un dels grans actius del país. La convergència de xarxes i terminals i la ubiqüitat en l'accés ens porta a un ús intensiu de l'audiovisual dins de les comunicacions electròniques, tant en els formats tradicionals com en els nous. En aquest sentit, les xarxes de nova generació permetran la generalització dels accessos de gran capacitat, la qual cosa ens durà a nous usos i noves maneres de fer.*

*Per fer realitat aquest nou escenari i mantenir i arrelar el sector audiovisual de què disposem, cal que el nostre país li ofereixi un entorn prou atractiu on experimentar i fer realitat aquests nous usos, i poder-los exportar després arreu. Cal disposar de les noves xarxes per generar mercats on experimentar amb aquests nous entorns, modes de consum, possibilitats i eines. Per permetre a la indústria local concebre, experimentar i validar models. Les administracions poden ajudar fent realitat els projectes que ajudin a consolidar el sector.*

### Paraules clau

*Convergència tecnològica, xarxes de telecomunicació, interactivitat, IPTV, televisió per mobilitat, consum audiovisual*

## 1. Telecommunications infrastructures: strategies

### 1.1. The importance of ICTs

A country's backbone is provided by its infrastructures: its roads, its railways, its power grids, etc. and also its telecommunications networks. Modern times dictate the use (both quantitative and qualitative) these are put to.

Individuals, companies and public administrations are trying to find ways to adapt to a present that is changing so quickly that it almost instantly becomes the past. A revolutionary present in post-modern terms in which concepts like *now* and *then* are constantly redefined through binary communication systems.

These days no-one would deny that telecommunications as a tool are basic to a country's competitiveness. In fact, the experience of the Nordic countries, leaders in this as in other fields, has demonstrated that there is a clear correlation between investment in education and telecommunications and the rise in a country's competitiveness.<sup>1</sup> This gives new technologies a vital role in the development of modern societies and their

competitiveness. As well as being seen as basic infrastructures on a par with electricity, water and gas, they are simultaneously across the board in areas like education and employment relations, and in the increased competitiveness and evolution of a country's production model towards a new model with higher added value.

### 1.2. Deployment of infrastructures: public intervention required

In spite of recognising the importance of these technologies, for the last ten years ICTs<sup>2</sup> have been seen as the preserve of private initiative, resulting in an unequal territorial distribution of opportunities to access these new services. Private initiative has only addressed those areas that offer the best chance of return on investment, that is, with large concentrations of population or high levels of economic activity. This *private* deployment of infrastructures has therefore left large areas without any electronic communications service cover.

Faced with this situation, it has nonetheless been observed that, in societies seen as benchmarks in the field, it is public administrations that act as their driving force, with policies that foster the creation of infrastructures, services and content and make efficient and effective use of new technologies to improve service to citizens and businesses. There has therefore been a volte face towards making public initiative responsible for creating the conditions to finally put an end to the digital divide between territories. In this respect, different administrations (the European Union and national, regional and local governments) have begun to launch a raft of programmes to bring ICTs into all sectors, and at all levels.

Similarly, electronic communications services and others including energy, transport, social and health services make up what are known as the *general-interest services*, one of the pillars of the European social model. Within the European Union, general-interest services are fundamental in guaranteeing social and territorial cohesion and economic competitiveness.

Individuals and companies quite legitimately expect the same access to quality general-interest services at affordable prices throughout the territory. For individuals, such access is an essential part of their standing as European citizens and is necessary for the full enjoyment of their fundamental rights. For companies, the availability of these services is an indispensable prior condition in any business environment that will favour competitiveness.

Thus a supply of general-interest services, in particular electronic communications, is an important factor in achieving the Union's strategic objective, proclaimed by the Council of Europe in Lisbon: "to become the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion."

Electronic communications are among the general-interest services that have seen the greatest transformation, and from this privileged position can therefore serve as a model for other services. To ensure that the stated objectives of cohesion and competitiveness are met, general-interest services must be provided subject to certain principles, among which is the key concept of *universal telecommunications service*, the right of everyone to have access to certain services (basically landline telephone and functional access to the Internet) considered to be essential.

Both on its own volition and as an integral part of the European Union, Catalonia shares these objectives of social and territorial cohesion and competitiveness. But the Catalan government's actions go one step further, pressing for universal service to be extended to cover mobile telephone service, broad-band internet and public digital terrestrial television, a wish repeatedly expressed to the European Union and other bodies. The obligation to provide electronic communications services, with their requisites of quality, reliability, safety and consumer and user protection, presupposes appropriate availability of the networks that underpin these services.

### 1.3. Deployment initiatives of the Catalan government

To ensure the availability of telecommunications and infrastructures, the Catalan government is concentrating on two lines. One in the short-term, through the Pla Catalunya Connecta,<sup>3</sup> which in its first phase to 2010 aims to bring at least mobile phone, broadband internet and DTT television access to centres of population in Catalonia with over 50 inhabitants. A second line that is being worked on in the mid and long term is to incentivise the introduction of next generation - essentially fibre optic - networks to provide the bandwidth required for future electronic communications.

But the deployment of infrastructures is not an end in itself. It could even be referred to as a *necessary evil*, in the same way as knowledge is not just an accumulation of data but what we do with it. The Catalan government's goal is to lay the foundations that will support the size and diversity of content required by society and the new business models. These structures are the scaffolding that must sustain the flow of information, which is after all the *raison d'être* of the Knowledge Society and the so-called New Economy that we wish to achieve. In other words, the infrastructures' sole aim is to allow individuals, governments and companies to benefit from electronic communications services at all times.

Irrespective of whether these infrastructures are deployed by public or private bodies and of the services they may support, it is increasingly clear that there is an inexorable trend towards technological convergence, both in networks and in services and terminals.

## 2. Technological convergence

### 2.1. Background

What we call *technological convergence* is the result of combining data transport networks with the digitalisation of their content. This will only affect the market when the networks have sufficient capacity and their content is completely digital. If one of these factors is missing, then its affect on the market is much less.

These days, any home has several electronic communication networks. Radio arrives via its receiver antenna (or the domestic installation); television (analogue or digital) arrives via radio frequency (through the television aerial) or by cable via a telecommunications operator; telephone by copper cable via a telecommunications operator, and internet access via the same copper cable (if ADSL) or the coaxial cable of the operator in question.

This setup is already changing. The new electronic communication networks are integrating services previously carried on different networks, converging them into one. Our homes will increasingly have just one inlet for one telecommunications operator, who will supply telephone, internet access, radio and

television services (and at a quality far superior to present standards, with new and improved services).

For historical reasons, television will probably follow one of two paths in Spain. Given the extensive deployment of aerials and cover throughout the country, much greater than for other electronic communication services, it seems unlikely that cable access technologies will overtake traditional radio frequency channels, at least in the short term. Indeed, the fact that the public administrations and radio broadcasters have both opted for digital terrestrial television (DTT) clearly indicates that radio frequency broadcasting technology (digital, of course) has by no means reached the end of its life cycle. However, it will soon have to start to compete with other broadcasting channels, which will come in gradually and slowly begin to gain ground.

In any case, this change affects the whole value chain of what until recently were separate markets. Content distribution networks are changing, as are players and access points; even agents who up to now were providing content and the means for its consumption. However, an analysis of these changes is beyond the scope of this article, which will be limited to providing a more technical explanation, without entering into market research or reconfiguring the value chain.

Because this change is caused by a technological change, the new environment must be understood before we examine its consequences. This technological change is what is known as technological convergence, the convergence of networks, accesses and devices.

Technological convergence arises from the digitalisation of information and its transmission. As soon as information has been digitised it can be transferred much more efficiently in information packages (known as IP technologies), the origin of the internet. In fact, the IP effect is one of the major revolutions in this market.

IP technology is not new, but it is only now, when network speed has evolved sufficiently to allow its capacities to be exploited, that we are able to digitise images and videos with high enough quality and efficiency. To make this change, both processes have had to coincide and mature for all their potential to be usable. Today, both conditions for initiating these changes are in place.

Although DTT can provide limited interactivity, only after it has been combined with a return channel following technological convergence can its new capacities be exploited. However, the increase in quality and capacity of the channels broadcast and the large installed base of reception systems give it significant margin for growth.

Conversely, the case of DAB ("digital audio broadcasting" or digital radio) is an example of improved quality that has not taken off in our market although it has penetrated other markets because formulae have been found to make users listen to digital radio in DAB format. In any case, the future of radio lies in digitalisation, although it has hung on to its existing technology pending a jump to other technologies or a development in

this technology (for example, direct streaming by wireless IP technologies). In spite of this, listeners can currently enjoy a good range of digital radio broadcasters on DTT.

## 2.2. Digitising content

Digitising content has been discussed since the 1990s. It was the first step towards what today has become consolidated in most productions for the general public. Recordings are now made using digital technology and can be easily transmitted via large-capacity networks.

Until recently this was the extent of debates by technology gurus. But today, when new networks have started to distribute such content and it is reaching consumers, and advanced consumers are already well versed in the use of new technologies, a new *crisis* is appearing in digital content, specifically concerning the formats in which this is distributed.

Everyone assumes that content must be digitised for its transfer and consumption, and so the debate is focussing on formats: people now want to interact with content, not just be passive consumers. So the debate has moved on to the consumption of content, how and where it is consumed and in which device, since these issues affect its creation, consumption and method of distribution.

Here it is worth taking a look at the first initiatives launched in different markets. For example, the series *24: Conspiracy*, adapted for mobile phone consumption (24 one-minute mobisodes, Vodafone & Fox Entertainment Group, 2004). (Other examples of mobisodes are *Lost*, *Prison Break* and *Doctor Who*, or cases like *When Evil Calls*, with 20 mobisodes of approximately 2 minutes, accessible on O2, T-Mobile and Orange as well as YouTube and MySpace). This case study<sup>4</sup> shows that not only are adaptations required in production (to adapt it to terminal screens, creation of close-ups instead of wide shots, direct, clear dialogues, etc.), but also in pace (short episodes, for easier downloading, with fast action but incorporating images based on clear fixed shots etc.).

Another aspect is television on mobile phones, for example DVB-H, which uses content already created for other broadcasting channels, less concerned with impact on production than on new consumption habits.

Furthermore, the consumer is no longer a passive link in the chain and now wants to decide what to view and when to view it. And not only with *à la carte content* but also the place and the device. The need, already expressed by spectators, to interact with content must be borne in mind. Now people don't want to be a mere *spectator*, a figure waiting for the distributor to give them what they want (although this does not mean that this facility will disappear). This is a new *actor*, not just a spectator wanting to interact. The first examples of this phenomenon have been via decoders, by means of the telephone line, but uncertainty about the economic cost made most users disconnect the line from the decoder.

However, the success of SMS messages as a return channel (and the business generated) has created new expectations and

new promises still to be met. In addition, now that the market has changed and flat rates and permanent internet connection have become the norm throughout the country, new initiatives may appear in order to take advantage of these changes (now that flat rates no longer attract the suspicion mentioned above).

So new uses of the internet also influence audiovisual consumption. Young people (the *Cut & Paste* or *Google Generation*, as they are known) prefer interactive systems, turning their backs on the passive consumption of information. According to a report by University College London<sup>5</sup> on the use of networks among young people, they prefer visual to textual information. However, an interesting debate has arisen on the impact of the internet on reading and whether it is affecting the ability to concentrate.

In particular, the article by Nicholas G. Carr<sup>6</sup> "Is Google Making Us Stupid?: What the internet is doing to our brains", published in the magazine *The Atlantic Monthly*<sup>7</sup> July/August 2008, has created a debate on the blogosphere that has even reached scientific journals like *Edge.org*. Specifically, the question raised is whether new habits of searching for information are affecting our ability for deep concentration. Putting to one side the negative posture of Carr, the debate has gone beyond this and is now analysing how searching for information is evolving.<sup>8</sup>

Although the appearance of the calculator affected most people's ability to do arithmetical calculations, new abilities with search engines seem to affect both memory (why retain information if you know where to find it if you need it?) and consumption of information (the UCL study analyses user behaviour on two research websites –one of the British Library, and the other of the Joint Information Systems Committee– and it concludes that users –of research!– were glancing at information and jumping to the next item, instead of studying it properly).

This change in habits is also affecting the audiovisual field, where products must be lively to attract and retain the spectator. And of course, advertising, which has to find new ways to keep its target's attention.

### 2.3. Next generation or convergent networks

New commercial offers currently entering the market are considerably increasing the access speed of electronic communication networks. These offers are the result of operators' efforts to renew network technology, efforts that were previously internal to the network and are now reaching users. The renewal of network architectures must allow for:

- Network convergence
- Greater efficiency in network management, operation and maintenance (cost savings for operators)
- New capacities for users

#### 2.3.1. The new capacities

The new networks have great capacities for data access and are seen as the natural evolution of ADSL, but they also include other tools like facilities to offer services managed by others or

symmetrical speeds for uploading and downloading information. One of the biggest limitations affecting current commercial DSL technology available in our market (apart from access speed) is that information can be downloaded from the internet at 6, 10, 20 or 30 Mbps, but the speed is much slower when uploading the user's information onto the internet. This is not so in other markets, which have DSL technologies with symmetrical up- and downloading speeds (it was the operators' market decision to introduce unsymmetrical access speeds).

The new networks are expected to improve speeds and to increase symmetrical connections for uploading and downloading information on the internet. Although up to now most users have used the internet to download information, the new applications, where the user is the active party in the communication (Web 2.0 applications, including social networks, user publications or collaborative work) now require the user to be able to supply information to the network and not just obtain it. This is an important change in use in the domestic area, while in the business area (above all concerning collaborative work) this was already happening.

At first, when modem connections were being used and speeds of 256 Kbps being reached, it was said that ADSL did not have much of a market, because only a small part of the market was prepared to pay more to take advantage of increased speed and quality. These days, curiously, the same arguments are being made, but the technologies referred to are xDSL and FTTH. If we compare what we were paying for 256 Kbps access a few years ago with what we pay today for 3 Mbps access, we can see (after updating for inflation and flat rates), that the cost is equivalent. It is to be hoped that, although offers with the greatest capacity target businesses and advanced users first, there is an adoption curve similar to that of ADSL, and the price will then quickly even out.

The basic connection, which today might be 3 Mbps, is expected to be updated and to increase to 10 or 50 Mbps. This will give enough domestic connectivity for high capacity broadcasting/reception of video and audio, which could bring a real change of scenario. Together with flat rates (the *always on* option), this is expected to influence consumption habits and to make multimedia on IP and Web 2.0 applications the norm.

#### 2.3.2. Convergence in fixed and mobile networks

One important aspect of convergence is the cost savings it represents for operators. Even allowing for investment to modernise equipment and the core network, it has been calculated that cost savings in operation and maintenance could amount to between 70 and 80%.<sup>9</sup>

This technological change also lets operators manage both fixed and mobile networks, and so we may soon start to see commercial deals combining the two technologies, or services exploiting the resources of both networks. Vodafone's takeover of Tele2/Comunitel is already moving the market in this direction.

Another factor is that mobile data services increase the

capacity requirements of mobile operators' infrastructures, and fibre optic must be brought to communications towers and aeriels. This means that management of fixed and mobile networks will become increasingly integrated.

What is happening, then, is a technological convergence resulting from network convergence, and at the same time a diversification of final access (DSL technologies, fibre optics or mobile access, either by classic mobile telephone networks like Movistar, Vodafone or Orange; or via new entrants like Iberbanda, which offers WiMAX access). One factor to be borne in mind is that final access, known as the *last mile* or *last metre* in the telecoms industry, is the most expensive part of a network. In this regard, mobile alternatives may become important agents in the market over the next few years. Although mobile access is currently no substitute for fixed access, in future the cost savings in installation and other advantages may raise the profile of mobile technologies still further.

### 2.3.3. Mobile access

The first offers in *mobile broadband* from mobile telephone operators are just starting to appear. And although current rates are not yet comparable to those for fixed broadband, it is a first step.

The reason why *mobile broadband* offers are not comparable to fixed broadband is that their capacities are not yet comparable, and because their quality suffers when connection volume exceeds a specific threshold. But the technology is making progress in this direction to increase capacity.

From digital mobile telephone service (GSM) we went over to mobile telephones that permitted data connections at a slightly lower capacity (GPRS) and third generation (UMTS), which already allows for mobile data. This is currently improving because these mobile data connections have greater capacity and quality. In fact, now UMTS installations are being replaced by the improved HSPA, and new and more ambitious technologies are already being planned (e.g. LTE).

Apart from this, coming from the IT market we are seeing the evolution of wireless connections: from Wi-Fi to WiMAX, high-capacity wireless access comparable to DSL technologies. We now have a new entrant for resolving the *last mile* problem, not from the mobile phone market but from the computer market. In Catalonia this technology is used by Iberbanda, which operates the Catalan government's broadband network. And already the WiMAX Mobile, a development of the current WiMAX with new mobile facilities, is also planned.

Mobile access is therefore rapidly developing towards greater capacity and allows for systems and accesses that are evolving towards mobile broadband, already encouraging serious efforts to take advantage of services with audiovisuals in mobile networks.

## 2.4. The impact of convergence on audiovisual consumption

As we have seen, network convergence will mean an increase

in the consumption of electronic communications caused by the increase in capacities and new uses. A mass market like the audiovisual field cannot miss out on this change in use and must employ and exploit the new capacities to its advantage.

### 2.4.1. Passive consumption

Additional channels have already been activated to reinforce traditional consumption. Some television channels are advertising their websites where they offer exclusive episodes or extra information and services using the brand image of the channel's own productions. That is, new channels are already being used to attract consumers and strengthen the link created with the brand.

But contrary to the most progressive views, it is generally accepted that passive consumption of content will continue to be the public's preferred mode of consumption for at least some time to come (see our opinion on DTT).

In spite of this, the passive consumption business model is increasingly seen as out of date. What will probably happen is that alternative channels will increasingly come to reinforce new proposals, since it is on these channels where income will show most growth over the next few years, and they may become the decisive factor when undertaking new productions.

But we should also discard the most negative forecasts. The current deployment of aeriels and penetration of radio frequency channels means that the model of television channels as the main content distributors is still seen as dominant for the foreseeable future.

Finally, there is steady progress in demand for consumption not bound by broadcasting time but by consumer preference. Although this used to be resolved by repeating the content at other times (for example, at weekends during low viewing hours), now there are other platforms where this is possible, like the internet or the mobile.

### 2.4.2. The new models of active consumption

Although active consumption began on (and for) the internet, it is hoped that it will soon extend further, taking advantage of the new domestic platforms.

Initiatives like YouTube have created a trend but are still far from being a major channel of information like television. But moves by operators like the Corporació Catalana de Mitjans Audiovisuals, who are exploring interactivity with *3alacarta* <<http://www.3alacarta.cat>>, reveal the first attempts at this.

But the capacity to view earlier broadcasts (like the *3alacarta* initiative or the clips broadcast by YouTube) is not the concept of active consumption. Active consumption is characterised by interactivity between consumers and content, whose course they can change or whose evolution they can influence. Two examples will clarify the idea.

One example is a video game, an example of total interactivity, where the player decides the result of the plot. Another example would be SMS voting during a television programme, where interactivity or the sum of interactions determines the

outcome of a contest or the majority position faced with a specific choice.

The internet is being used to explore different options from a range of possibilities. From initiatives where the spectator interacts fully with the producer of the content (videoblogs and readers' comments, for example, that make up a new global content that feeds back into the whole) to online games, where the producers of the content get together to play a game.

#### 2.4.3. Terminals, a battle still to be addressed

Not so long ago, you needed a different gadget, device or terminal for each type of content you wanted to enjoy: television, playing music, radio, access to the internet, telephone, your location (GPS) or photographs, among others. And there were different gadgets for listening to music at home and while exercising.

Now all that has changed. The content we used to need several gadgets to enjoy is now converging into a single increasingly mobile terminal, where *mobile* means it can be carried and used everywhere. We are also seeing the opposite: gadgets devoted exclusively to one specific use in a specific situation (for example, the iPod or Walkman).

On the other hand, the computer is a mature appliance that concentrates a range of content traditionally only accessible separately: television, music, the printed press, games and many more.

Mobile phones have accustomed consumers to mobility, first with voice and SMS, later branching out as recorders (and creators), cameras that could send images, and now reaching beyond the scope of a simple telephone to become mobile appliances that can access all kinds of content by using their connectivity.

Consumers of content want all this, but they also want it wherever they are (ubiquity) and at any time: in the cafe having breakfast, on the underground going to work, on the beach while on holiday, etc.

So we are actually seeing a dual trend, a concentration but also a specialisation. Up to now this made sense, when it was associated with quality. We had the high fidelity music centre at home and the transistor radio when on the move. But today, quality has improved and is comparable in home and mobile situations, something that is quite new. And furthermore, not just the user's profile or mobility must be considered but also the environment in which the content is to be shared or otherwise, or whether people around are to participate.

As well as the challenges we have already noted – combining content, packaging services, sizing communication networks first for data volume and second for mobility – there is also the design of terminals that are either multi-technological and can display content from different channels, or can reproduce multiple content from a single channel.

The tendency is towards unification. The same multi-technology mobile terminal could be connected up to a mobile television network while also accessing the internet via another technology, sharing content through proximity technology and, of

course, reproducing all existing audio and video formats and listening to the radio.

This terminal can also be simplified, however, and fitted with a mobile broadband connection through which all content is delivered, whether put together by a single supplier or located separately by the user.

The cocktail made up of content, technologies, access networks and terminals is starting to take shape. It is already possible to find mobile terminals that can reproduce multiple technologies, accessing the internet with broadband, locating one's position by satellite and maps, acting as a mobile office while being the ever-ready recording gadget: a camera, a video recorder, and with the connectivity required to share all this instantaneously on the internet using a social network.

It can be said that the technological challenge of integrating so many features into a single mobile pocket terminal has been achieved, given the scale of miniaturisation we have become accustomed to from terminal manufacturers. But this also requires users to be experts in the technology, as well as the highly intelligent management of available resources to provide the best solution in every environment.

One school of thought is that a single terminal will be too expensive and/or complex, and that it can be deduced from the arguments above that no single terminal will dominate the audiovisual market, but rather terminals will differ with the user's profile and where they are. Terminals will incorporate more than one kind of connectivity, and the most suitable will be selected. In fact, devices that had functioned *in isolation* from the world will start to share information with the world, thereby multiplying today's possibilities.

The challenges facing the electronic industry, then, are still very daunting, and it is difficult to predict a solution. But as we have said, the main challenges are to combine content, package services and offer them via a single network that connects with the consumer then connects with the mobile terminal that the consumer carries in his or her pocket; or to successfully determine the device for a specific user profile (echoing the success of Apple, for example).

#### 2.4.4. The television of the future

Focussing on the home, a battle is being waged that will set the trends among new agents on the market. The battle between television and the computer. There are two opposing stances in the market that will have no option but to converge. On one side is the traditional television set, which via external decoders is progressing rapidly towards becoming a new, more interactive device with new capacities for recording content, opening up to the outside world and allowing new inputs (from memory sticks to an internet connection). On the other is the computer, which is incorporating multimedia and television reception capacities (or at least receiving television signals via the internet).

Furthermore, the new plasma or LCD screens already incorporate inputs to turn them into monitors for either of the two

systems, so the battle to decide which electronic platform is to prevail is now in earnest.

But this is not a battle that will be decided in Catalonia: the electronics industry is sufficiently globalised for it to be decided in the headquarters of the multinationals involved. And we cannot rule out a new hybrid apparatus that will draw from the advantages of both devices combined (for example, the games console).

While those of us with twentieth-century mindsets are used to consuming quality television, the next generation, more influenced by the twenty-first than the twentieth century, are tending more towards YouTube, which has many advantages but quality is not one of them. So to consume content on large panoramic screens we will have to improve the quality of content on the internet or introduce new methods (it has been calculated that, at speeds of 10 Mbps, good quality films can already be downloaded from the internet in real time, so we may be in for some surprises in the near future).

Added to all this is the tremendous impact of the next technological evolution: high definition, which represents an unprecedented leap forward in quality. The user's experience on first seeing an audiovisual in HD is like discovering a new world and a new way of experiencing audiovisuals.

Although traditional broadcast channels will still dominate audiovisual communication for some time to come, consumption will start to grow on alternative channels (the internet, mobiles, devices with connectivity, etc.). So new business models will appear, as may productions specialising in particular alternative channels developed for specific user profiles.

It can be predicted that the increase in channels (in DTT but also in the other media) will lead to a new, more fragmented user (consumer) and a specific kind of consumption. But as these alternative business models emerge, production will increasingly have to cater for the new channels and develop marketing oriented to these new, more precise profiles.

What is certain, however, is that users have changed. They are no longer last century's TV viewers, sprawled on the couch. Users are now content consumers with a single terminal in their pocket from which they wish to communicate, who want to enjoy what interests them at all times without considering where they are or sacrificing their mobility, without depending on any preordained broadcast time, and when they want information it has to be here and now. But they may also want another, higher quality service, with a panoramic screen, as an alternative kind of recreation.

#### 2.4.5. The mobile phone of the future

When physical diaries were in common use, some people preferred small pocket diaries to do their planning on the move, while others preferred large book format models in which they could take notes at meetings. The trend in mobile phones is following the same line of development, defining user profiles and adjusting to their needs (and this may also be a guide for the television of the future).

So we have small, lightweight devices with standard features for people who only want their phone to make calls and be contactable. Others will adapt to the profile of older people, with simple ergonomically designed keypads for use even without glasses and easy to carry around. While at the opposite extreme, there are specialist terminals whose owners want a portable office or portable multimedia (either in the business or leisure profile).

So the mobile phone of the future will not be any one phone in particular but multiple phones adapted to the different profiles of demand. What will certainly be true, though, is that multimedia options will come into general use, particularly as they get cheaper and mobile data connections become widely available.

Special reference must be made here to television by mobile. There are markets where this kind of mobile television already exists due to the increase in capacity of terminals, substantial improvements in terminal screens and technology (DVB-H standard, which allows DTT to be viewed on a mobile, to put it in layman's terms).<sup>10</sup> Users' experience is very positive: although the screen does have its limitations, it lets users consult content live (as it is broadcast, for instance news broadcasts) or follow their favourite series when they are not at home. But the use of mobiles to watch television is really a substitute for when you can't be at home, and not for the broadcast channel itself, since the small screen bears no comparison to today's panoramic screens. So although this could be an interesting market and will certainly affect advertising, for example, consumption of broadcast television on the mobile is still seen as a substitute and for occasional consumption.

#### 2.4.6. A camera with broadband internet?

But there is one emerging group of new devices that will also have broadband access and that is not yet available on the market. Can you imagine a camera with access to the internet? That is what the industry's multinationals are planning. This particular example is taken from Intel, whose Barcelona Intel Labs are coordinating world research on chips that will bring connectivity to these devices, which are expected to appear on the market in the near future.

A camera with broadband access might seem strange to those of us born last century, but it could allow our photo shop to print up our photographs and send them straight to our home, or let users upload photographs directly to the internet (to Facebook, for example) and share them almost in real time. In fact these days, most mobile phone terminals are already cameras linked up to the internet.

Experts believe that the change will happen when these chips have been miniaturised and their price has come down to US\$30. They could then be included in any product as a basic option, as already happens with computers that include Wi-Fi (soon to be WiMAX) as a basic option. It has been calculated that this could happen in 2009, and they could be on the market by 2010.

So the market will very soon have a whole range of gadgets equipped to share their information through multiple technologies, and we will be able to choose between them depending on our operator or our current situation.

### 3. A view of the future

The audiovisual market must make a turnaround in the near future. This may come from technological change, the convergence of networks, but also because convergence will allow services to be distributed on more channels (which may or may not require formats to be adapted).

The connectivity model and how consumers are targeted are also changing. Advertising campaigns can be directed through multiple networks and accesses (through TV, but also through Bluetooth or WiMAX in large shopping centres). Such invasive marketing may seem strange today but, if we imagine a boy who is hooked on a certain TV series, his modes of consumption may vary and he may accept invasive advertising so as to find out about the new merchandising for the series while he is walking around a shopping centre.

We have already said that the passive consumption of television (the broadcast model, whether on the screen at home or on a mobile) is thought to have a long way to go. But young people are increasingly adopting models of consumption based on interactivity, and it is not surprising to find advertising popping up during video games, or wanting to decide the end of a series by interacting with it, or requesting certain events to be included in the production by the series creators.

So there is not only technological uncertainty here. There is also the uncertainty of how users will interact (or want to interact) with these new possibilities and the new business models they will be offered. Will operators of telephone and internet networks, either fixed or mobile, open up to new agents or will they want to maintain their present vertical integration? Will broadcasters become producers of content for the different broadcasting windows? Will producers be able to incorporate and adapt to these new requirements for interactivity, or will the users themselves take over? There are still many questions with very open answers, auguring an even more fascinating future.

### Notes

- 1 Study by the International Monetary Fund, IMF, 2007.
- 2 Information and Communication Technologies, ICTs.
- 3 <<http://www.catalunyaconnecta.cat>>
- 4 <[http://en.wikipedia.org/wiki/List\\_of\\_24\\_\(TV\\_series\)\\_media](http://en.wikipedia.org/wiki/List_of_24_(TV_series)_media)>; <[http://en.wikipedia.org/wiki/24:\\_Conspiracy](http://en.wikipedia.org/wiki/24:_Conspiracy)>
- 5 UCL forms part of the University of London (<<http://www.london.ac.uk>>) and the report can be found at <<http://www.bl.uk/news/pdf/googlegen.pdf>> (January 2008).
- 6 <[http://en.wikipedia.org/wiki/Nicholas\\_Carr](http://en.wikipedia.org/wiki/Nicholas_Carr)>
- 7 <<http://www.theatlantic.com>>
- 8 Users jumped from one article to another, read one or two pages and clicked on the next one, normally without going back. The average time devoted to the reading of an electronic book was four minutes, eight in the case of an electronic newspaper.
- 9 Data from the Public Consultation of the European Commission on next generation access networks, 2008.
- 10 It should be noted that, in oriental markets, for example Japan, DBV-H is not used since broadcasting follows other standards.

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# Future trends in audiovisuals

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## Abstract

*The aim of this article is not to foretell the future, but rather to help us understand the present. It describes a set of current trends that will become stronger in the upcoming years and that will shape the future of the audiovisual industry. Such trends are grouped into three main areas: technological developments, consumer habits and political and economic tendencies. In the final section, the article presents an overview of a number of trends that point to the disappearance of the television set, a transformation of today's television channels and a necessary reconsideration of the public broadcasting service, which is believed to be clearly vulnerable to these trends.*

## Key words

*Future, interactive network, asynchrony, financing, public service.*

## Resum

*L'article pretén, més que pronosticar el futur, ajudar a fer comprendre el present. Descriu un conjunt de tendències actuals que es reforçaran en els propers anys i que condicionaran l'evolució de l'audiovisual. Ho fa agrupant-les en tres àmbits: tecnològic, hàbits de consum i políticoeconòmic. Acaba dibuixant unes tendències cap a la desaparició dels televisors, una transformació de les cadenes de televisió i un necessari replantejament del servei públic audiovisual que considera clarament amenaçat per les tendències descrites.*

## Paraules clau

*Futur, xarxa interactiva, asincronia, finançament, servei públic.*

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## 1. Introduction

The CAC publication requested that I offer a description of the consequences of the analogue-to-digital switchover in audiovisual media and, more specifically, in television. Such a task would require me to offer an outlook on the evolution of this medium and therefore a description of the television of the future.

Before I begin, however, I must state that I do not plan to discuss this. I would not dare describe the future. From my point of view, anyone who does so is simply acting out of imprudence. Fortunately, the future is not written. If it were written and could be read, I am not quite sure what we would all be doing here.

Though the future is not written, it is indeed influenced. While many future scenarios are possible, the same does not go for all imaginable outlooks. The realities of the future will be the result of the innovative ability of people and organisations that work in a setting equipped with certain environmental conditions (available technologies, economic or political regulations, social or cultural habits, etc.). Some of these environmental conditions open up new possibilities, broaden our freedom and enable us to do things that were not possible before. Others, in contrast, limit the capacity for creativity and change and therefore hinder the effective materialisation of

ideas. This distinction marks the difference between innovation and utopia. Envisioned yet impossible ideas are utopias; imagined, achievable and achieved ideas are innovations.

In this article, I will endeavour to describe some of these influential factors upon which the future models will have to be built. To explain them, I will attempt to identify them in the current background of the industry, since the trends that are happening today and taking root are the ones that will affect the future. Not everything that is happening today is important, nor will it all have the same long-term potential. Not everything that seems important today actually is. In this respect, separating the chaff from the wheat can therefore be very useful for looking into the future.

In a word, rather than forecasting the future, I have set out to help us understand the present better.

To do so, I will describe and explain three groups of trends that appear to be taking root today and which I believe will continue or become even stronger in the coming years.

Given the difficulty in clearly separating certain trends from others, since they mutually influence one another, I will group them into three general areas: technological trends, social habits, and economic and political trends. This will help my explanation, as all these trends are intricately intertwined.

This description will undoubtedly give rise to approaches applicable to the audiovisual sector as a whole. However, I

cannot neglect, nor do I wish to hide, my particular concern for the future of the public audiovisual service. As a result, in my outlook I will focus more on this aspect, given both my interest and experience.

## 2. Technological trends

**A. Digitalisation.** In other words, the use of the numerical code for the transmission, storage and processing of all types of information.

In a sense, this is the mother of virtually all the other trends. As we will see, all the following trends hinge on our progress in working with bits. The ability to encode all information into bits has transformed what was initially a technical information revolution into a social revolution in communication and information.

Rather than storing or transmitting a piece of information by means of a natural phenomenon, the digital code essentially consists of saving or transmitting the numerical measurement of such a phenomenon. As opposed to transmitting or storing a wave (sound, light, etc.), what is stored or transmitted is the numerical information (frequency, amplitude, etc.) that describes such a wave and enables it to be identified and reproduced. Digitalisation has converted all kinds of information into numerical information, which is expressed in bits.

Technological progress has incredibly increased the capacity for bit storage and transmission. In view of our virtual limitless use and manipulation of numbers and our ability to express any type of information in numerical terms, we are now in the midst of the information revolution.

**B. From cable to fibre optics.** For many years, the telephone cable that has reached our homes has had a capacity of several dozen Kbits per second. Though this capacity is entirely sufficient for a conversation, it is not enough to comfortably enable other uses without testing our patience – as we all saw in the early days of the internet. The use of compression technologies (such as the DSL type) have enabled us “to send bits through the same tube at a higher pressure”, yet still the capacity is limited to a few Mbits per second (Mbps). Once fibre optics, which are now being used for main connections, come to all our homes, these limits will be easily overcome.

**C. From the broadcasting network to the interconnected network.** The last decades of the 20<sup>th</sup> century saw the coexistence of two completely different types of communication networks with opposing topologies and features.

The first is the telephone network, in which a user can connect with any other user (multipoint), and where all users can send and receive information (bidirectional) yet with a limited transmission capacity (Kbits per second, narrow band).

The second is the “television” network, in which a single point on the network transmits information to the users, who in turn

can only receive information. In this network, the users cannot connect with one another and the information only circulates in one direction (point-multipoint and unidirectional). However, the transmission capacity of this network is considerable (Mbits per second; broadband).

The convergence of these two networks has given rise to the “broadband internet” network, which enjoys the advantages of both. In other words, everyone can connect with everyone, everyone can send and receive information and the capacity is large enough to send voice, text, data, graphics, images and videos. Thus, we now have a multi-point bidirectional and broadband network.

**D. From silicon memory to magnetic and optical disks.** Capacity to memorise bits – and therefore to store information – has increased extraordinarily. At the end of the 20<sup>th</sup> century, silicon chips took us from Kbits to Mbits. Now, external disks have taken us to Gbits, and we will soon be measuring memory in Tbits. This implies a one-billion-fold increase in capacity in only 40 years.

Bearing in mind, as a reference, that the memory capacity of the human brain is not quite one Gbit and that a 1-Tbit disk can hold the text of one million books or 500 hours of high-quality video, it is safe to say that we have surpassed all the limits of our needs. Moreover, for an absurdly low cost we can store an immense amount of memory at any point on the network.

**E. From the cathode tube to the flat screen.** Until recently, all screens (television and computer) were based on cathode tube technology. This technology has at least three major drawbacks. The first problem is that the tube is a three-dimensional element and requires a cubic container. In other words, the larger the screen, the deeper the depth of the box. The second limitation is that the television is extremely heavy and impossible to transport. Finally, the television has a limited range of sizes, as it is impossible to make very large – or very small – screens. Different flat-screen technologies have given rise to lightweight depth-free screens in sizes ranging from very small to increasingly larger sizes, with the advent of flexible and roll-up screens on the horizon.

This technology will make it possible to install screens everywhere and to integrate them, hide them if necessary, and conveniently transport them from one place to another.

**F. From waves to cable and vice versa.** For many years – the entire second half of the 20<sup>th</sup> century – telephone transmission was carried out by means of cable, while television transmission was via waves. This was rather absurd, as the telephone, which is a “personal” device, was connected to the wall by a cable. Hence the great success of mobile phones at the end of the century.

Though the situation is very different in different countries, and with varying degrees of intensity, television transmission

has progressed from waves to cable to such point that, in some areas of Europe, there is no longer a single television antenna on the rooftops.

On the other hand, small places in many buildings, commercial areas and other locations have seen a proliferation of Wi-Fi zones, where all network connections are via waves, making for remarkable savings in cable and enabling a new type of mobility.

This is leading us towards a new conception of the unified mixed network, with a predominance of cable (and satellite, yet with certain drawbacks) for distance transmission, and wave transmission for local distribution.

### 3. Trends in audiovisual consumer habits

All these developments allow and at times require new models of audiovisual content consumption, engendering trends that in turn gradually accelerate. This does not mean that everyone will follow them or that they will change consumer habits. Rather, it suggests that users will have a broader range of possibilities to choose how they wish to consume audiovisual products. Some will continue to be traditional consumers due to inertia or lack of information or confidence, and others will cling to the new opportunities. Undoubtedly, the younger the people, the stronger their inclination to change. Trends will eventually become mainstream although, in all certainty, diverse customs will coexist for a long time. By virtue of this fact, we must expect a far more complex and even fragmented society. It has become commonplace to speak of “digital natives” and “digital immigrants” to distinguish between those born in the digital era from those who had to immigrate from the analogue era, often with some difficulty.

**A. From synchronous reception to asynchronous consumption.** The members of primitive societies (before Babylonia) could only transmit information orally and by means of signs. In both such cases, to do so, the individuals had to be in the same place at the same time. The invention of writing broke the barrier of time and space, thanks to the invention of a code (letters, ideograms) and the advent of a physical storage place outside of the brain (papyrus, parchments, books, etc.). Johannes Gutenberg brought the use of written transmission to the masses, by making books abundant in number and low in cost.

Today this phenomenon is repeating itself in the field of audiovisual transmission. With the conventional television system, the viewer must see a “programme” at the time when it is broadcast. In other words, the viewer must coincide with the broadcaster in time, though not in space. Therein resides the importance of “programming” for the different channels.

Yet this requirement began to die out just as it became inexpensive to introduce bit storage at any point on the network. The letters of forty or fifty centuries ago are the bits of today,

and what was once the book and written documents are now electronic memories and particularly hard disks.

The consumption of audiovisual products can continue to be *pushed* to the viewer (receiving what is sent to him/her), yet it will also increasingly be *pulled* (seeing what he/she wants, when he/she wants to).

**B. From the television set to multiple screen reception.** The device that enables viewers to watch television has become an integrating element within our culture. It has become so identified with its function that many people do not say “the television set” but rather “the television”.

Yet that era is now over. To receive audiovisual content, the user simply needs a screen and a set of speakers. Screens and speakers are found everywhere: on the computer, on the telephone, on the GPS and elsewhere. All these items are potential television devices and, in fact, are now acting as receivers.

As a result, in the future we will be receiving “television” through many different types of screens: small and large, mobile, wall-mounted or pocket handheld screens. Moreover, at the same time these screens will also serve as other applications (telephone conversations with eye contact, viewing photographs, working with the computer, etc.).

In the near future, nobody will go to purchase “a television set”, since such appliances will no longer be manufactured.

**C. From the passive consumer to the interactive user.** The network to which we will be connected will be an interactive and broadband network. Consumers will have the option of being both receivers and senders at the same time. Today, many highly interactive communities on the internet are offering us a glimpse of the direction in which things will progress. These networks operate based on users connected by means of a computer. For many people, the computer represents a barrier; however, as television sets become digital and the use of the PVR (personal video recorder) becomes more widespread, the computer will become accessible to many more people, particularly if PVRs are user-friendly and come with built-in electronic guides for programming and content searches.

From the perspective of television, this change will immensely increase “viewer” participation in all content. Such participation will take on very different shapes, depending on the specific features of the content (telephone calls, electronic mail, SMS, live chats, sending photos, sending news and videos, unexpected initiatives, etc.).

**D. From an ostensibly free service to transparent financing.** All the audiovisual media have a problem in terms of funding, as the result of a single original sin: media content is seemingly free. Clearly this is not the same throughout the media, nor does the same thing happen in every country. However, generally speaking, users are accustomed to the fact that listening to the radio, watching television or downloading content from the internet is free. Many countries have implemented a special tax

to watch television, yet here in Spain we pay for it through public funding and massive advertising.

In recent years, new forms of financing have gradually emerged: subscriber television channels, pay-per-view content, community fees, music and video shops on the internet and others. This will gradually become more widespread in all the media, better reflecting the reality of the market and helping to solve the problems stemming from content creation and production costs.

This will lead to an important question, which I will discuss later: Is public funding for audiovisual service necessary, as it is in the healthcare or educational sectors?

#### 4. Political and economic trends

**A. Increasing difficulties to finance production.** The number of “channels” to access audiovisual content is multiplying at an extraordinary pace. On the one hand, the number of television channels is growing and, with the advent of DTT, the industry has fallen into the error of using the enhanced transmission capacity to increase the number of channels of each operator, rather than to offer fewer channels with higher technical quality (HDTV). On the other hand, access to content is offered through other platforms (internet, telephone operators, cable operators, etc.), often in addition to previous platforms.

Some of these channels have their own financing, as the user pays for what he/she receives by some means. However, in general, we continue to be entrenched in the free-of-charge model, both for television and on the internet, meaning that all production and transmission must be financed by advertising or public funding. I believe that both these sources have reached their limit. As regards public funding, I will take up this issue later on. At this point, I would like to express my belief that advertising will not be able to cover the costs of the production needed to satisfactorily fill the thousands and thousands of hours broadcast on the hundreds of channels that will be available to us in the forthcoming years. I have been sure of this for some years now. However, if the current property crisis, and particularly the financial crisis, reduce the levels of today’s excessive and unnecessary consumption, in part caused by advertising, the effect will be even greater.

Obviously, there is a solution to this – a bad solution – that has been applied for several years now: lowering the cost of production, and at the same time lowering the quality of the product. There is no need to delve any further into this, although anyone can suppose the considerable difference in cost between an hour of a quality film or series and an hour of a gossip show in which two relatively unknown guests are encouraged by a presenter to argue about third-party hearsay or the infidelity or rumoured acts of one or the other.

**B. Increasing funding difficulties for public television.** In the coming years, the budgets of all the public administrations will

be in dire straits. One of the causes is structural and has been going on for a couple of decades now: it is becoming increasingly impossible to combine the gradual reduction or elimination of taxes with the logical expansion in the scope and quality of public services. The second cause is the impact of the current economic situation on public revenue over a number of years (which we hope to be few).

Under these circumstances, governments will have to be highly selective in their priorities and very demanding in the cost benefit analysis of each service they fund (public health, education, social service, research, safety, audiovisuals, etc.).

I am a firm supporter of public service in the audiovisual sector. For this reason, I would like to warn of two very clear dangers that could be critical and problematic in this cost benefit analysis for public television.

As regards the cost of channels, it must be noted that, throughout Europe, the model followed by television for the past half century was not a “good model of efficiency”. Some channels can partially justify their cost with their quality; however, there are many that are both expensive and mediocre. For some time now, different initiatives have been implemented to remedy this situation, some of which have been quite traumatic. Such initiatives are essential and time will tell whether they will be efficient enough. Although not everyone needs a traumatic change, everyone does need to take into account a certain principle and conviction: to survive, it will not be enough to make a good product. Rather, it will be necessary to make a good product and to demonstrate that it has been made at the best possible price.

**C. Difficulties and contradictions in evaluating service.** The second part of the ratio between cost and benefit involves a great hidden danger. What service does public television provide for the community? How can it be assessed? I have always upheld the view that, in order to evaluate such a service, three objectives must be borne in mind: that public television should produce comprehensive information and many different opinions, both politically and socially; that it should provide quality entertainment, and that it should help promote the local culture and language, where applicable. There seems to be a certain consensus regarding these three points, although in the future a fourth objective will need to be added: the use of television as a tool to provide other public services, such as healthcare, education and administration, and even politics.

It is the government that undertakes such an assessment in order to set priorities in its budgets. In evaluating public television, a new factor comes into play: the government’s interest in using television to serve its own purposes. In terms of the benefit for the government, we have all seen and we all know of many cases of public television that clearly contravene the three objectives mentioned above – particularly the first, and often the second as well. The governments of different levels that have created them primarily seek a television channel that will serve them and their political interests. There can therefore

be a contradiction between the goals of the public service – particularly regarding that of objectivity – and the government's interests.

In the forthcoming years, where will the combination of the financial difficulties of governments and the social and political pressure towards more accurate information and greater plurality take us? Above all, how will governments behave when analysing the benefits of public service? Will governments gradually lose their interest in large investments as their prospects for intervention diminish? Might we deduce that absolute degovernmentalisation is a threat to the survival of public television in those cases where other objectives are not particularly strong? A number of relatively immediate examples might lead us to think so.

**D. Intensification of political pressures on governments.** The audiovisual sector is one in which private operators coexist with public operators. This also occurs in other sectors (healthcare, education, transport, etc.). However, unlike these sectors, where coexistence is based on a combination of competition and cooperation (private schools and hospitals that receive some public funding, etc.), in radio and television the relationship is purely based on competition. Competition for audience ratings and competition for advertising, which in a sense are the same, particularly for private broadcasters, whose reasonable goal is revenue from advertising.

There's nothing odd in private operators viewing the public broadcasters' use of advertising as a sort of "unfair competition" and in them doing their utmost to convince public channels at the very least to limit their own use of advertising, or better, to eliminate advertising altogether. In many cases the objective, whether admitted or not, is the disappearance or privatisation of public broadcasters, based on lines of reasoning that, in some cases, are partially right, given the rather irresponsible conduct of some public operators.

Given the obvious importance of the role of the mass media in electoral periods, and particularly of television channels, it comes as no surprise that political parties may gradually assume undertakings in the future with private operators along the lines of their demands.

## 5. Provisional answers to a few questions

Many conclusions can be drawn from the description above, and such extrapolations could serve to help political and business decisions vis-à-vis the sector. However, this is not what I will do now, firstly because I have already stated my intentions at the beginning of this article, but more importantly due to a lack of space. However, if asked, I will not elude the request to do so at another time, even if it means taking certain risks.

For the same reason of lack of space, I am also leaving out a very interesting reflection on how these trends are already giving rise to specific initiatives in both the commercial and reg-

ulatory sectors of different countries around Europe and in the European Union itself.

To conclude, I will therefore limit myself to asking and answering a few somewhat provocative questions I have prepared. This will enable us to form an impression of the future and to momentarily avoid an in-depth analysis of all of its implications.

**A. Will the television set disappear from our households? I believe so.** At the very least, we will not go to a shop to purchase "a television set". As I have mentioned above, a television set is a household appliance that contains a screen, speakers and a tuner, along with decoding, amplifying and control electronics.

Given that, for many decades, the screen was a cathode ray tube, the television set had to be a large and deep box that contained many different parts. Some of these were very large and had to do with the tube itself, yet there were also speakers, tuners, electronics and other mechanisms. The appearance of flat screens and integrated networks inside the home (with cables or wireless) are changing all of this, and eventually we will be building our receivers in much the same way that we have been building our "sound systems".

What we will purchase will be "screens", "speakers", "amplifiers, tuners, decoders, storage disks", etc. On each of the screens we have installed, we will be able to watch television and view the content we have stored on the disk or the content coming to us via internet. We will also be able to see the person with whom we are conversing on the telephone, and write a text with the computer. In a word, when we purchase a screen, we will not be forced to buy speaker, and, similarly, when we purchase a computer we will not necessarily have to buy a screen.

**B. Will television channels disappear? To a large degree, yes.** Many of them will disappear, both private and public, as they will be unable to survive due to the large number of channels accessible. Yet it is not this that I wish to explain. What I mean to say is that the channels that continue to exist will have to be very different from the way they are today.

Today, the existence of a television channel is founded on two pillars: the ownership of a channel for broadcasting and the configuration of a programming grid. Without these two items, there is no channel. All channels must have a permanently assigned bandwidth (a fixed frequency), which should remain the same for many years. This enables viewers to locate the channel and tune into it. Without this bandwidth, the antenna and television set will not locate the channel. Potential users may also need to know what programmes are broadcast by each channel at each time of the day, making a programming grid essential. The viewer must know the time and channel on which he/she will find what he/she is interested in viewing. The "passive" viewer, for example, can do nothing but channel hop; in other words, he/she can merely choose from among all the

shows that are being broadcast at any one time.

These aspects make the channel very important, which in turn generates loyalty. Though there are viewers who say, "I watch American action films wherever they happen to be playing", in general, the vast majority of viewers tend to watch the same channels most of the time.

As I have already mentioned, this model of audiovisual "consumption" is changing due to the opportunities for asynchronous communication, storage on a computer disk or installed in the television set itself and the use of new platforms. Whereas audience ratings at the time of broadcast are extremely important, just as important for content providers will be the fact that viewers know that a given programme is available in a certain place and that they can receive it whenever they wish. The importance of the channel will now be complemented – not completely replaced – by the "electronic guide" and the PVR ("personal video recorder") which, with little more effort than channel hopping, will enable viewers to see "what they want, when they want to and on the screen they want". This has already begun on the internet and the trend is growing rapidly, with particular use among the young generations. The difficulty inherent in this model is that it requires the habit of using the computer, which is somewhat uncommon among a part of the adult population. Thus, in several years' time, it will gradually become prevalent.

Operators' commercial strategies must change. They will have to learn to produce not only for broadcast but also "for storage". In other words, waiting for someone to order products from them. Moreover, they will have to find the best strategies to ensure the success of such storage.

**C. Will public television disappear? Probably.** I believe that some broadcasters will disappear due to the causes I have suggested before. Some will have great difficulty in justifying the service they are currently providing, if subjected to a minimally rigorous analysis. Alongside the increase in budgetary difficulties, the governments or administrations that finance public television may gradually lose interest in keeping such services going. Finally, these circumstances may combine with the success of private sector pressures to block all public funding, however minimal or incomplete such funding may be.

Other public broadcasters will disappear in the sense I have just explained. In other words, those that continue operating will have to undergo the very transformation that I have described. Their failure to adapt to market changes will inevitably lead to their disappearance. On this point, the great danger is the possible sluggishness of public bodies to adapt to the new demands of the new times and, in such a case, it will be the competition that will relegate them to a marginal role.

Public operators will survive if they know how to make this change and to adapt to new consumer habits, yet in any case they will voluntarily disappear as simple television channels.

In conclusion, I will pose one final question.

**D. Will the public audiovisual service disappear? I hope not.**

I am of the belief that it would clearly be to the detriment of our European societies to allow the consumption of audiovisual production to remain exclusively in the hands of the market and its exclusively profit-based logic. Social equality, cultural progress and other collective values would end up losing out.

I have already pointed out that I do not have enough space to develop this thought, though I firmly believe that it will largely depend on the attitudes and conviction of governments. Above all, the survival of this public service will depend on the wise decisions and outlook of the managers of today's public operators when envisaging a new public service model, and particularly in their ability to overcome any resistance that may arise when implementing such a model.

# The challenges of digital convergence for television<sup>1</sup>

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### Abstract

*This work looks at the task of mapping out the technological transformations involved in the convergence process, establishing the current state of affairs in technological terms and the extent to which digital convergence has occurred. It concentrates on the changes that this implies for the communication system and the consequences in the areas of production, distribution and consumption of TV content. Finally, it tackles the consequences of these transformations at a social and cultural level and the effects on communication policies. These are facing a huge challenge because their effectiveness to date has been founded on a channel-based structure of the audiovisual system, while the system resulting from convergence will be based on a structure that, although it will include channels, will be network-based.*

### Key words

*Digitalisation, convergence, network, television, communication policies, adoption of innovations, identity.*

### Resum

*Aquest treball aborda el mapa de les transformacions tecnològiques que intervenen en el procés de convergència tot establint un estat de la qüestió tecnològica i del grau de plasmar la convergència digital. Es fixa en els canvis que això implica per al sistema de comunicació i les conseqüències en el camp de la producció, la distribució i el consum de continguts televisius. Finalment aborda les conseqüències d'aquestes transformacions en el pla social i cultural i els efectes sobre les polítiques de comunicació. Aquestes es troben davant d'un desafiament de primera magnitud perquè tota la seva efectivitat històrica es fonamentava en una estructura del sistema audiovisual constituïda sobre la base de canals, mentre que el sistema resultant de la convergència es fonamentarà sobre una estructura que, tot i incloure els canals, ja no es fonamenta en aquests sinó en una base en xarxa.*

### Paraules clau

*Digitalització, convergència, xarxa, televisió, polítiques de comunicació, adopció d'innovacions, identitat.*

Digitalisation characterises our times because it marks a change in era with the shift from analogue to digital technologies. It is thanks to digitalisation that three industrial branches that have been able to maintain perfectly independent lives – telecommunications, information technology and the media – are now embarking on a process of convergence which has led to all manner of prophecies, some of which have already been stubbornly refuted by reality, such as the death of television. But prophets' mistakes should not make us lose sight of the enormous magnitude of the change initiated by digitalisation.

First of all, convergence must not be seen as a state but as a process and, as such, a changing phenomenon; its development must not only be evaluated by taking technological innovations into account but also, and especially, its social appropriation. On the other hand, its consequences can be felt on different planes, depending on whether it is considered from a business or technological perspective or on the basis of its content. Cultural and social consequences result from interaction

between all three dimensions that make the whole observation of this process relevant.

In this study, we will focus on the consequences for the audiovisual sphere, thereby not looking at some technologies involved in convergence and many other activities, both in business and in converging services. From this perspective, we will analyse the most relevant transformations caused by digitalisation and convergence with respect to audiovisuals. Digitalisation in technological terms is very advanced and affects all industrial stages: the production, transmission and reception of content.

### Production equipment: between sophistication and banality

Sound and image recording devices have increased the features they offer, as much in the quality of the signal as in their usability and cost, flooding the market with a huge variety of

professional- and consumer-based models that record images at different degrees of definition, from standard quality to high definition, and suitable for different screen sizes. Audio and image processing equipment have also become lighter and both digital editing, mixing and generation devices have reduced costs and increased features, making them much easier to use. The domestic version of these devices is guaranteed by software packages that imitate the functionality of professional equipment, found in personal computers and laptops. Consequently, all of this has increased, and in unprecedented numbers, the availability of professional production infrastructures and production devices among home users.

Taking a mature market such as the North American one as a point of reference, according to data produced by the *Consumer Electronics Association* (CEA 2008),<sup>3</sup> the number of video cameras sold each year increases, and sales from the last two years reached around 5.9 million in 2007 and 6.1 million in 2008. Other camera sales should be added to these figures, such as digital cameras, which can film short video clips: an average of 9 million have been sold each year in the last two years (CEA 2008). On the other hand, 9% of North Americans with mobile phones use them to take short video clips (OFCOM 2008).<sup>4</sup> Around 83% of North American homes have a computer (LGR 2008)<sup>5</sup> and, therefore, the possibility of using video editing programs.

### Transmission and distribution support: more capacity, more speed, more...

From a transmission point of view, digitalisation is already very advanced and its innovations are of great significance. The first concatenated consequence of all these innovations is the exponential increase in transmission capacity or available bandwidth. Digitalisation supposes, firstly, a more efficient use of

the airwaves and of bandwidth available on the transmission media, since a digital signal, in itself, occupies less space than an analogue one. Moreover, once digitalised, the signal may be subjected to different processes that further improve the channel's performance, such as compression, which in essence eliminates redundant information, and multiplexing, where more than one signal can be interlaid along the same channel. All this leads to a significant rise in the transmission capacity of different supports, both via airwaves and physical supports.

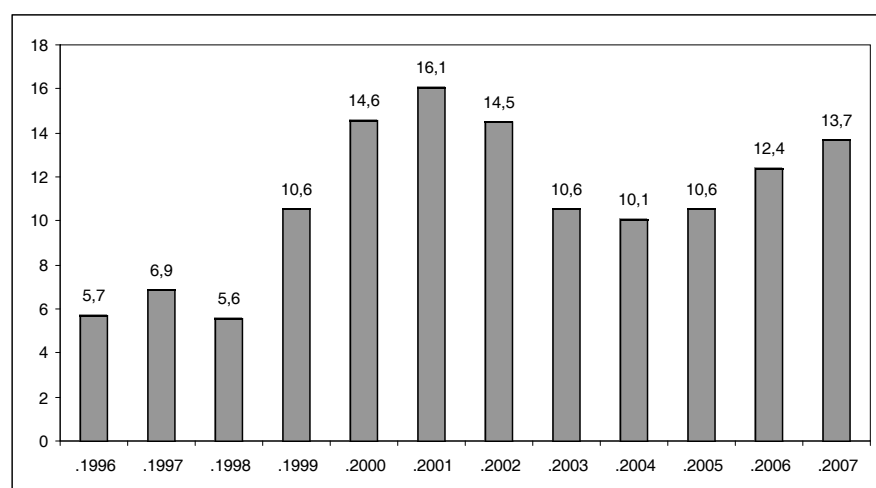
The digitalisation process for transmission media has essentially affected terrestrial, satellite and cable television broadcasting networks and has enabled the establishment of networks as an audiovisual support.

### Cable: the most capable network

Cable has completed the digital upgrade of its installations where it had spread via analogue technology and has introduced new installations in markets where it was less present with fibre optic or hybrid fibre-coaxial networks. It has increased its capacity to transmit television channels and services and has introduced some interactive services with intrinsic return path, as well as high definition. It has also extended its operations into new areas where it had hardly been active before, such as telephony and internet broadband connections, so that it has now become what is called a *triple player*.

In the United States (US), cable innovation has been constant ever since the *Telecommunications Act* came into effect in 1996, the new regulatory framework that would open the door to cable operators in all telecommunications services, as well as television services. Up to the end of 2008, US operators had invested more than 130 billion dollars in technological upgrading that has allowed them to provide sophisticated television services, such as VOD (Video On Demand), high-definition tel-

**Table 1. United States of America. Investment in infrastructure by cable operators (in thousands of millions of dollars)**



Source: own, with data from Kagan Research LLC.

evision (HDTV), advanced digital telephony services VoIP (Voice over Internet Protocol) and high-speed internet connections.

Part of this investment effort has allowed the adoption of two vital innovations, with the aim of guaranteeing the most sophisticated usage. These are Wideband and Switched Digital Video.

Using DOCSIS 3.0, a new generation of Data Over Cable Service Interface Specifications, cable operators can put together different channels in a bundle and convert broadband into wideband, which increases internet connection speed exponentially. In a bundle of four channels it is possible to achieve speeds greater than 150 Mbps, and bundles of many more channels can be made. Compared to the typical 6–15 Mbps broadband speed delivered by cable, and the 3–6 Mbps of ADSL, this innovation is already progressing towards the “Third Internet Revolution”, which would be possible on an infrastructure such as the one offered by US operators, which can cover 92% of homes (NCTA 2008).<sup>6</sup>

No less important is the other innovation, Switched Digital Video, which allows cable operators to transmit channels to a specific point according to clients' needs, instead of occupying bandwidth by transmitting to points where there is no demand. This release of bandwidth will make more wideband and high-definition or interactive services available, meeting the demands for more sophisticated services.

### **Digital Terrestrial Television (DTT): ultimately nothing more than replacement technology**

Television broadcast on the Hertz wavelength has also followed its own digitalisation process and is currently at different stages of implementation, depending on the country and geographical area. In developing countries, with certain small differences, analogue is scheduled to end between the first and second decades of the third millennium. Digital Terrestrial Television (DTT) enjoys the same advantages that digitalisation has brought to other media: a better-quality picture and an increase in the number of broadcasting channels. As it is a digital medium, it can transmit data, local interactive applications or applications with extrinsic return path (CMT and CAC 2002;<sup>7</sup> Prado 2003).<sup>8</sup>

The USA, the first country to start the transition from analogue to digital, albeit after various postponements, is now in full countdown to the digital switchover, forecast for 12 June 2009. Some countries have already switched off, such as Holland and Sweden, and others are due to do so soon, such as Germany and Spain in 2010, Canada, Japan and France in 2011, Italy and the United Kingdom in 2012, and so on. Finally, there are still many other countries that have no set date and are still discussing which of the three standards to choose (the North American ATSC, the European DVB or the Japanese ISDB), in the midst of great debate based more on

the conflict of political and industrial interests than the intrinsic qualities of each of these standards. Certainly, the existence of three standards is a clear demonstration of the powerful brakes to convergence, motivated by geo-techno-strategic and economic interests more than technological ones. In any case, from a communication point of view, what matters is not so much which standard is used, or which is relevant from the point of view of industrial policy, but which implantation model to adopt.

One of the most touted advantages of DTT has been the improvement of image quality. While its standard quality marginally improves on the quality of analogue television, this increase is much more perceptible in high-definition television (HDTV). However, the choice of high definition has not been uniformly available in all geographical locations.

In the USA, although not predetermined, the regulator left this option in the hands of the operators, giving each a multiplex with the possibility of managing it dynamically, which essentially means that each operator can use the bandwidth of their multiplex channel as they like, be it to transmit data and different Standard Definition Television (SDTV) channels, be it to emit a high-definition channel and data or a combination of the two at different times of the day. In practice, the preferred option has been high definition.

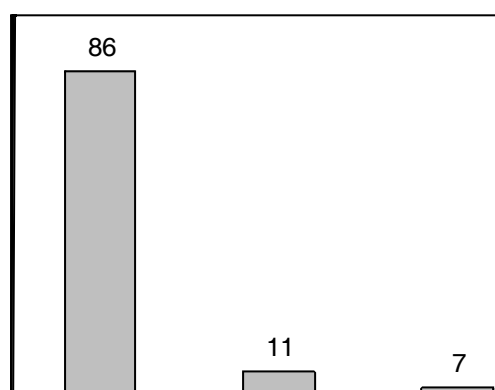
High definition has not been a priority in Europe and, in general, the use of each multiplex channel for the broadcast of four SDTV channels has been favoured, reserving 20% of multiplex capacity for data transmission. Consequently, this has led to a multiplication of the number of channels and a notable delay in the introduction of HDTV through digital terrestrial television on our continent and, in turn, has also slowed up the availability of high definition on other platforms, such as satellite, cable or IPTV.

Meanwhile, Japan opted for a combination of the two formulas, offering from the start digital terrestrial television in SDTV and HDTV.

The other main DTT innovation is mobile reception. The European DTT standard has developed this option from the start (DVB-H), but it has not been a priority in the implantation stage. The Japanese ISDB system also relies on this availability and, in fact, has already implemented it. In contrast, the North American ATSC standard did not have this option defined and has only just (on 26 November 2008) announced preliminary approval of a DTV mobile standard.

### **Satellite: dealing with the triple player handicap**

It could be said that satellite has completed its digitalisation process and, even though some analogue satellites are still operating, their use is subsidiary. Digital satellites have increased the number of channels transmitted, have introduced local interactive applications or with extrinsic return path (telephone, ADSL, etc.) and are now increasingly focusing their

**Table 2. HDTV channels offered via satellite**

Source: own, with data from IDATE relating to 2007.

interest on data transmission and on the introduction of high-definition services. In fact, in the USA satellite broadcasts the most HDTV channels, something that is generally repeated in Europe, although at much less significant levels. One exception to this is Japan, where the availability of HDTV channels is led by cable, offering seven times more HDTV channels than satellite.

Satellite's main competitive problem against its key multi-channel rivals is that it does not offer triple-player capability, even though it has tried to do so virtually. The USA has offered triple-player packages, taking out agreements with telephone companies in some markets, but the entrance of all telephone operators in the television and broadband arena has made this strategy ineffective. Now satellite is concentrating on exploiting its competitive edge in offering high-definition channels and on making the most of its capacity to transmit data downstream. The implementation of intrinsic return paths for their introduction into the domestic market remains stalled, although there

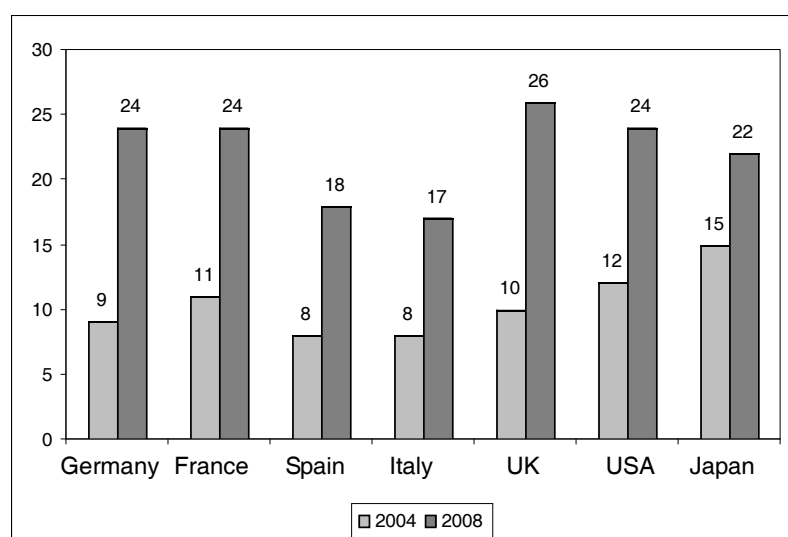
are some interactive services with an intrinsic return channel aimed at business markets.

### IP Television: with all-digital, all-internet on the horizon

Broadband must be added to these three multi-channel distribution platforms, resulting in the appearance of growing audio-visual traffic. Even though the different video circulation formulas on the internet offer many varieties, two main options should be differentiated at present: user-generated content professionally generated content. The latter includes IPTV platforms, which have actually monopolised this label, using it inappropriately as a synonym of an ADSL supported multi-channel platform.

In fact, within the overall context of the liberalisation of telecommunications, telephone companies will choose this route to make their triple player offers (telephone + broadband + television) in order to compete with cable. The dynamic that results in the supply of HDTV on rival platforms (satellite, cable and now DTT) becoming increasingly more central, apart from the increase in VOD popularity, reveals ADSL's limitations on the telephone network to guarantee a positive user experience. Telephone companies are therefore opting to make large investments in order to implement their own fibre-optic networks. Meanwhile, the capacity to compete with cable in countries with a high level of penetration, such as the USA, currently means it is runner-up in the multi-channel television market, dominated mainly by cable (64.9%)<sup>9</sup> and by satellite, which has already reached 31% of subscribers.

IPTV platform initiatives are possible thanks to the increase in broadband connections, which have seen a spectacular rise in recent years, as much in capacity as in availability. Despite this, in more advanced countries only one in every four people benefit from connections providing access to the most sophis-

**Graph 3. Percentage of inhabitants with broadband connection**

Source: own with IDATE figures, Ofcom and Ministry of Industry.

ticated services, including internet television. But this fact, however, can be seen another way: namely that, even in the most developed countries, three out of every four people have no access to sophisticated internet applications.

Thanks to the growth in users who enjoy broadband connection, apart from the multi-channel platform mode, audiovisual network activity is becoming more prevalent among all the traffic generated on the internet. This explosion is due to the type of content generated by users (UGC or user generated content). The best-known are YouTube and Dailymotion: web-sites where users can add video content and, to a lesser extent, also take part in social networks, the most well-known being Facebook and Badoo. Added to this is the feverish exchanging and downloading of videos from industrial cinematographic and television production, more or less legally.

Television operators, after some resistance, are gradually putting their own content for public view on the internet, either via streaming (real-time reproduction) or downloads, or both. Access to content varies between free access and conditional access. Pay-per-view is an example of conditional access, e.g. iTunes by Apple and Canal Play, the French Canal + group's downloading system, as is subscription access, paying a monthly subscription to access things like L'Equipe TV Live or DK4 livestream. Free-access systems are financed by fee-payers, such as the BBC's I-Player, or funded by advertising, such as ITV or the American networks (ABC, CBS, Fox and NBC). There are also mixed options, e.g. with RAI, TVE or, in Catalonia, Televisió de Catalunya, a pioneer in exploring all forms of internet presence, from different types of streaming to downloads (Prado and Fernández 2006).<sup>10</sup> After a period in which conditional and free access were combined, free access with mixed financing has now been chosen.

Apart from television channels, other businesses have appeared that provide audiovisual content from the film industry and television channels. This is the case of Hulu, a business run by NBC Universal and News Corp (Fox) which sup-

plies VOD programmes from different North American channels. As well as NBC and FOX, it also offers programmes from Comedy Central, PBS, USA Network, Bravo, Fuel TV, FX, SPEED Channel, SciFi, Style, Sundance, E!, G4, Versus and Oxygen, as well as offering films from different studios, such as Universal, 20th Century Fox, MGM, Lionsgate Entertainment or Sony Pictures. It uses Flash Video technology to ensure SDTV features and also has some programmes in HDTV. The distribution of this content is legal because Hulu has acquired the internet rights and access is free for users because it is funded by advertising.

A similar case is Joost, a company started by the founders of Kazaa and Skype, which also gives access to television programmes, whose rights it has acquired from CBS, Showtime, Last.fm, Wallstrip, Moblogic, Viacom, BET, CMT, Comedy Central, LOGO, MTV, The N, Nickelodeon, Spike and VH1, Sony Pictures and Warner Bros. It uses Flash-based technology and is developing its own P2PTV. Joost uses some tools from social networks, offers free access and is also financed by advertising.

The BBC promoted a similar initiative in an agreement in which ITV and Channel 4 also participated, which had aimed to promote content from British operators. Currently, this initiative, nicknamed Kangaroo, has encountered regulatory restrictions which have delayed its entry into operation.

All these internet distribution formulas for audiovisual content show to what extent the internet experience is moving increasingly towards audiovisuals. In fact, traffic figures show the great importance this content is acquiring and forecasts point to exponential increases.

### Mobile television or television on mobiles?

By mobile television we mean television that can be received on mobile terminals: disseminated over Hertz networks follow-

**Table 1. Internet traffic in the USA. Petabyte (PB) per month**

| Internet traffic in the USA. PB (Petabyte) per month |      |      |      |      |
|------------------------------------------------------|------|------|------|------|
|                                                      | 2007 | 2008 | 2009 | 2010 |
| Web, e-mail, transfer                                | 186  | 249  | 325  | 425  |
| P2P                                                  | 370  | 439  | 507  | 526  |
| Games                                                | 15   | 19   | 23   | 28   |
| Video communications                                 | 4    | 4    | 5    | 7    |
| VoIP                                                 | 5    | 7    | 9    | 11   |
| Internet video on PC                                 | 139  | 240  | 346  | 449  |
| Internet video on TV                                 | 48   | 155  | 301  | 492  |

Source: own, with data and forecasts from Precursor LLC.

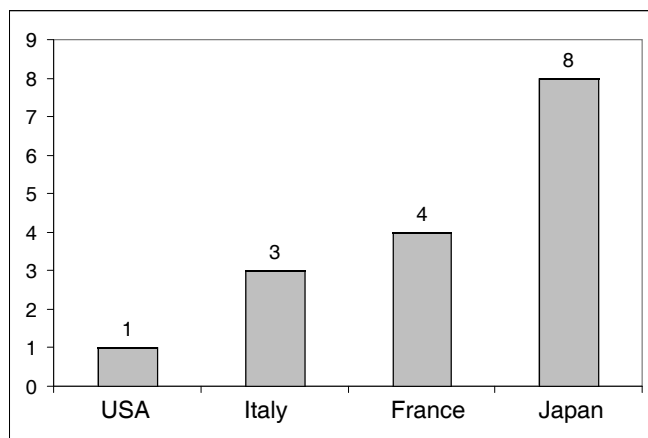
ing a broadcasting system (from one to many) using digital standards such as DVB-H, ISDB-T and ATSC, or others such as MediaFLO, DAB or MBMS, received in mobile devices (telephones, PDA, MP4, video consoles, portable TVs, etc.).

Mobile television is still in its infancy. In Europe, the only country where this technology is of relative importance is Italy, which embarked on the experience in 2006 with three operators offering a variable number of free-access or conditional-access channels, using DVB-H technology. The operator 3Italia is the most established and offers 12 channels, combining free access with subscription and pay-per-view. The other two operators – Telecom Italia Mobile and Vodafone – have opted for the subscription model and offer eight and nine channels, respectively. Japan started in 2004 with the subscription service MoBaHo!. Using S-DMB satellite technology, from 2006 a consortium of broadcasters and operators launched a free-access service with ISDB-T technology, their standard of digital terrestrial television. In the USA, Verizon Wireless launched its mobile television service in 2007 and AT&T Wireless in 2008, with MediaFLO technology. In both these cases, the model chosen is subscription and they offer nine and ten channels, respectively. However, in spite of the expectations raised, the business model is not clear.

Television on mobiles is called *unicast* (one to one). It uses the mobile telephone network and is received on 2.5G, 2.75G, 3G or 3G+ devices. Practically all operators offer some service of this type, but they have mostly opted to offer television channels that are already broadcast on other media or with slight adaptations. Currently, the availability of products specifically conceived and developed for mobiles has not moved beyond experimentation. The business model, as much in this case as in the previous one, raises many questions about its viability.

Given this scenario, the percentage of mobile-phone users who actually watch TV on their phones is almost surprising. As you can see from the graph below, the country with the great-

**Graph 4. Use of mobile for watching live television (in %)**



Source: own, with data from Ofcom, 2008.

est usage is Japan, a pioneer that did not launch this service in vain. Even so, no more than 8% of users watch live television on their mobile.

There are still clear possibilities for exploration and a lot of regulation is required to enable a new concessional process capable of opening up the horizon to new business models that meet public demands.

### Receivers: dispersion and confluence

Digitalisation presents all kinds of novelties in terms of devices used as receivers. Here various trends intersect. The first is the variation in screen size, varying from miniature to giant *videowalls*; the second is multi-functionality (television reception, viewing offline products, surfing the internet, etc.); the third is process and memory capacity; the fourth is how tactile the device is; the fifth refers to connectivity and there is also a sixth, mobility. All of this leads to tremendous dispersion, contradicting the convergent prophecy of the “combo”. All screens serve many different purposes, although each one, depending on its size, brightness, definition and location, will be more suitable for one function or use than another. In any case, it is the end of an era in which the receiver and the medium were synonymous.

### TV: loss of identity and confusion

If we look at TV, all these trends become evident within a context of confusion brought about by many simultaneous changes: flat screen, digital standard, interactive capacity and high definition. The first and most visible is the replacement of cathode ray tube TVs with flat-screens (plasma, LCD, TFT). This process started before digitalisation and consequently filled houses with analogue receivers on the eve of digitalisation. These new analogue receivers will delay the take-up of DTT and will mean that owners have to acquire an external tuner to be able to see digital broadcasts, reconverting the signal into analogue. Moreover, in many European countries, and notably in Catalonia, since there are no regulations to prevent users ignoring the limitations arising from this option, they mainly choose to buy simple tuners, known as *zappers*, which do not have MHP (*Media Home Platform*), the standard that allows the enjoyment of interactive services (Franquet *et al.* 2008).<sup>11</sup>

While these types of screens are still being marketed, digital televisions – with an integrated receiver – are coming onto the market. In this case, with no regulatory rules for them to follow, companies also sell receivers that do not have MHP. As a result, the number of digital TV receivers able to operate the interactive services associated with DTT is not rising. Consequently, the market conditions are delayed, *sine die*, that should stimulate the supply of interactive services that bring the so-called information society services to certain segments of the population, one of the acclaimed virtues that were meant to accompany the switch from analogue to digital television. Finally, the other change coinciding in time is that of high def-

inition. The majority of flat-screen TVs that are updating the receivers in Catalan and European homes are of standard definition, some are *HDTV Ready* and only some have *Full HDTV*.

In Europe, and in Catalonia in particular, HDTVs have caused confusion. In the first place, there is a widespread belief among users that TVs have HDTV capability so everything they see will have a better-quality image and will be in high definition. Secondly, they also believe that *HDTV Ready* means the receiver is high-definition, when in fact it will need adapting to be so. Finally, they also believe that a TV with *Full HDTV* capability will allow you to watch high-definition digital definition, when in fact it will only let you see programmes made in HDTV in high definition. A whole range of misconceptions that do nothing but generate frustration and lack of confidence in consumers, yet they represent another delaying factor in the digital convergence process.

But HDTV is one of those 'totem' concepts that tend to be used in technological marketing, a fact that creates all manner of disappointment everywhere. In the USA where, as already stated, broadcasters have clearly chosen HDTV and all multi-channel operators (satellite, telephone, microwave) have a wide range of channels and VOD in high definition, the adoption of HDTVs is accelerating. According to figures from the LGR (2008),<sup>12</sup> 34% of North American homes have at least one high-definition TV, a percentage that has doubled over the last two years, which confirms growing consumer demand. In absolute terms, this means that there are 40 million homes that can receive high-definition emissions in the USA, but the same study states that confusion also reigns in the country concerning high definition, since 18% of homes with an HDTV receiver believe they are watching high-definition television when they aren't, in spite of having a receiver capable of providing this.

### STB: more and less

STBs (Set Top Boxes) have been key devices in accessing the supply of multi-channel systems, as much with satellite as with cable, in the analogue age. These devices, separate from TV sets, allow access to the signal of these platforms and manage conditional access, according to the subscription the user has taken out, as well as other offers, such as pay-per-view (PPV) or interactive television (iTV). With digitalisation, STBs have increased their processing capacity and have been key in giving users new and more sophisticated access options: VOD, interactivity management and ultimately access to HDTV channels and, in some cases, triple player benefits. Moreover, STBs are increasingly merging with another device that changes the user's conditions of consumption, DVR (*Digital Video Recorder*), when not replaced by TVs with Tru2way technology. This technology, developed by CableLabs and previously called OpenCable<sup>TM</sup>, allows access to all the benefits of cable without needing a STB. These sets allow conditional

access, VOD, PPV and interactivity simply via a subscription card that is inserted directly into the set. The first sets with this technology have been launched recently onto the market in an agreement with Comcast, the most important North American cable operator (14,738,000 subscribers to 3Q in 2008), and Panasonic, which has fitted this technology into some of its well-known VIERA plasma-screen models.

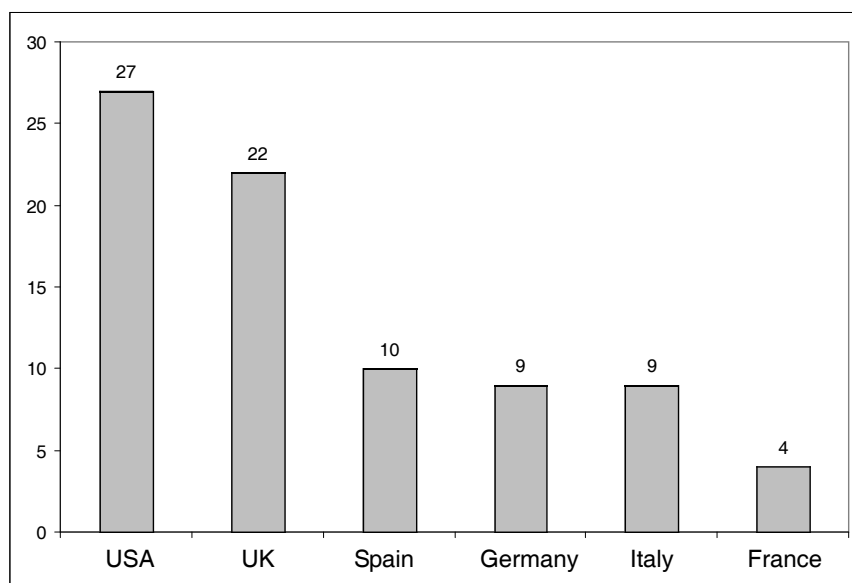
### DVR: after all the fantasies, will it not have a window of opportunity?

DVRs (*Digital Video Recorders*, also known as *Personal Video Recorders* or PVRs) are devices that were meant to replace domestic VCRs (*Video Cassette Recorders*). They offer the same functions but, instead of using tape, they have a hard disk that allows them to record up to 400 hours. DVRs contain software that allows users to navigate between available channels, to record, store, classify – by default or user-created criteria –, and easily recover the programmes recorded, as well as a *Time Shifting* function, which allows a live broadcast to be paused and then taken up again and the time recovered during the next advertising break. This is one of the most highly regarded functions by users, who can skip adverts when they watch recorded programmes. DVR can also learn users' preferences and offer them a selection of programmes likely to interest them, as well as schedule the recording or even record one that might match the user's tastes and afterwards inform them of the recording the first time the user connects, giving them the option of watching, storing or erasing the programme.

Since the introduction of DVRs at the end of 1990s, rivers of ink have run on its capacity to transform television consumption habits<sup>13</sup>, on releasing TV viewers from programming and from the tyranny of having to synchronise with what is being broadcast, as well as its capacity to self-programme and the independence of freeing itself from the omnipresence of television advertising. These characteristics would threaten the medium's survival, whose essence is tied to lineal-flow broadcasting, to the programming of a sequence of programmes, and would also work against the business model based on advertising revenue.

In spite of everything, users have adopted this device very slowly: in the USA a limited market share penetration has been achieved in 27% of homes and in Europe it is much more modest, except in the United Kingdom, where it has reached 22%.

But the survival of DVR as a singular device is strongly threatened. The first threat comes from the aforementioned fusion with digital STBs: most of the platforms have all DVR functions included within their own digital STBs. But another threat comes from their conversion into virtual DVRs, which can be installed in any kind of computer and, by default, any computer card used to tune a television contains software that turns your computer into a TV and DVR at the same time. Finally, another threat comes from the aforementioned trend, followed

**Graph 5. Penetration of DVRs in the United States of America and Europe (in %)**

Source: own work, with data from Forrester Research, Inc., by 2Q in 2007 in Europe and by LGR by 2Q in 2008 in the USA.

by television operators and those providing TV content (Hulu, Joost), to make this content available online and accessible on VOD, making local storage totally unnecessary, which is the main function of DVR.

### Social appropriation of the digital experience

We can draw some conclusions from an analysis of the state of the affairs regarding the introduction of digital innovations applied to communication. To start with, the capacity to produce and manipulate images and sounds is now greater than ever.

This situation has consequences in the professional production industry, since it allows business initiatives with more affordable technological investment costs than in the age of analogue technologies. However, professional production costs are still high and threaten to be higher still if it becomes a general requirement that all professional production is in HDTV. FOX has just announced that all its broadcast channels and multi-channel offers will only be produced in high definition by 2010<sup>14</sup>. This maintains a situation that has been growing since the start of the multi-channel age: the capacity to produce original content is growing more slowly than the capacity to transmit it.

A large capacity to record and manipulate sounds and images also has consequences on an individual's ability to produce content. Image and sound production have become commonplace. Image has become ubiquitous. It does not seem possible that any area of reality can escape the gaze of a camera as a consequence of broad ownership of popular consumer electronics.

This situation of personal ownership of recording devices is not a recent phenomenon, having a precedent in the analogue era, but the products obtained found it very difficult to undergo any post-production and, as rough pieces, were quite limited in

terms of entering the chain of communication. Now the dissemination of non-linear publishing on personal computers and sound and image processing software, as has been seen, have enabled a growing number of individuals to produce and post-produce pieces worthy of communication. This has led to the hypothesis of the advent of an unprecedented democratisation in audiovisual production and limitless freedom of expression. Such content's capacity for dissemination on the internet has backed up this hypothesis, especially with the growing popularity achieved by such UGC sites as the aforementioned YouTube or Dailymotion.

However, we are already seeing signs pointing to a decline in the centrality of UGC video on the internet. While other forms of UGC carry on growing, such as photographic or social networks, video inputs have slackened off in more developed markets, while access to television programmes through the internet has risen, especially in countries with the arrival of media aggregators providing programmes from different channels, such as the aforementioned BBC iPlayer or Hulu, which have helped to increase the *streams* per capita of free-access programmes by 69% in the United Kingdom and by 85% in the USA.

In any case, in most countries the percentage of internet users who watch videos rather than television programmes online is still higher, but this also depends on the duration and the different requirements for a good quality connection for these two types of audiovisual content.

Anyhow, the future of aggregators of user-generated videos is still not written in stone; the volume of products stored and the traffic they generate is starting to encourage debate on their viability.

On the other hand, all manner of initiatives are emerging to put a value on this content from an industrial perspective. One

trend that we might call “undue appropriation” consists of television programmes that are funded totally or partially through user-generated videos, incorporating them into their value chain without paying copyright. Another trend is to place these productions within an industrial initiative whereby user generated content is provided in different proportions to go to make up the supply. In this case the content is selected using editorial criteria and the content actually broadcast entails some rights for its author. The most successful case is that of Current TV, a channel promoted by the former vice-president of the United States, Al Gore, which has consolidated its position in North America and has started to expand into Europe, first in the United Kingdom and more recently in Italy.

### All digital and all internet: a fixed deadline and episodic realisation

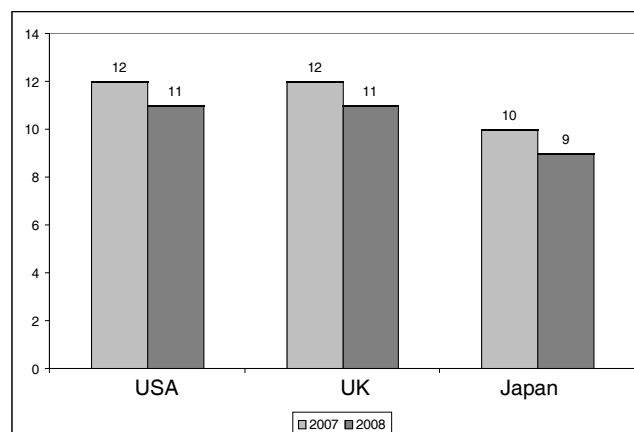
As we have seen, transmission capacity has also grown exponentially and, it would seem, without limits. Despite this, there is strong resistance to network integration. From a technological point of view, all transmission media could be integrated as network resources that would allow effective convergence and the consequent improvement of available broadband per capita. The interests of network operators have slowed up this convergence, since each seeks to capitalise on the competitive advantages they have achieved by making multi-million investments, as we have shown. Nevertheless, despite understanding the need to recover their investment, the convergence of media that must lead to ‘all-digital, all-internet’ will not be possible if a deadline for the so-called *net neutrality* is not established, which would avoid discrimination in terms of signal transmission quality, independently of the service provider. Meanwhile, the different capacities of different networks will continue to provide one type of service or another more efficiently.

Many difficulties persist in the run-up to convergence. The first relates to discrimination in the capacity and coverage of internet access, which keeps 78% of the world’s population without access, and a tendency for the gap between developed and developing countries to widen.

The second difficulty relates to quality of access: a high proportion of people cannot access broadband, not only in developing countries but also in developed ones, where only one in every four internet connections is made through broadband (see graph 3).

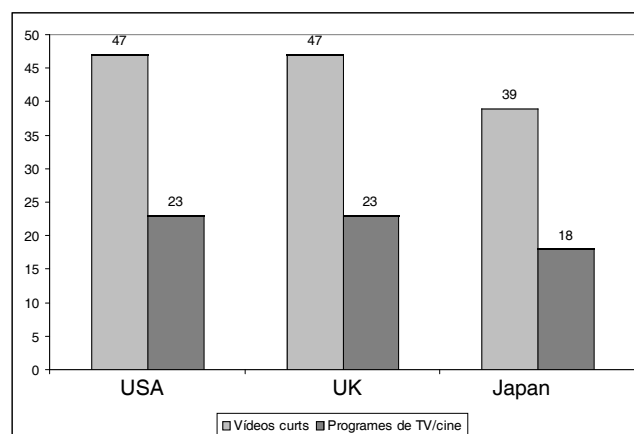
The third difficulty is marked by the fact that, among those who do have broadband access, transmission capacity varies a great deal depending on the type of connection used, which depends on their financial situation and, irrespective of being able to afford the cost, depending on the availability of some infrastructures or others. In general, those that have a broadband connection through digital cable operators can enjoy much higher bandwidth speeds than those who use ADSL

**Graph 6. Use of the internet for uploading videos onto a website (in %)**



Source: own, with Ofcom figures.

**Graph 7. Use of the internet to consume audiovisual content (in %)**

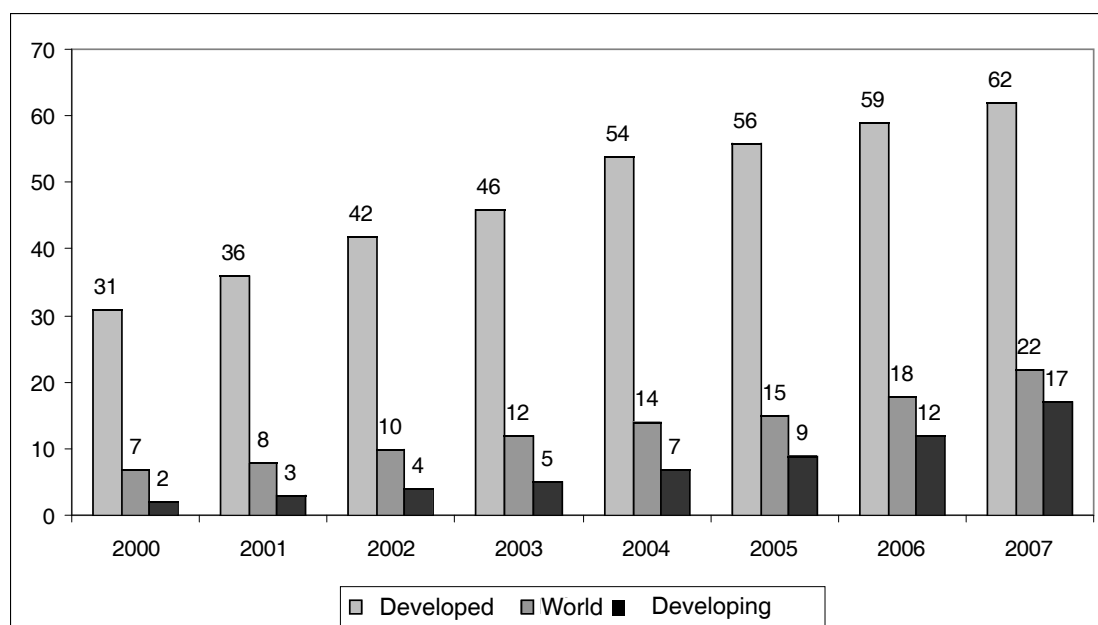


Source: own, with data from Ofcom, 2008.

lines, whether wireless or not, or with third-generation mobile phone connections which, as we have seen, can triple the typical connection speed, excluding the possibilities of cable with *wideband* which brings transmission speeds up to 50 times higher than those typical of ADSL.

### A Great Virtual Universal Store, more virtual than universal, for now...

Obviously the type of connection determines the degree of access to the most sophisticated applications, both with video signals in general and television signals in particular, especially in the case of high definition, as well as services requiring a greater degree of interactivity. Therefore, if we consider this on a global scale, the advent of ‘all-digital and all-internet’, which would give way to a Great Virtual Universal Store (GMUV in Catalan) (Prado 1997)<sup>15</sup> to provide people with all types of

**Graph 8. Internet users per 100 inhabitants**

Source: own, with data from the ITU.

information and cultural products, remains in the more distant future. This GMUV would not be based in any geographical location but distributed in the magma of the internet and would be free to access, both by the user and the producer. It could be entered with the sole condition of having the necessary connection technology and the knowledge required to surf, and it would contain products of free access and others with more limited access. But if we consider this on a more local level, for those who have broadband access, this starts to be a reality, reflected in the data we have given about internet traffic in the USA (see Table 1).

If we look at how internet users use audiovisual products in the most developed countries, GMUV starts to take shape.

These figures allow us to see a reality that is a consequence of digital convergence. The capacity to protect borders against the circulation of audiovisual products and, in general, of products from cultural industries, which was possible in the analogue era, is now impossible in the all-digital, all-internet scenario. Citizens can access GMUV and establish their own consumer menu without paying any attention to the chosen product's identity card, by virtue of the value it has and not because of its nationality.

If we accept that audiovisual consumption plays an important role in the transmission of values, in the health of a language, in the defence of cultural and national identity and in social cohesion, then alarm bells must sound urgently.

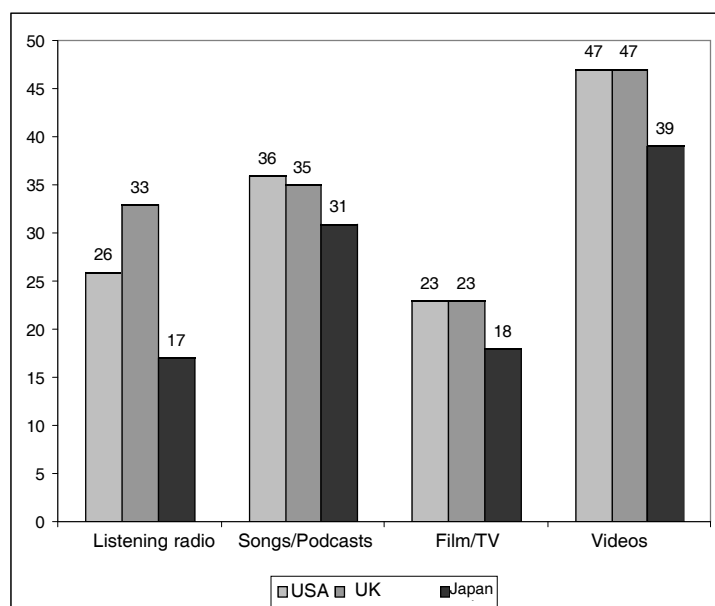
### Communication policies, more necessary than ever

Communication policies owe too much debt to the capacity to place boundaries on media coverage and the effectiveness of

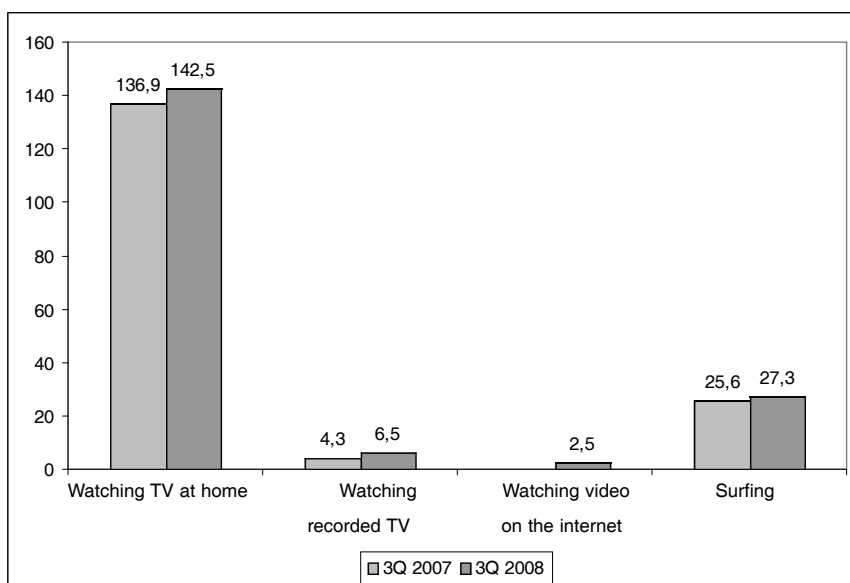
restricting the circulation of content. In the all-digital, all-internet scenario, these two supports have lost efficiency and communication policies must therefore resort to other measures. The first is to shift the focus from policies of dissemination to production.

It is necessary to provide the GMUV with competitive products so that it can continue to fulfil the functions of identity and social functions held by audiovisuals in the recent past. One must invest, therefore, in the consolidation of a competitive national industry, invest in training creative talent and in the presence and visibility of national GMUV devices. Given the growing proportion of audiovisual consumption on the internet, it is necessary to encourage national channels to make all their content available on the internet, both live and on demand. In this respect, we must follow the example of the Corporació Catalana de Mitjans Audiovisuals and support the effort made to find a space in the GMUV through all possible openings. One must also undertake cooperative initiatives between different operators to boost the presence of national products. In this way, the British initiative Kangaroo, an aggregator providing content from the BBC, ITV and Channel 4, boosts the presence of British production on the internet and is a way that can be followed by new policies. One must also stimulate the national business initiatives of media aggregators, which can secure economies of scale on the internet for national products and can explore avenues to raise their value externally, with the dual result of making national identity visible outside the country and expanding the market for content producers.

Communication policies must also revolve around training user skills in navigating the GMUV and in knowing how to find quality products to make up their own consumer menu, with

**Graph 9. Use of the internet to gain access to audiovisual content**

Source: own, with figures from Ofcom's *Understanding International Communications Behaviour* research, October 2008.

**Gràfic 10. Hores mensuals invertides per persona als Estats Units d'Amèrica**

Font: elaboració pròpia amb dades de Nielsen.

the hope that the combination of these two skills, creativity and user skills, will lead to the consumption of a significant proportion of products with a specific brand.

The challenge is not small, but the brakes to completing convergence still allow an effective reaction because, despite the growing importance of internet usage, classic audiovisual consumption has not diminished, and part of the time spent on internet consumption has gone to TV, a fact that debunks the idea that the internet would kill television.

In the United States, time allocated to television consumption has not fallen despite time given to the internet. Time

given to real-time television viewing in the home increased by 4.1% in the last year, in spite of the fact that the consumption of programmes recorded on DVRs has significantly increased (52.5%), although in absolute terms this figure is low. Neither has television consumption been negatively affected by the time spent surfing the internet also increasing by 5.7% in the same period. These figures indicate television's robust health, not only with more real-time TV viewing but also the fact that a part of the time spent by users surfing the internet is used for watching television programmes. Moreover, the time spent watching programmes recorded on DVRs must also be added

to TV consumption. We should also point out that some internet users have multi-tasking habits and often split their consumption simultaneously.

But these figures must not let us lose sight of the changes underway and the powerful trends indicated. It is important to remember that many of the possibilities affecting television are only available to those who have broadband access, something that will gradually change as availability spreads. We must therefore identify the dangers to plan solutions and detect opportunities.

## Notes

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# Integrating media within interactive discourse: the case of cultural dissemination

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## Abstract

*The intrinsic feature of interactive discourse is the inclusion of the management of users' actions. Such implementation in the digital medium adds the capacity to include unlimited forms of dialogue and media integration. The conjunction of this integration with interaction is, in our opinion, the paradigmatic feature of interactive multimedia, hypermedia. In cultural dissemination there are very few interactive applications that really take advantage of these possibilities. This article presents some hypotheses on the possible causes of this situation, outlining a theoretical framework to analyse that characteristic of the digital medium and describing some examples that may be quite revealing.*

## Key words

*media integration, interactive design, cultural dissemination, hypertext rhetoric.*

## Resum

*La propietat intrínseca del discurs interactiu és incloure la gestió de les accions de l'usuari. La seva implementació en el mitjà digital li afegeix la capacitat d'incloure il·limitades formes de diàleg i integració de mitjans. La conjunció d'aquesta integració amb la interacció és, al nostre entendre, la característica paradigmàtica dels interactius multimèdia, els hiper-mèdia. En difusió cultural hi ha molt poques aplicacions interactives que aprofitin profundament aquestes possibilitats. En aquest article plantejarem algunes hipòtesis sobre les possibles causes d'aquesta situació, esbossarem un marc teòric per analitzar aquella característica del mitjà digital i descriurem uns exemples que poden resultar reveladors.*

## Paraules clau

*Integració de mitjans, disseny interactiu, difusió cultural, retòrica de l'hipertext.*

## Introduction

The typical discourse of the internet seems fated to fit the different media into rectangles: from the browser's window, inevitably related to the standard interface of the operating system, to the interior vertical, horizontal and central frames, joining discourses seems to be reduced to a game of fitting boxes into each other, a boring puzzle. The two-directional confluence with television, the box-medium *par excellence*, appears to lead us inevitably to this dominance of the rectangle, two Cartesian dimensions that delimit and create artificial boundaries to collaboration and integration between discourses.

On the other hand, most games are based on constructing a world that is more or less realistic, in which there is the chance to move and act. We get excited both about the particular design of each action as well as the possible configurations in the form of sophisticated, complex and stimulating manoeuvring. But the different media involved in constructing the environment – graphics, sound, perhaps real or photo-realistic images, animation, etc. – collaborate with the single desire to disguise their boundaries and construct an integrated whole in which, and with which, the game can be carried out.

Nonetheless, there are many alternative ways to make different media converge in digital discourse. In fact, we believe that these different ways of integrating multi-modality and interac-

tion is what best typifies the digital medium. At the end of the 1990, some CD ROMs already noted some of these possibilities, later almost forgotten under the enormous weight of the internet and the games we know. The strength of these two benchmark hypermedia (*hyper* in the discursive sense but particularly also in the financial and social sense) is probably the main cause of the virtual and, we hope, temporary disappearance of these pioneering experiments.

This article ends with a short description of some significant examples from that brief time of interactive production for cultural dissemination. In order to reach these examples, we will follow some successive steps. Firstly, we will note some of the characteristics of the internet that, strictly speaking, do not play an important role in its current configuration, in order to explore the possibilities we are interested in here. After we will describe the conditions required by interactive products in which such possibilities can be found. We will then outline some theoretical concepts on multimedia interactivity that should provide us with insight into the range of possibilities we hope to open up with our final examples.

We take the internet as a reference because we believe that, as an heir to cultural dissemination initiatives on CD ROM, the internet might be and in some cases is (Ribas 2008) one of the spheres where innovative initiatives for media integration can be developed. It is not that these are not possible within

the sphere of games – in fact, there have been some quite successful attempts at combining games and cultural dissemination during the same period we are looking at – but the priority given to playability and immersion means that its reasoning is very different to the reasoning we are developing here. And, in spite of the interest of some experiments with media, here we cannot enter the extensive sphere of interactive art. Moreover, its intrinsic freedom distances it from our focus of study, namely cultural dissemination.

### Technological convergence, media integration and the internet

We still remember the interactive audiovisual experiments based on video-disk, when it was necessary to “orthopaedically” mix this analogue source of video and audio using a computer, perhaps also with some simple computer text or graphic. The fact that all the different media of a multimedia application are digital files that can be handled uniformly by the same computer system that contains them gave true meaning to the term hypermedia applications. Technological convergence naturally entails the possibility, inevitability, of using all kinds of media: “(...) (technological) convergence would not be viable without the digitalisation that means all kinds of sources of information can be manipulated singly, i.e. it doesn't matter whether the information was originally audio, video, graphic or data as, thanks to digitalisation, everything is bits” (Prado 2003: 3).

Taking this into account, in an environment such as the internet, so huge and with all the flexibility of a digital medium, it's surprising not to find more experiments in combining media along the lines of what also used to be done, and with much more difficulty, on two-dimensional media: parchment, paper, silk... Research into the integration of illustration and typography, like the characteristics of capital letters and other elements of so many medieval manuscripts. Or more special cases in which the texts, using the typographic resources of size, colour and direction, construct figures that refer to their content, such as those of the French manuscript copy of the beginning of the 19<sup>th</sup> century of the poem *Eridanus*, originally by the Greek poet from the 3<sup>rd</sup> century BC, Aratus. Or the techniques used in the often very long Japanese and Chinese horizontal rolls on silk, the *emakimono*, popular between the 11<sup>th</sup> and 17<sup>th</sup> century (and perhaps earlier in India), in which the calligraphy and pictures, on occasion united by a single production technique, literally unfold stories and options before the active spectator that opens and unrolls them.

Why, in spite of these integrating characteristics of the digital medium, is it so difficult to find something with similar vitality on the internet? A quick tour around the web will show us a majority of sites where it seems that the only thing exported from the paper medium are the least creative combinations of text and image, mere juxtapositions: an illustration next to a

### Il·lustració del manuscrit *Eridanus* del segle IX.



Source: (c) British Library Board. All Rights Reserved  
(Shelfmark; Harley MS 647, f.10v).

Available at the British Library website: <http://www.bl.uk/>

text to complement it, a text at the foot of an image or video, or as a title... It's true that the internet explosion as from the last few years of the 20<sup>th</sup> century brought to an abrupt halt the experiments that were starting to be undertaken in offline media.

This situation is the consequence of the significant weight of characteristics inherent to the internet itself, particularly encouraging certain ways of carrying out discourse. The internet's great social appeal comes from the combination of its two key properties: firstly, its unlimited capacity to store and instantly return all kinds of content, much of it pre-existing (ideally all pre-existing) and other specifically constructed content with radically heterogeneous criteria; secondly, its hyper-communicability, the egalitarian capacity for everyone to swap, with intrinsic ease, the role of receiver and producer. In neither of these two cases is the exploration of innovative forms of interaction and media integration particularly useful in achieving their objectives.

Prioritising content or communicability means that experimentation or depth in design is not a priority value for the resulting websites. This situation can be understood better via the distinction made by Elizabeth Boling between design quality and production value, i.e. the relative level of sophistication in a product's overall treatment. For example, the quality of interactive design does not necessarily improve with the amount of content, nor with the number of different media, nor with sophisticated graphic treatment, nor with the intrinsic quality of all its components. And neither is the opposite the case. In fact, Boling believes these two concepts are independent and consequently proposes a way of analysing interactivity based on the generation of a Cartesian grid (Boling 1995).

Production value is the key parameter to evaluate those sites based on the intrinsic appeal of previously existing content. The paradigmatic case might be YouTube, where all its

tabs and small rectangles with the list of related videos, of videos being watched at that time, of searches, comments and all kinds of tools, complement (and are secondary to) the window where the portal's greatest value is shown, namely its videos. Another case with quite a lot of similarities is that of firms or institutions that have a valuable asset, e.g. of an audiovisual nature, such as production houses or TV channels, but also specifically artistic or cultural assets, such as museums, foundations or heritage centres.

If these centres applied a philosophy of cultural service when joining the digital medium, they could go beyond the simple transposition of previous content and embark upon the creation of intrinsically digital products. In fact, some TV channels already have interactive applications in parallel with some of their series, such as the very simple examples on Discovery Channel (<<http://dsc.discovery.com>>), and some museums do the same with their exhibitions, such as the very interesting examples by the San Francisco Museum of Modern Art (<<http://www.sfmoma.org>>). Incorporating this kind of material could constitute great added value. "These new websites should contain that which can provide more competitive edge to the audiovisual industry: multimedia and interactive content" (Codina 2003: 41).

In the case of the second characteristic of the internet, hyper-communicability, not only the design quality but also the production value, although not seen from a classic viewpoint, become secondary to the strength of the desire for communication. In this respect, the internet's appeal is the appeal of utopia: we have, such as we may never have had before, the sensation of taking part in constructing a world we could hardly have imagined or desired, a world that suddenly becomes possible, everyday, and is within the reach of everyone. Behind this idea of access to all existing and imaginable information, behind this idea of absolute interconnection there is a myth; that of the information society seen as "a state reached when all actors in society, both individuals and public and private organisations, have the chance to access and disseminate any information, from anywhere, immediately and in the format they wish" (Prado 2003: 5).

The conviction of these desires, closely related to the internet, has shifted the focus of attention mostly towards aspects associated with hyper-communicability in detriment of constructing more elaborate interactive discourses, discourses more along classic lines where an author uses a medium specifically to transmit ideas in a certain way. It is certainly in such an area, closer to tranquil, noise-free reflection, where we might find the experiments we are dealing with here. We believe the internet is sufficiently extensive to contain these "designer discourses" but neither do we rule out a desirable evolution of the as yet primitive e-books of today, perhaps overlapping with other mobile devices, perhaps including all the necessary wealth of media. This might be one way to secure the definitive and constantly delayed implementation of interactive discourse.

## Interactivity: managing actions and types of interaction design

Saying that the basic characteristics of interactive discourse are interactivity and multi-modality is almost a tautology that can be expressed, with variations, in many different ways. In order to refine our own characterisation further, we will base ourselves on one that has been particularly recognised and is almost canonical, namely that of Janet Murray whose interest centres on the possibilities of digital narrative. Her characterisation of multi-modality in particular will provide us with a good starting point to achieve our own view of media integration. Murray believes that interactivity and immersion are the two specific aspects of the digital medium (Murray 1997: 83 and others).

According to Murray, interactivity, that which makes communication with a computer attractive and different for us, can be considered as made up of a combination of the procedural, the basic characteristic of the computer in making a succession of orders or procedures, and of the participatory, our capacity to provoke behaviours that intervene to modify these procedures. For Murray, interactivity is the basic characteristic of what is interactive, what defines its essential figurative property: "(Computers) are responsive to our input. Just as the primary representational property of the movie camera and projector is the photographic rendering of action over time, the primary representational property of the computer is the codified rendering of responsive behaviours" (Murray 1997: 86).

Although, in this particular formulation, Murray seems to focus only on responses, it is clear that we should not limit ourselves to a strongly asymmetric situation in which a person asks and the computer responds. The attractive forms of media integration can only arise by turning the computer into a dynamic "alive" component of its relationship with the person: "[...] an interface is not simply the means whereby a person and a computer represent themselves to one another; rather it is a shared context for action in which both are agents. [...] 'agent' to mean one who initiates action [...]" (Laurel 1993: 4).

The actions we carry out with a computer are merely a part of the sum of actions we carry out during the rest of our personal activity. It is clear that, in many ordinary situations, our objectives and our intentions are not completely defined: instead of subjecting our behaviour to analysis and exhaustive planning we adapt our general intentions to the opportunities offered to us by events. In other words, the cycle of action - goal/execution/evaluation - may start at the third part due to a change in the situation of the world. Each contextual situation will define the alternatives open to us but, in general, opportunist actions can be more stimulating than direct ones: "Opportunistic actions are less precise and certain than specified goals and intentions, but they result in less mental effort, less inconvenience, and perhaps more interest" (Norman 1988: 49).

This viewpoint allows us to divide interactive elements, or the various parts of an interactive element, into two different kinds

depending on what we expect, when designing them, concerning whether the user's motivations will be largely extrinsic or intrinsic. They are extrinsic when they are external to the interactive product: a person consulting a concept on Wikipedia, the programming of a TV channel on its corresponding portal or videos on YouTube only needs to be provided with fast, effective, hassle-free access to the information he or she wants. On the other hand, it may be considered that someone who decides to install a CD ROM or to consult the interactive extension of an exhibition on a museum's website or that of a TV series may have a specific, intrinsic interest in the interactive product being consulted. The user can get excited, can enjoy innovative unexpected proposals that provoke and stimulate this initial interest and that even deviate it, resulting in the initial goals being modified, adapted or replaced.

In a previous study we analysed the consequences of this dichotomy for interactive discourse theoretically and heuristically. The construction of this discourse, the process of designing interaction, must be based on knowing how to strike, at any particular time – both globally and locally – the necessary balance between design for efficacy and design for stimulus (Ribas 2000).

It is in this second case, concerning a user with a specific interest in interactive discourse, that the whole range of indirect solutions can be used, solutions aimed at mechanisms to involve and stimulate the person interacting. It's not easy to systemise these solutions but it's clear that they are all related to improving or increasing involvement: encouraging users to discover, surprising them, broadening their expectations. In general, trying to maintain and optimise the degree of enjoyment so that the interaction does not only maintain prior expectations or desires but causes unexpected and perhaps never imagined things: "Enjoyment is characterised by this forward movement: by a sense of novelty, of accomplishment" (Csikszentmihalyi 1990: 78).

The kind of media integration we are focusing on, and for which we will provide examples at the end, is based essentially on the explicit but smooth convergence of the different media managed by interactivity and is one of the most powerful design tools of its type.

### The immediacy and concealment of the media

According to Janet Murray, the second characteristic of the digital environment is immersion, the part that allows us to add dramatic aspects to our relationship with the computer. Murray breaks immersion down into spatial immersion, the capacity to show us spaces through which we can "move", i.e. "surf" (this movement is what provides us with a spatial feeling, whatever the physical interface employed) and encyclopaedic immersion, access to a quantity of data that seems endless and that translates into the possibility of almost unlimited wealth of representation.

It's obvious that Murray is deliberately concentrating on only one of the possible future forms of the digital medium: its immersion prototype is the holodeck from the second series of *Star Trek*, a place indistinguishable from reality, where all traces of the computer have disappeared. This is a new version of the myth systematically generated by communication, that of the disappearance, transparency or inexistence of the medium. The projective geometric perspective of the Renaissance, its optical and chemical automation in the *camera obscura*, in photography or in the cinema, and the new and ideally "perfect" algebraic automation in digital images are successive attempts at offering an impossible experience without mediation. In this respect, the holodeck is no more than an extrapolation of experiments in contemporary realistic virtual reality in a situation where all intrusive interfaces have disappeared.

Naturally, what sustains the desire for immediacy is not an ingenious belief in the reality of what is being experienced but the existence of a point of contact between the medium and what it represents, of a certain mental model that relates them: optical via photography, geometric via perspective or algebraic via digital image. This means that, in desktop environments, although the physical interface is more obstructive, the same logic of immediacy can apply. Hence the change in paradigm resulting from the availability of computer graphics in the 1980s and 1990s. Direct manipulation interfaces and their associated graphic user interfaces (GUI), where an analogy such as a "desktop" or "toolbox" allows us to understand the actions with the computer in function of other, already fully assimilated actions that are often from a previous medium, are based on this philosophy of making the computing medium imperceptible.

The same explanation can be applied to the characteristic immersion of computer games. In spite of the frequently low quality of their graphics, it is remarkable how easy it is for players to project themselves within old realistic games such as *Myst* or *Doom*. This is a consequence of combining automatism (with which we are now used to perceiving representation in cinematographic perspective respected by these games) with the fact of interacting, of placing ourselves inside the world represented.

In effect, the sensation of immediacy can be achieved with various combinations of these two conditions: negation or ignorance of the medium's presence (and of all its associated aspects, such as the author) in the act of mediation, and the situation of the spectator in the same space and perhaps under the same conditions of intervention as the objects represented. These conditions can be found to different degrees and in different combinations in all the historical examples we have mentioned.

### Hypermediacy and making media explicit

As stated by Jay David Bolter and Richard Grusin (Bolter 2000), provided there is media convergence, immediacy is

inevitably associated with another apparently contradictory property, namely hypermediacy. While immediacy aims to eliminate or automate representation, hypermediacy does the opposite, aiming to place it at the forefront, catching the user's attention concerning the presence and intervention of the media in the act of representation.

According to Bolter and Grusin, the digital medium does what all its predecessors have done when they appear, namely remediating, i.e. defining itself in relation to the previous media, presenting itself as their remodelled version. This appropriation of the old media on the part of the new (polymorphic as never before in the case of the digital medium) leads to the appearance of this productive tension between the experiences of media absence and presence, between immediacy and hypermediacy. In a unified space we penetrate via a kind of window, hypermediacy opposes a heterogeneous space that visualises in various parts or channels, perhaps "windows", the representations of other media, creating possible openings to the different sensorial varieties of the experience.

The window interfaces of operating systems and internet, with their characteristic "rectangular" style, are obvious examples of the practice of hypermediacy. They serve to highlight in which way their strategies can directly contradict those of immediacy. On the one hand, the windows environment does not aim to unify space under a single privileged point of view in which the observer is located: each window defines a point of view that can be strongly conditioned by the diverse nature of the medium contained in the window: verbal, visual, audio... On the other hand, the processes to manage the windows and the explicit contact with the different media mean that the interface not only does not disappear but becomes reinforced to ensure the user is in contact with it. In this respect, this mode of integrating media forms part of the most significant trends in contemporary art, a characteristic of which is to attempt to make the spectator aware of the presence of the work.

### Immediacy, hypermediacy, desire and fascination

In the examples we gave at the beginning to express our nostalgia for a different internet, we always wished to cause the same outcome: illustrated capital letters form part of the main text, and the images made up of letters in the case of *Eridanus* form part of the image, but both cause and place the reader to appreciate the integration of text and image. This aim is for the spectator to recognise the medium as a medium and to enjoy this process of recognition. "Today as in the past, designers of hypermediated forms ask us to take pleasure in the act of mediation..." (Bolter 2000: 14).

As we have seen, disappearance, transparency and immediacy in the process of configuring a medium is a desire that seems to have dominated throughout the history of art and communication in the west. Next to it, and closely related to

this desire, there is a minority and only apparently contradictory feeling: the fascination for explicit presence, exposition and collaboration between media. The enjoyment it can cause justifies the value we give it in designing stimulating interactive elements.

The relationships between desire and fascination are complex but help to understand some of the historical reactions to new media, such as those produced by simulation games from the movement of the first part of the 19<sup>th</sup> century, such as the phenakistoscope and even the reaction of the first cinema audiences. Although these are extraordinarily hypermediated experiences in which the devices' extremely high visibility continuously called attention to the fact that it was a mediated representation of movement, the strength of the desire for immediacy, as this was a time when dynamic representation was starting to become more powerful than static representation (Crary 1990: 151), made the experience valuable for the spectators of the time. At the same time, the fact that the medium's mechanisms were explicit made the experience pleasurable per se. This kind of functioning, of positive tension between immediacy and hypermediacy, can also explain the easy involvement in games that are not visually realistic but with a markedly physical component, such as those of the Wii platform by Nintendo.

### More hypermediacy strategies

Medieval examples suggest that the interface of windows or frames on the internet is not the only way to construct hypermediated experiences. To relate the different media that converge in the digital sphere, the interaction designer must define their audiovisual and conceptual relations. Depending on these relations, we can see very different results in terms of media integration. A first step in studying them is to define the range within which they can move, between juxtaposition and absorption: "In the logic of hypermediacy, the artist (or multimedia programmer or web designer) [...] does so by multiplying spaces and media and by repeatedly redefining the visual and conceptual relationships among mediated spaces, relationships that may range from simple juxtaposition to complete absorption" (Bolter 2000: 42).

An alternative analytical method that can be used to differentiate the strategies between these two extremes is the semiotic analysis of syntagma in multimedia. The most reasonable option in adopting this point of view is to take as a reference the closest and most extensively analysed medium, namely cinema. This is the option of most authors and in particular that of Bo Fibiger. Unlike the cinematographic medium, in which the spatial dimension is resolved exclusively through the internal configuration of the staged shot, in multimedia there can be various spatial presentations simultaneously, perhaps each one in a window. Even sound, closely related to the image in film, can now be a node apart and therefore directly controlled by the user.

An initial differentiation in the possible syntagmatic constructions of multimedia space is based on whether the relationship between the media is synergetic or not synergetic. In principle, a non-synergetic syntagma corresponds to the usual window environments that, due to their nature, hinder discursive synergy between what they contain. According to Fibiger, this configuration can become confusing: "A non-synergetic relationship exists when different unrelated information is presented at the same time in different windows or frames. Non-synergetic syntagmas have a tendency to confuse the user, normally looking for consistence - or they can be competitive as different entries" (Fibiger 1999, 4.2.2).

Considering these two different parameters, the forms of media integration we are interested in here are closer to absorption than juxtaposition and closer to synergetic than non-synergetic forms. The examples we will give all fall into this area of study. Unfortunately, analysing in detail the significant variables to be considered in the field we have just defined is an objective that is beyond the scope of this article. This is, on the other hand, quite unknown territory and we hope it will be an object of study in the future.

### Action and its integration within interactive multimedia discourse

However, we will explicitly stress what we believe is the most significant characteristic of the interactive medium, namely the integrated consideration of the relationship between the media and the management of user actions. Few authors insist on this enough. Bolter and Grusin themselves seem to see hypermedia only as a simple collage of media previously "remediated" by the digital monster: "In photomontage the pre-existing forms are photographs; in literary hypertext they are paragraphs of prose; and in hypermedia they may be prose, graphics, animations, videos, and sounds. In all cases, the artist is defining a space through the disposition and interplay of forms that have been detached from their original context and then recombined" (Bolter 2000: 39).

But interactive multimedia products are much more than the mere juxtaposition of media: an analysis does not make sense if it does not consider the ways in which the media can provoke and assemble the user's actions. As stated by Jim Rosenberg, adopting the perspective of reception, in an interactive product the structural operations are closely mixed with the multimedia text so that the structure of an interactive product is as much as or more than the network of connections planned by the designer, what the user gradually discovers through his or her actions: "A hypertext is a document in which interactive structure operations are intermingled with the text; hypertext structure is usually investigated from the point of view of the 'real' structure connecting these operations. [...]. This overall structure graph may not be apparent to the reader.

Readers *discover* structure through *activities* provided by the hypertext" (Rosenberg 1996: 22).

One obvious consequence is that this play between action and media must form a relevant part of the interactive discourse. In the same way that any discourse (verbal, written, audiovisual) plays with all the elements at its disposal to construct an integrated whole, the rhetoric of hypertext must include action and its possibilities for integration with other elements in constructing a coherent interactive discourse. Free games with the media, as habitual in interactive products as with any other sphere, especially when a technology appears that enables new and different things to be done, only make sense if they constitute a coherent element within the overall discourse. Brenda Laurel expresses this need for coherence quite concisely: "Multiple modalities are desirable only insofar as they are appropriate to the action being represented" (Laurel 1993: 160).

Going back to the expression of Janet Murray, we believe that the basic figurative property of computers is how users' actions are handled, taking into account the different possibilities for media integration, both between the media and with these actions.

### Some examples of media integration on CD-ROMs for cultural dissemination

The history of CD-ROMs for cultural dissemination starts and practically ends with the 1990s, and their expansion occurred in a very particular way, based on French cultural and museum management. A significant observation within the context of what we have just outlined is that the first products were opened in another window of the operating system's environment, so that users were prepared for working in a computer application. One example of this paradigm (not the first but the most well-known) is that of the Microsoft Art Gallery (Microsoft 1994). As from a specific point in time, at the latest with the first edition of "Le Louvre" (Montparnasse Multimedia 1994), most CD-ROMs of cultural dissemination started with the whole screen black and usually showing a title, some credits and probably music.

This step from a computing reference to a cinematographic reference was strongly affected by the technical circumstances of the time but also shows a desire for immersion in the developers of the incipient medium. The cinematographic reference, the apparent control of all computers on the part of the application and the disappearance of the framing window or any other kind of frame reminiscent of subordination to operating systems and to computers in general was maintained until the CD-ROMs had almost become extinct. When attempts were made to construct equivalent applications for the internet, the inevitable presence of the browser window, with all its anti-immersion possibilities, became a decisive drawback for this

## Opération Teddy Bear, 1996



Source: INDEX + 1996

kind of treatment. Application on the internet enforced a global treatment based on juxtaposition more than absorption.

Below we provide a short description of some examples taken from these CD-ROMs. The criterion is deliberately quite subjective; in fact, it is the appeal, the fascination we believe they can produce. As the aim is to show the possibilities of these forms of media integration in an exciting design, we believe this is a good criterion. Later on more objective aspects should be dealt with. However, so as to follow an order, we will start with those cases that affect the interactive products in question in more global terms, ending with more local examples.

“Opération Teddy Bear” (INDEX + 1996) is constructed on a huge database with facts, events, places and people from the Second World War. Naturally there is a large number of conventional accesses to this information, basically presented with text and photographs, animation and maps. However, the main treatment focuses on a story located in occupied France and narrated in a format taken from paper-based comics but, on being absorbed by the digital medium, includes a large number of new possibilities. Logically, as the story develops many different contextualised accesses open up in the database.

The story, based on Nazi documents hidden in a teddy bear, progresses as different vignettes are “opened”. This is done linearly using automatic fragments that employ different dynamic resources from both comics and cinema, as well as from their integration: some characters or objects move through the vignette or even to other vignettes, text bubbles appear, words, sounds and some music can be heard. Often the action stops and we must intervene for it to start up again, in general clicking on a bubble, but also by unveiling a window, placing us in the role of a character, to be able to see the outside from where a ball will move, bounce and give us access to the next vignettes or drag a character from one box to another so that the action can continue, etc.

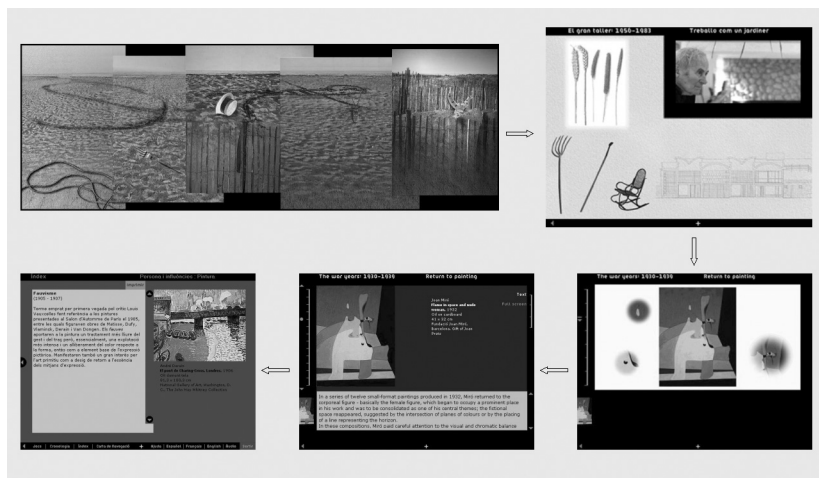
The different possibilities provided by this case of absorption

of the comic medium by the digital medium are so many and so diverse that we cannot summarise them easily. In general, the aim is that the user’s intervention should drive and also be a reminder of the surprising possibilities of the integrated medium. There are some interesting dramatic effects. For example, as a means of involving users, the first intervention, by activating a vignette with a close-up of an SS captain, makes the voice of this character order the shooting of three resistance fighters. It is the start of the story. Also attractive are some discourse resources, such as a sequence that is developed at the same time in space and time, seeing and hearing it simultaneously both in close-up and in a general perspective in two successive vignettes.

Concerning the CD-ROM “Joan Miró. El color dels somnis” (Joan Miró Foundation, 1998) which was produced at the Universitat Pompeu Fabra in collaboration with the Miró Foundation in Barcelona, here we shall only highlight one aspect of its main access that relates the structure with the user’s actions and with the dominant media.

This main access is divided into five levels or layers differentiated by their audiovisual, interactive and informative treatment. The first is a beach where there are some objects, such as those Miró used to look for, that provide access to five different Miró areas. In these, once again some other objects appear, when we “capture” them, putting the cursor over the top, small animations integrated in the space, as a prelude to what can be found when we advance by clicking on that branch of the interactive product. The click takes us away from the area to an animation conducted by the words of Miró and based on images from his life and work. Another click on one of the images that go to make up the animation leads to textual information on that image and additional options for studying the work: enlargement, sketches and games. And by clicking on the active words of the text, the fifth level can be entered, the hypertext space where users can surf freely around the textual information.

### Joan Miró. El color dels somnis, 1998



Source: Fundació Joan Miró, 1998

Each level is therefore characterised by a strongly differentiated media treatment: of exploration and fictionalised at the first and second levels (the first, more abstract, the second, more concrete); an audiovisual of documentary inspiration at the third level; of text, image and characteristic options at the fourth level; hypertext and with fixed subsidiary images at the fifth level. This passing through levels where, by choosing, the capacity to explore is reduced while the amount of information is increased and consequently the type of medium employed changes, used to explain the proposed structure to the user. Content, media and interaction collaborate in the process of receiving the interactive product. Interactive resources such as a simple “back” through levels tend to enhance this complicity.

Scarcely one year after *Apple QuickTime VR* technology appeared, the authors of the CD-ROM “Orsay. Visite virtuelle” (Montparnasse Multimedia, 1996) provided an extraordinary example of how to creatively subvert technological possibilities. In the *Récit* section, associated with some outstanding pieces of the CD-ROM, replaced the predictable video animation based on fixed images (pictures, photographs) with a spatial

collage placed over the cylindrical panorama characteristic of QuickTime VR. The usual advance control through the panorama: the time controls the space. The usual resources of cinematographic discourse (shot composition, editing) are replaced with the control of the two user displacement options provided normally by QuickTime VR technology: free movement through the panorama and the zoom. The voiceover is synchronised with variations in these two parameters to construct an explanatory lineal discourse, a story (*récit*) on the theme in question.

But not only that. At any time users can control the discourse and move through the space-collage in the same way as through an architectural space, dragging it and increasing or decreasing it with a click. Naturally, this also drags the voiceover, which now “obeys” the spatial transfer in terms of time. Complementary to this, a standard location marker (a rather uninspiring ball on a bar) means that the development of the animation can be followed through time and controlled with the usual dragging.

The application “Makers of the Twentieth Century” (News

### Orsay. Visite virtuelle, 1996



Source : Montparnasse Multimedia 1996

Multimedia 1996) is constructed on pre-existing material: the text-based biographies, photographs and news items from the time of the 200 most important people in the 20<sup>th</sup> century according to the *Sunday Times Magazine* of London, where the material had initially been published on paper. Maintaining this base material, the Israeli firm Zappa Digital Arts constructed an interactive layer to conduct access to this final material. This is a product with a lot of aspects to be highlighted, but we will focus on one example of the delicate treatment of video integration within the interface.

The characters are divided into six worlds: Mind, Power, Body, Senses, Discovery and Design. Each world has a different visual, musical and interactive treatment. The interface for the Body world is centred on that of an actress recorded on video and integrated within a markedly graphic environment. The integration blurs boundaries, reinforcing the positive perception of the contrast of the integrated media.

Depending on which character we choose, the girl does one thing or another and explains something we have chosen, setting up a subtle and complicit game: if we choose Pelé, she plays with a ball; if we choose Coco Chanel, she's on a catwalk... This excellent visual integration is complemented with a comparable conceptual integration. As we demanded previously, the whole play of the media integration is secondary to the coherence of the discourse. Although it was only very recently that the imperceptible mixture of video and graphics was technically possible, there is no gratuitous use of this resource here.

In a very old and quite eclectic product, the first edition of the CD-ROM for the Louvre (Montparnasse Multimedia 1994), the best selling interactive product of all time, we can find another extraordinary example of how interaction allows for unexpected forms of handling media. It can be found as a sub-option of one of the most standard options in all interactive products that focus on pictorial work, namely the magnifying glass or zoom. At a first level, the Louvre CD-ROM's zoom Louvre doesn't seem special at all: a red box that can be dragged over a miniature of the picture to focus our attention on the enlarged fragment.

The novelty comes with its "Details" option, accessible while using the zoom. This sub-option starts up a voiceover that, in the typical fashion of museum guides, explains the four or five most important details of the picture. It does so by controlling the square we had dragged. When our attention needs to shift from one detail to another, the square moves following the voice and, in the large window, we can see perfectly what is being explained. We can regain control at any time and move the square as we wish. As in the Orsay case, the voiceover follows us: the guide does what we want.

We can find a similar example in the CD-ROM of the "3<sup>ème</sup> Biennale d'Art Contemporain de Lyon" (Réunion Des Musées Nationaux 1995) but with an interesting variation. In the section dedicated to each artist there is a brief interview and, irrespective of the language spoken by that person, the video is

## Makers of the Twentieth Century



Source: News Multimedia, 1996

## Le Louvre, 1994



Source : Montparnasse Multimedia 1994

## 3<sup>ème</sup> Biennale d'Art contemporain de Lyon, 1995



Source : Réunion Des Musées Nationaux 1995

subtitled in French and English. Instead of proceeding in a fragmented way from shot to shot, following the timing of the video, the text moves from right to left, even exceeding the rectangular limits “reserved” for the video and “invading” the rest of the interface, its shape reminiscent of how a scroll works.

In fact, the subtitled text functions like a scroll. Dragging it in any direction, we can control the point of the video and corresponding audio. Once again space controls time, in this case physically intervening in an element that is so indivisibly associated with sequential image, namely subtitles.

## Conclusions

This is an open article. Its aim is to propose rather than conclude and that is why it ends with some examples that suggest ideas. These are quite diverse examples but, in all of them, we can expect users to be aware, to some extent, that they are taking part in a different way of configuring media. However, in this approach, it seems as if users are meant to gently perceive of their actions. Taking control of the subtitles in an interview, commuting between the lineal explanation of a picture's details and our control, surfing through the space of a cylindrical collage or allowing oneself to be carried along by a voice, experiencing the many possibilities of an expanded comic, enjoying a well integrated interface that nonetheless has a lot of contrasts or even discovering an interactive product's structural key in its variation of media all appear to us as enjoyable and natural experiences, a kind of stroll, surfing through a new “space” that is surprising but quickly understandable. We believe they help to construct a kind of “story” in which the user enters and integrates naturally. But that is definitely another story.

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# Mobile Web 2.0. The new mobile communication industry

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### Abstract

*The convergence of technical and consumption aspects today allows hybridisation between mobile devices and the Web 2.0, leading to a new symbolic space called Mobile Web 2.0. This research outlines an original theoretical and technical panorama that offers the reader an introduction to the Mobile Web 2.0 phenomenon. To do so, emphasis is placed on the central aspects of the evolution of mobile telephones towards collaborative internet-based applications. It also analyses the difficulties and limitations of the industry, the seven principles of the Web 2.0 adapted to mobile devices and the product and content aspects of an incipient yet fully-evolving market.*

### Key words

Web 2.0, mobile Web 2.0, mobile devices, third generation (3G), mobile communication, user-generated content, multimedia convergence, culture industry

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### Resum

*La convergència d'aspectes tècnics i de consum permeten avui la hibridació entre mobile devices i web 2.0, i generen un nou espai simbòlic denominat Mobile Web 2.0. Aquesta investigació traça un original panorama teòric i tècnic que permeti introduir al lector en el fenomen del Mobile Web 2.0. Per fer-ho, es posa èmfasi en els aspectes centrals de l'evolució dels telèfons mòbils cap a aplicacions col·laboratives via internet. A més, s'analitzen les dificultats i limitacions de la indústria, els set principis del Web 2.0 adaptats als mobile devices, i els aspectes de productes, continguts d'un mercat incipient però en franca evolució.*

### Paraules clau

Web 2.0, Mobile Web 2.0, dispositius mòbils, tercera generació (3G), comunicació mòbil, continguts generats per l'usuari, convergència multimèdia, indústria cultural.

## 1. Introduction: from the mobile internet to the mobile Web 2.0

The mobile network society (Castells *et al* 2006) is in movement through wireless communication technology. The drive by terminal manufacturers and telephone operators towards third-generation mobiles (3G)<sup>1</sup> has created the appropriate infrastructure for promoting physical mobility plus connectivity, and with it an attractive and incipient market. The mobile internet defines the use of the internet on mobile devices.<sup>2</sup> Meanwhile, the convergence of technical and consumption aspects today allows hybridisation between mobile devices and Web 2.0 (O'Reilly 2005; Cobo Romaní and Pardo Kuklinski 2007), and generates a new symbolic space called mobile Web 2.0, driven by an empowered web consumer (Wilson 2006), always online, with whom manufacturers, telephone operators, start-ups and media try to connect. It is precisely the mobile Web 2.0 that is the subject of our study in this article.

Mobile devices allow content to be captured from the point of inspiration (Jaokar and Fish 2006) and Web 2.0 adds to it the principle of collective intelligence through a taxonomy created by users, which promotes a new mobile data industry.

The appearance of 3G technology gave meaning to this transformation. Whereas the first and second generation of mobiles were designed and optimised based on voice communication, the differential of the third generation is its efficient connection with TCP/IP networks – the internet communication protocol – offering complementary uses that take advantage of this technical capacity.

However, to attain market maturity and achieve the leap from traditional mobile telephony to mobile internet and then to mobile Web 2.0, those involved in the business need to modify and adapt historical strategies described later in this article. For their part users, with their consumption attitudes, will have to perceive the appeal of these devices in terms of convergence, ubiquity and productivity. With increasingly more pow-

erful equipment in terms of processing capacity and multimedia implementations, a growing bandwidth on mobile internet, greater volume of Wi-Fi networks, more flexible and efficient web browsers, hybrid uses and massive online communities, convergence appears to be simply a matter of time.

This study outlines a theoretical and technical panorama that provides the reader with an introduction to the mobile Web 2.0 phenomenon. To do so, emphasis is placed on the central aspects of the evolution of mobile telephones towards collaborative internet-based applications. It also analyses the difficulties and limitations of the industry and the product, content and graphic interface aspects of an incipient yet fully-evolving market. This work is part of the theoretical framework of more extensive research called "Campus Móvil. Mobile devices and Web 2.0 applications. Towards a prototype design with teaching innovating university purposes", the final aim of which is the design of the prototype Web 2.0 application for devices based on Spanish higher education uses.<sup>3</sup>

## 2. Limitations of the mobile telephony industry

The penetration figures of mobiles worldwide are spectacular. According to Castells (2006), in 2004 there were 1,198 million landline telephones in the world and 1,748 million mobiles, when scarcely a decade earlier landline telephones numbered 643 million compared with just 56 million mobiles. The figures rise year on year. The ITU (2007) states that there are 2,600 million mobile telephony users worldwide.<sup>4</sup> This inversion in the figures between landline and mobile telephones, in the favour of the latter, occurred in 2002, which showed a trend in which landline telephony was on the road to disappearing. However, there are historical factors that result in current technical limitations and hinder the shift from traditional mobile telephony to the mobile internet and subsequently to the mobile Web 2.0. Mobile telephony devices have been designed from both the physical and the conceptual aspect in the image of wired telephony terminals. Manufacturers have focused on offering a user experience that is as close as possible to traditional telephony. As there is no initial standardisation of manufacturing, or of software (especially of operating systems), or of user experience, consumers have been locked into incompatible proprietary technologies that offer a market in which the user is punished on the basis of using more and more incompatible technologies on different supports. Besides this, the industry's finances have been based on operator-manufacturer power relationships whereby network administrators incorporate proprietary services of the manufacturer that are totally dependent on their network, without permitting the access of third-party developers. This way, the operators create an increase in the value of the use of the network in line with the improvements added to the software or to the equipment itself. This commercial logic creates *de facto* monopolies where the subscriber is deprived of options and which has, to date,

prevented the creation of an ecosystem of applications and services that result in the increase in value of mobile devices as multimedia terminals. It is because of this that, despite growing technological capacity, mobile devices are underused as multimedia tools. The operator-manufacturer society is based on mechanisms that prevent both users and third-party developers from installing additional software, generally through the non-publication of API, libraries or the internal description of the workings of the operating system.<sup>5</sup>

Consumers select the devices and technologies that best meet their needs, but they also do so as a mass user who has to adapt to business models existing prior to their needs. One of the mistakes of the IT and electronics industry is in thinking that the first type of adaptation is resolved by the consumer selecting terminals independently, when in reality the most natural act is for the consumer to choose the independent features of each telephone of use to them. The telecommunications industry has made attempts to recognise these behaviour patterns and has created compatible open protocols and technologies, such as Bluetooth and Wi-Fi. However, to date there is no standardisation or opening-up of the internal technologies of mobile devices, both in terms of equipment or software.

A new difficulty appears in the above context: that of software designers. Users face a market of technologies fragmented into different manufacturers. This fragmentation means that designers have to increase their development costs because of two key aspects: a) adapting applications to devices with very diverse equipment and software features; b) the complementary production costs relating to access to the operating system libraries or to the programming and cross-compiling<sup>6</sup> environments in the different devices.

Beyond the intentional division of the industry (and the logic of planned obsolescence), software designers also face limitations regarding the computational capacity of mobile devices. Generally speaking, these devices use low energy consumption and small physical space technologies, determined by portability needs. They also usually use embedded technologies or unrelated and inferior versions of the most popular operating systems, which are often completely different systems from their commercial versions (especially those belonging to Microsoft and Apple), even though they retain the names of desktop computer systems for commercial reasons.

The increase in viewing surface on new devices and the standardisation of the browser in terminals works as a window on the use of technologies housed in different zones of the network by mobile telephony users. Software manufacturers and service providers can focus on creating value and content for terminals by different manufacturers solely, economically and openly, and use the existing front-end web technologies of almost any development.

It is to be expected, as occurred in personal computing systems, that manufacturers focus on creating semi-proprietary extensions in browsers (open API, closed back-end or blocked by patents) for the captive creation of differentiating applica-

tions in their terminal models. On the other hand, it is also foreseeable that the evolution of technologies and software will foster the adoption of completely open web browsing applications for mobile devices.

In the area of browsers as a platform, a parallel technology seems to be developing to implement the web in terminals that were not originally designed for web display or interaction. Proxy browsers<sup>7</sup> distribute the computational load of the download and rendering of the page equally between the terminal and a server situated on the internet (generally belonging to the company), which acts as a proxy in the connection. The intermediary server traps the requests, captures them, recalculates them and converts them into a format more in line with the computational needs of the device and the connection (compression of graphics, simplification of the HTML and/or conversion to XHTML) and sends them to the terminal. This trend in using a proxy browser as a platform and intermediary<sup>8</sup> means access can be provided to services that require an intensive computing process for normal terminals and may lead to an interesting trend with a view to the adaptation of developments designed for large systems and the compatibility of traditional computational systems.

### 3. Adapting the consumer market

As has been mentioned, the limitation of mobile terminals lies more in market impositions and their modes of use than in the actual technology. Beyond the traditional use of telephony systems (calls, interaction with voice mail), the most successful recent uses have been those that have increased the communication possibilities of the terminal at very low or nil cost per unit of use. In Europe, the use of SMS for short communications (user to user and business to user), the use of pings or SMS with "confirmation of receipt" indicating the receipt of arrival and the use of calls that are not picked up by the sender and that are usually used to communicate binary information between users aimed at the communication of an unequivocal message with temporary importance are well known. These uses of communication have characteristics that are missing from many computing developments aimed at mobiles. In other words, they are standard, born on the terminal, they have a simple and unequivocal interface and are universal to all telephones. And they have, therefore, begun to be used by agents and/or incorporated as a means of interaction between users and the traditional computing or interactive systems on the web.

With such a complex scenario, we will have to wait and see how the consumer market will react to 3G technology. The most optimistic (Levinson 2004; Thompson 2005; Steinbock 2003, 2005) foresee an unstoppable evolution. Steinbock (2005) points to the transition of the voice business to the looking business and it is here where the hybridisation of mobiles towards applications with built-in Web 2.0 consump-

tion makes sense. According to an analysis by Levinson (2004) of the benchmark environment of the USA, this trend indicates that the mobility culture will swallow the internet, i.e. users will consume the net much more from their mobiles than from their computers. This is a possible scenario in the USA and Asia, with mobile internet at no additional cost or consumption volume limit (e.g. in the AT&T/Apple alliance for the iPhone), and the ease of access to Wi-Fi networks in urban environments. However, it is a scenario with certain limitations in the European and Latin American context, given the peculiarities of operators' commercial strategies.

While the mobile was originally designed for business and professional consumption, the evolution of the market veered towards employment and interpersonal communication. Later, teenagers and young adults became the driving forces of the market. This is the same sector that leads the consumption of Web 2.0 and that offers more early adopters in the trial and error strategies of both Web 2.0 businesses and mobile device manufacturers and operators. The similarities of the two consumer markets - mobiles and Web 2.0 - further reinforce the possibilities of the convergence analysed in this study.

In 2000, European telephone operators made a large capital investment with the aim of being awarded a licence to use the frequencies aimed at 3G telephony for European Union states.<sup>9</sup> Despite this, after eight years they have still not been able to capitalise this investment (Wilson 2006). At that time, it was supposed that 3G technology would offer an enormous range of multimedia services for which the user would be willing to pay. This has not been the case, while the pressure to capitalise these investments quickly becomes even greater in an environment of planned technological obsolescence geared towards the development of the fourth generation of mobiles.

Beyond the above evolutionary limitations of the mobile telephony industry, another of the reasons that has, to date, slowed down the modification of consumption towards the mobile internet and the mobile Web 2.0 has been the scant innovation policies of the operators, fearful and incapable of facing the outcome of social networks via mobile Data Industry through the fear of losing their traditional market of charges based on voice communication and SMS.

Other reasons that affect the implementation of web consumption via mobiles are the extremely high connection costs, slow browsing speeds, barely usable interfaces for browsing and the lack of a culture of use. Today, computers are more efficient and economical for internet browsing and using Web 2.0 applications. Despite this, the experiences of text messaging and ringtones indicate that, with pre-existing advantageous conditions for the user, there is a consumer market looking for new forms of technological uses.

Another significant problem is that of standards. Graphic interfaces vary according to the device and not all mobiles support the same software since the service provider restricts the functions of the tool and limits the usage capacities according to its commercial interest. As was the case in the virgin market

of web browsers in the early 1990s, the W3C<sup>10</sup> is fostering a web applications standard for mobiles that promotes undifferentiated browsing integration between computers and mobiles. However, this will not only be difficult to control but it could also entail a limitation for a specific type of application that seeks to obtain greater specificity.

#### 4. Central features of the mobile Web 2.0

Jaokar and Fish (2006) propose seven features of the mobile Web 2.0 that highlight significant aspects of the convergence analysed in this article.

1. Content created on mobile devices and integrated in Web 2.0 could alter the balance of power in the media industry. The ubiquity of mobiles allows the user's point of inspiration to be captured and takes it from being a primary information consumption tool to being a content production tool (e.g. news) by the user, all within a context where consumption becomes highly personal and differential.

2. The user is not a number but a label. Labels could provide a way of mapping the multiple numbers of our lives more naturally and intuitively and free the user from the restrictions of network operators. All users store personal data of contacts on their devices, but changing these (because of theft, ageing or loss of the terminal), the problems of transferring these data from one terminal to another and the ever greater use of independent fixed connection pointers of the operator (e-mail, instant messaging, VoIP addresses) force users to keep copies of these data as a back-up on address servers (Web-based or on protocols such as LDAP) housed on the internet. The opening-up of these data using standard social network, contact and personal information description protocols (such as FOAF<sup>11</sup>) may – in contrast to the traditional telephone book – promote the creation of a decentralised taxonomy that awards meaning to the snippets of personal information distributed in a user network. Together with the information gathered from the mobile and other communication devices, this folksonomy will allow the creation of geolocation-based recommendation services or new, more personal forms of remote social contact similar to existing Web 2.0 applications.

3. Global nodes and multi-language. Location is a complex exercise of traditional mobile networks. The mobile Web 2.0 is destined to be a web-based worldwide mobile network with multi-language access. This is a desirable scenario without roaming, international calls, download by file weight or monopolistic or duopolistic market abuses and with the competition of VoIP telephony to reduce the cost of traditional calls and increase the possibility of locating users, irrespective of the network and country they are in.

4. The mobile Web 2.0 allows synergies between applications to be enhanced through mashups. New functions created on the basis of joining products, at all times emphasising efficient uses associated with mobility. An example of this is the wide-

spread use of mashups of Google Maps on mobile devices (especially in the USA). Besides this, virtual presence or remote interaction technologies (software that permits the use of one terminal from another through a network connection) will enable the administration of a large volume of data that "live" in other systems (desktop computers, laptops, servers, web or remote services) ubiquitously over terminals. Classic interaction technologies such as Webex/Cisco are giving way to much more closed and multiplatform systems of interaction<sup>12</sup> that permit the administration, consumption and alteration of information housed in remote terminals and both person to group and group to group collaboration.

5. *Ajax* as a basic system of interaction both with a view to the user (greater flexibility for interaction) and with a view to optimising network resources (the load of transferring a complete HTML or XHTML document versus the load of transferring a snippet of information formatted with XML or JSON). *Ajax* can be used in conjunction with the interaction facilities of the browser (telephone services mapping) to enable the interaction of the application using the terminal keyboard, as occurs with the shortcut keys of *Ajax*-based services aimed at domestic computers (Gmail and Yahoo! E-mail use combinations of keys to access different services and menus). This will allow the creation of applications sensitive to the context of the terminal and to the usual forms of interaction known to the user.

6. The mobile Web 2.0 will drive location-based services as this is the essential differential of mobiles with which other tools cannot compete. Mobility contributes to data administration from different geographical spaces. In addition, the architecture of participation may offer truly significant data based on contextual need and propose organic use in contrast with the present limited offer by operators.

7. The mobile Web 2.0 proposes mobile searches differently from the search procedures used from computers, emphasising the context of time, event and place. There is also a low capacity of serendipity and less user patience. With these differences, greater efficiency in the results is required given the specific consumption needs and the obligation of presenting scant information sequentially. Still in its emergent phase,<sup>13</sup> the development of effective research tools in Web 2.0 applications via mobiles and the trail of use and research that a user generates may contribute to the development of the semantic web.

#### 5. Trends in content and graphic interfaces

One of the fundamental questions in tackling convergence between mobile devices and Web 2.0 applications is what type of content will users want to consume under mobile platforms. The key question is: how can mobility add value to content? While the role of editor is passed on to the consumer in Web 2.0, in the consumption of social networks via mobile devices, the offer of content by operators is secondary. It may be that the key is not to provide content of great relevance or to recy-

cle what is offered in the traditional media but to generate connectivity, user visibility and participation platforms designed for mobile leisure or for professional life. This is where there is more similarity with Web 2.0 architecture, wherein providers supply a platform for an active end user turned into a publisher.

Although there are multiple possibilities of use, three consumer needs can be stressed regarding mobile Web 2.0 applications with which attractive business models can be constructed: a) manage mobile data from the point of inspiration; b) generate snippets to be recovered and reused in other environments. One of the possible applications that would fulfil these connectivity variables would be a platform devoted to transferring these snippets of information from a mobile to a server and from there to a web application for their possible revision and extension, such as an agenda or knowledge management system (Brandt, Weiss and Klemmer, 2007); c) make the most of time without computational availability or network access (means of transport, public places without access to computational power, short waiting times) to continue online, have access to multimedia content and interact on the network.

As regards graphic interfaces, the challenge facing mobile devices is well known due to the lack of space on the screen. Whereas Web 2.0 applications were originally designed to be browsed from a computer with a standard resolution of 1024x768 pixels, mouse, keyboard and drag and drop, the main question regarding this item is what the most suitable way is to adapt Web 2.0 applications to these interfaces (with 240 pixels width or less) that do not have many of the screen visibility features that a standard computer has. The emergence of touch screen technology – which allows sites to be visited in their normal version and without format changes – may result in a new design paradigm for all manufacturers.

However, beyond this recent innovation, the main distinctive patterns of portability continue to be light weight, sequential presentation, prioritisation and user understanding (Lindholm, Keinonen and Kiljander 2003). But not just that. Simplicity is the essential aim because, unlike the use of larger interfaces such as desktop computers, where all the attention is focused on the screen, interaction on mobile devices takes place within a different context where the physical environment is the interface and where users are carrying out their primary activity while using the mobile.

According to Lindholm, Keinonen and Kiljander (2003), the present aim of designers of this type of interface is miniaturisation and the expansion of applications and functions. These two apparently contradictory issues share a common obstacle: the restrictions of the user interface. Many more things can be done on smaller tools, but how do you design all this new information on the screen? Also, as an additional difficulty, the transition of changes in interfaces is difficult. If one of the constitutive principles of Web 2.0 are light programming models and the search for simplicity, it is evident that over-specification has no place.

## Notes

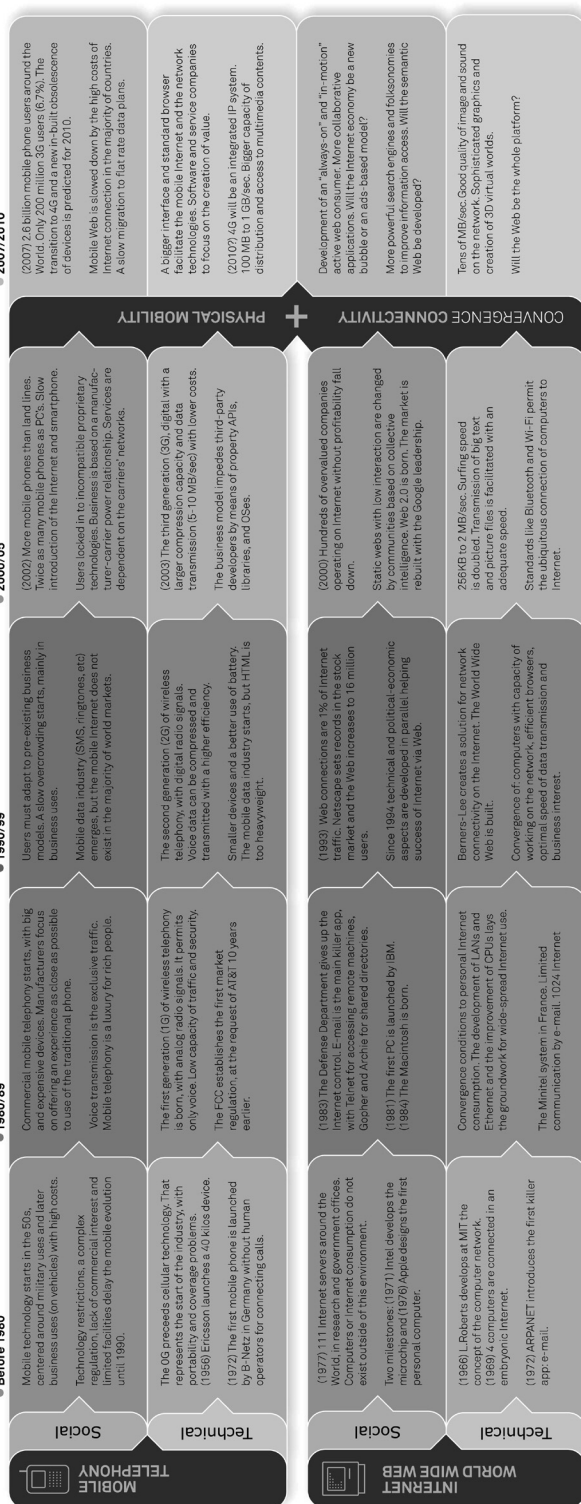
- 1 Analogue telephones are considered to be the first generation of mobile telephony (1G); digital cell phones the second generation (2G), and high-speed broadband digital devices are the third generation (3G) (Castells *et al*, 2006: 24). Besides affording better quality internet connections, these promote a more sophisticated use of the equipment towards convergence with multimedia applications. 3G describes a telephone protocol range that transmits and receives information at greater speed and allows internet connections at a similar speed to that of standard connection broadband.
- 2 Some time ago, manufacturers in the industry ceased calling their products “mobile telephones”, with the most widespread term being mobile devices. Mobile devices include mobile telephones, PDAs (Personal Digital Assistants), MP3 players and portable video consoles. Laptop computers are not included. The applications that a third-generation mobile device features include: telephone, photo and video camera, audio and video player, broadband internet connection by Wi-Fi or the network of the partner operator of the equipment, web browser, e-mail, agenda, video games console and, in some cases, other personal computer functions. It should be stressed that although new applications are constantly being added, there is a broad range of products and not all of them have the above features.
- 3 More on Campus Móvil at <http://hci.stanford.edu/jbrandt/hugo/campusmovil>.
- 4 ITU (International Telecommunication Union) data for September 2007. Taken from <http://afp.google.com/article/ALeqM5iqxtfxK0Op09jqpbJht2Ahp5Vgyw>. As an example of one of the markets that most affects us, Spain is one of the countries with the greatest density of mobiles per inhabitant. In July 2007, there were 48 million users and a level of penetration of 107.46 lines for every one hundred inhabitants (data taken from <http://sociedaddelainformacion.telefonica.es/jsp/articulos/detalle.jsp?elem=5107>).
- 5 The strategic positioning of operators resembles the attempt by old internet and e-mail services providers, such as AOL and Compuserve, which created closed and proprietary technologies along with a marketing strategy focused on convincing the consumer of the need to use these technologies. This business model coexisted alongside the increasingly more established ecosystem of the non-commercial internet, where value relationships were increasingly generated on the basis of the creation of mashups or the combination of information without closed proprietary licences.
- 6 Cross-compiling is the technique whereby it is possible to compile (go from source code or code written by human programmers to binary, or understandable by the machine) in a different environment from the one in which we are working. Cross-compiling aids the development of embedded applications as it allows the programmer to work in a known environment (a work station or a desktop computer) with common, known and generally more powerful tools.

- 7 Proxy browsers (including Opera Mini and Teashark) are programs designed for mobile terminals and are adapted to the lower processing capacity and speed of these devices. Instead of connecting directly to the internet, these programs send the requests to an intermediate machine (proxy), which processes them as though they were the user and serves them again to the terminal compressed, simplified and suitable for the user to view.
- 8 This is a trend promoted by developments by two independent companies: Opera in its Advanced version for java MIDP2 and Basic version for MIDP2; and Teashark. Both include the legacy started by the Japanese DOCOMO at the end of the 1990s.
- 9 For more information about the investment by European telephone operators in 3G telephony licences to use frequencies, consult the research entitled *Can Mobile Telephony Become an Architecture of Participation?* by Jason Wilson (2006).
- 10 The W3C Mobile Web Initiative, with the work entitled Mobile Web Best Practices 1.0, proposes steps to be followed to ensure standards in this type of web application, in line with the thinking of experts of the likes of Berners-Lee who believe that the design of differentiated applications for mobiles could contribute to the fragmentation of the web. In this vein, other authors criticise the development of specific platforms for accessing certain types of web-sites, as occurred in the development of the Japanese Mobile Web (i.e. N different standards for N specific operator companies). We recommend reading Andreas Bovens, *Mobile Web development in Japan: A Tag Soup Tale*.
- 11 <<http://www.foaf-project.org>>.
- 12 Such as the NX and VNC free protocols and systems or the Yugma commercial ones. <<http://www.yugma.com>>.
- 13 The 3GSM 2007 held in Barcelona was the meeting point of seven European mobile operators (Vodafone, France Telecom, Telefónica, Deutsche Telekom, Hutchison Whampoa, Telecom Italia and Singular) to promote a strategic alliance in order to create a tool that competes with Google — the research market leader on the internet — and that can obtain part of its advertising

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# CONVERGENCE: EVOLUTIONARY ASPECTS



# Mobile Web 2.0

## Theoretical-technical framework and developing trends.

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Synergy between novel technology and use patterns has enabled the convergence of mobile devices and web 2.0 applications. This synthesis is a new conceptual space called mobile Web 2.0.

Planeta Web 2.0: [planetaweb2.net](http://planetaweb2.net)  
Mobile Web 2.0: Future text  
Mobile Communication and Society  
Web 2.0 Summit  
Mobile 2.0 Conference  
Mobile Web 2.0: AMF Ventures  
Mobile Monday

Credits  
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[http://hci.stanford.edu/jbrandt/hugo/infographic/MobileWeb2\\_English.pdf](http://hci.stanford.edu/jbrandt/hugo/infographic/MobileWeb2_English.pdf)



# Convergence and general audiovisual legislation in Spain

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### Abstract

Today, the phenomenon of convergence between the telecom and audiovisual industries is a market reality within both the international and Spanish context. The government's announcement of the imminent remission of a general audiovisual act, together with the fact that Spanish society has long demanded an independent regulatory authority for audiovisuals, have led to the possibility being considered of there finally being a convergent authority in Spain, based on the structure of the CMT.

In 1995 the Spanish senate unanimously passed a report asking for this to be created and, in 2000, the Council of Europe passed a recommendation, with Spain voting in favour, which urged member states to create independent audiovisual authorities, a mandate that some autonomous communities in Spain have already complied with, such as Catalonia, Navarre and Andalusia, but not the state authorities to date. This mandate becomes a requirement with the amendment of Directive 89/552/EEC.

### Key words

Audiovisual, concentration, convergence, pluralism, regulation, telecommunications

### Resum

El fenomen convergent entre el sector de les telecomunicacions i l'audiovisual és avui una realitat de mercat en el context internacional i espanyol. L'anunci per part del Govern de la imminent remissió d'un text de llei general audiovisual, juntament amb el fet que l'existència d'una autoritat reguladora independent en matèria audiovisual ha estat una demanda llargament estesa en la societat espanyola, porten a plantejar l'oportunitat de, finalment, disposar per a Espanya d'una autoritat convergent sobre la base de l'estructura de la CMT.

El 1995 el Senat espanyol va aprovar, per unanimitat, un informe sol·licitant-ne la creació i l'any 2000 el Consell d'Europa va aprovar una recomanació en què s'instava els estats membres a crear autoritats audiovisuals independents, mandat al qual han donat compliment algunes comunitats autònomes, com és el cas de Catalunya, Navarra o Andalusia, però encara no les autoritats estatals. Aquest mandat apareix com a imperatiu, amb la modificació de la Directiva 89/552/CEE

### Paraules clau

Audiovisual, concentració, convergència, pluralitat, regulació, telecomunicacions.

## The history of the telecom sector's liberalisation and its convergence with the audiovisual sector in Spain

It has been slightly over a decade now since the Spanish Government approved the Royal Decree-Law on the liberalisation of the telecommunications sector in 1996<sup>1</sup>, which Parliament decided to enact as a bill after its approval. Today, with the regulatory knowledge and experience accumulated during this over 10-year period, we can look back and confirm Spanish society's capacity for incorporating revolutionary changes almost seamlessly into our daily lives at home, work, school, university and on the street.

However, the work accomplished during these years in the communications area has left highly relevant legislative and regulatory issues pending. An undoubtedly serious gap in Spain's democracy is the lack of a general framework for the audiovisual sector that offers a basic legislative framework or legal homogeneity and certainty, which has led to the governmental vice of legislative "patches" for television and radio.

This period of liberalisation in the electronic communications sector has taken place alongside the social and technological advances digitalisation has brought to our lives, which should doubtlessly be properly reflected in the legal framework for the telecom and audiovisual industries. Whereas yesterday we spoke of an approaching convergence, today we are living with it and enjoying its active presence in the market through services accessed via today's terminals and equipment. Nowadays, providers are offering us fixed and mobile voice services, broadband internet access and audiovisual content in a natural manner: converging providers with converging offers that we access via converging devices. Today, in 2009, the convergence between the telecom and audiovisual sector is a reality which requires suitable regulation providing appropriate solutions for the future and that is no longer fixated on the past.

During the processing of the above-mentioned Royal Decree-Law on the liberalisation of the telecommunications industry during the late 1990s, Spanish legislators introduced into the

text of the first Article (which created the Telecommunications Market Commission or TMC), a vision of converging regulations for the communications “hypersector” as a whole, and launched Spain on the path of convergence regulations already pioneered by other countries around us, such as the United Kingdom with Ofcom, Italy with AGCOM or the US with the FCC, among others.

Thus, the final text of Article 1.2.1. of Law 12/1997 laid down the TMC’s object as the body responsible for “[...] safeguarding conditions of effective competition in the telecommunications, audiovisual, telematic and interactive services market to benefit citizens, monitoring the proper setting of prices in this market and functioning as an arbitral body in any sector conflicts that may arise”. This perspective places citizens at the heart of telecom and audiovisual market regulation and competences and - in line with the current transitory situation established by the General Telecommunications Law 32/2003 of 3 November - now offers us the foundations for a future integrated regulation of the communications market capable of responding in a dynamic environment in which convergence and bundled services lead and will lead the way for users and the demand for final services, which will be a mix of telecom and audiovisual content.

### **The liberalisation process and slide towards convergence**

The telecom and audiovisual markets have been undergoing deep structural changes since December 1998, the date set by EU institutions for introducing competition in the telecom sector, thus bringing the period of large national monopolies to a close. Although many people may think that the old monopolies, today’s “incumbents”, still have too much weight in the telecom and electronic communications markets, it is also true that today Spain is undeniably part of what we call the Information Society and that this sector’s panorama hardly resembles its prospects ten years ago.

In 1998, the different markets that went to make up and supported the Information Society in Spain accounted for 3.55% of the GNP, employed 96,105 workers and furnished internet access to 667,351 corporate and private users.

It is hard to pinpoint precisely how many internet users there were just ten years ago, but in any case, the figure was no higher than one million. Today, thanks to periodic reports issued by the TMC and specific yearly reports on the Information Society in Spain, more accurate data is now available on this sector’s profile: today, practically 57% of the population over 16 years of age are internet users – more than 24 million people in all, 17 million of whom use it frequently. In the corporate arena, more than 88% of all Spanish firms were connected to the internet by the end of 2008 and approximately 91% used computers at work.

Yet, speaking of the Information Society in Spain does not

only mean citing the number of direct users since, in practice, these services reach all of us through health services, public administrations, the school system and the media. The Information Society is a reality that has naturally and favourably impregnated our lives and corporate life in such a way that nowadays it is hard to conceive of a reality in which the facilities offered by these services are not available.

Spain’s inclusion in the Information Society also encompasses phenomena that were unthinkable ten years ago, such as the massive penetration of mobile telephones or digital television.

In the case of mobile telephony, it provides not only voice services but also smart phones, authentic access portals to a broad and diverse range of services that span text messaging, internet access, music, photography and obviously, voice.

After ten years of liberalisation, Spain is beginning to bid farewell to analogue television; the start of broadcasts on digital terrestrial television (DTT) from the Fonsagrada transmitter and the switch off or switchover (according to one’s point of view) in Soria is paving a new way of watching television that now covers 92.38% of the population and is accessed by 45.2% of all homes, according to data from Impulsa DTT. This higher quality, more plural and diverse television affords viewers access to interactive applications and Information Society services and in its way can guarantee all Spaniards practically universal access to the Information Society.

In 2009, in order to respond to the new converging services Spanish users are demanding - broader bandwidths and higher transmission speeds - new generation optical fibre networks are beginning to be deployed to buildings and homes. Along with cable infrastructures, these networks will provide support for new needs, once copper networks start to reflect symptoms of depletion and the lack of capacity to provide internet users with high and very high speeds, audiovisual services such as high definition television (HDT) or 3D in the future, pay-per-view programming or other applications, such as videophony, online games, etc., that users are demanding.

### **The general audiovisual law on the horizon**

After the cabinet meeting of 14 August 2008, the president of the Spanish Government announced it would present the long-awaited general audiovisual law by the end of March 2009 and finally create an independent regulatory body for the Spanish audiovisual sector as one of twenty-four economic stimulus measures, in this case, as a part of the measures for the Information Society in the telecommunications sector<sup>2</sup>. Thus, the time has come to consider the expediency of incorporating into the TMC - Spain’s independent communications regulatory body - the competences of this new converging environment, which must satisfy users and furnish them responses as well as protect their rights, and to offer the sector homogeneous regulations and the management of scarce resources and infrastruc-

tures, such as the bandwidth for Information Society services as a whole.

Within this converging context, in which electronic communications and telecom services are coming together with audiovisual services, old debates from more than ten years ago must be revived to achieve proper regulation of the communications sector. Convergence was an expectation ten years ago and today is a patent reality. Nowadays, users are asking for more and more bundled converging service offers and providers are seeking to supply them. In view of this new scenario, rational administration and budgeting should be the foundations for appropriate regulatory responses that the converging regulatory body should construct for the telecom and audiovisual sector within the TMC's environment, joining the wake of converging regulators such as Ofcom in the UK, Italy's Communications Authority or the FCC in the US.

In any case, one of the main novelties stemming from the approval of the general audiovisual law is that, for the first time, there will be a basic law in the audiovisual area that will affect the entire country at all levels, i.e., national, regional and local, and endow Spain as a whole with a stable, homogeneous legal framework that guarantees greater legal certainty in the sector. This tenacity must be conjugated with due coordination with the competent regional administrations in the diffuse radio and television services in their respective territories on the one hand, and the desirability for the text of the law to create an independent audiovisual authority and include it in a converging body alongside today's TMC, on the other.

Apart from the above, the law's approval will mean the television market's true liberalisation. Until now, Law 4/1980 on state-owned radio and television established television as an essential public service to be delivered directly or indirectly; in the latter case, it was to be furnished by private providers under a concessional regime. The future law guarantees the direct provision of public services by public companies with local, regional and national coverage created to that end; in the rest of the cases, radio and television services are considered services of general interest that private sector entities are to provide under a competitive regime, with the limitations inherent in their technical restrictions, which result from the spectrum's limited use. Furthermore, the concept of *public service* by public companies, i.e., Corporación RTVE and the various municipal and regional public televisions, which will be the only ones to provide it, must also be reinforced.

In practice, this liberalisation will mean that sector companies will be in a better position to offer new features and develop new services for their audiences. And it will also mean greater flexibility for companies, which will have fewer administrative and economic restrictions upon shifting from concessionaires to licence holders.

With respect to the data available for the GAL's eventual approval, no significant delay in the Government's commitment to present the draft bill by the end of March seems likely, despite a final example of the "patchwork" policy alluded to

above: the Government's approval of Royal Decree-Law 1/2009 of 23 February on urgent measures in the telecommunications field, which would never have been needed had the promised general audiovisual law been approved by the previous legislature; the supposed urgency of this executive legislative tool would undoubtedly not have arisen. A new delay would be deadly for the audiovisual sector as a whole - both public and private television providers - as well as for the consumer electronics industry and internet providers.

### The draft bill for the General Audiovisual Law of 2005

The preliminary draft bill for the general audiovisual law announced by the Government in spring 2005 is an excellent starting point. Although the legal text is very detailed, this approach should be maintained, since leaving too many aspects open to future regulatory developments may once again generate a high degree of legal uncertainty about key aspects that should be made clear-cut as law. Moreover, approving regulatory principles for the audiovisual sector through a law means that the degree of consensus reached must be much higher than anything laid out in a subsequent regulatory development that would leave the government too broad of a discretionary margin in this sector, which is highly sensitive in social and economic terms. Furthermore, leaving key aspects of the audiovisual legal framework, such as accessibility for the disabled, multilingualism, public service elements or missions etc., in the hands of subsequent regulatory development actually means leaving the government in power in a "vulnerable" position, compared with television operators and their corporate groups. This exposure to the risk of "mediocracy" that threatens democracies is needless.

### The Spanish audiovisual market

The audiovisual market in Spain, like on the rest of the planet, is not immune or isolated from the economic and social vicissitudes surrounding it. Today, in 2009, television and the advertising market that supports it are undergoing convulsions, which include at least three aspects related to public television, the advertising market and television content, in addition to the migration to digital terrestrial television (DTT).

In the first place, public television is the leader in viewers thanks to its repeated credibility in delivering the news and a new management inherited from the period in which Carmen Caffarel undertook indispensable structural reforms in the old public entity, the key to its popularity today; it is being managed in accordance with the mandates of the law on state-owned radio and television, which enables it to face the challenge of migration to DTT with a quality, multi-channel public service offer at the level of public providers in the rest of the European Union.

In the second place, the growing plurality in the number of television operators has increased advertising supports until the digital switchover takes place and each DTT provider with national coverage is re-assigned a complete multiplex that, together with the proper legal framework, will allow not only free-to-air and paid HDT services to be offered, but also pay event services on DTT.

Throughout this entire process, providers must offer differential content that encourages viewers to migrate to DTT. Without attractive content, viewers will not perceive the need to migrate their equipment, which will slow the whole process down. Multiple possibilities will be opening up for future licence holders. Taking into account the many future license holders who will be granted management of a complete multiplex with a four-channel broadcasting capacity, plus a 20% reserve for data, decisions on the content to be offered can be very diverse. These may include offering paid content or broadcasting two channels in "traditional" format and reserving the other half of the bandwidth for a high definition (HD) channel.

The combined scenario of DTT and a suitable legal framework enables not only up to half the number of open channels to be reduced, but would also allow a better segmented market to be offered for different advertising targets, democratising access to premium content by enabling a low-cost individualised offer without the need for multichannel platform subscription fees and sustaining the media system's plurality, which is undoubtedly healthy for the country's democracy.

In recent decades, Spain has made efforts to foster competition, seek plurality and offer viewers the chance to access different editorial lines. Thus, in the constant search for pluralism, it was decided in 2005 to promote the introduction of a new digital provider with two DTT channels and an analogue support, the latter with limited transitory coverage until the switchover. All these efforts would be threatened if scenarios of entrepreneurial concentration are now permitted. However, this does not mean that several regional or local projects will not end up being abandoned after the entire liberalisation process has concluded and in these cases, what should be done with this bandwidth and its potential use will then be determined.

Lastly, in the third place, the switchover that is to take place on 3 April 2010 is only comparable to the euro's transition process, because never before has there been an event with these characteristics, one which affects 100% of the population and is joined by the decisions on economic payments that must be made on this occasion.

Hence, meeting the goal of having all homes ready to receive the digital signal on 3 April 2010 will be a complicated, yet not impossible task. Much work is being accomplished in several areas, e.g., Catalonia is promoting volunteer workers to help ease migration. Guaranteeing 100% coverage is an ambitious goal and at least public television is expected to be able to provide universal service, even if it continues to use the synergies between DTT and satellite, for which Royal Decree-Law 1/2009 is a very positive factor.

Spain is in the best conditions to comply with the anticipated analogue switch off dates next 3 April 2010. The network already has extensive coverage and we know that it is perfectly prepared, since it has been broadcasting since 2000 and has proved to be a robust, tested network.

Therefore, there are no apparent reasons to consider delaying the switchover date. Furthermore, providers are currently suffering from overruns in the cost of broadcasting in analogue and digital; delaying the date would pose an added problem for operators, which have been making efforts for several years to provide the two kinds of broadcasts in simulcast. Moreover, the spectrum freed-up by releasing analogue frequencies cannot be reassigned and the anticipated "digital dividend" cannot be provided until the switchover has taken place.

### **The new regulatory environment and new operating models in the television market**

It seems that the exploitation of paid content will be a reality in the new liberalised market, whenever open content is offered at the same time. Although the law has not yet been approved, many providers have already positioned themselves in the market by acquiring content to broadcast in paid formats, in the conviction that this will come to pass. As for the model they will follow, I would personally endorse broadcasting pay events instead of creating premium channels, except for high definition channels. Pay TV will not be the only new way to earn income; other formulas such as t-commerce, data services and even internet television will also open up a wide array of possibilities for the sector.

Moreover, this is very important, because it will be possible to "democratise content" from here on in. Until now, it has been necessary to subscribe to one of the paid television platforms before certain content that might be called premium, such as cinema premières or sport events, could be accessed. Therefore, televisions should have the option of offering all viewers access to this type of content, to the specific events they wish to see and only pay for without the need for a monthly subscription.

Aside from the above, it is slightly more complex, yet desirable, to make strenuous public efforts to foster the availability and harness the potential of the interactivity offered by DTT. First, users should be offered attractive interactive services that are useful to them. We should not allow the development of these services to wait until all viewers have the capacity to interact. As in other businesses, first the technology is developed, then the service is offered and, thanks to the offer's existence, finally a market is created by the demand. If televisions offer interactive services that viewers appreciate and demand, these viewers will no doubt choose to purchase the equipment that allows them to access these services and the market will be profitable. Without an interactive services offer, no one will be willing to pay ten or up to twenty times more for a decoder

that incorporates interactivity, whereas to the contrary, an interactive service that attracts viewers will significantly boost the penetration of interactive equipment.

### Public services and the future General Audiovisual Law (GAL)

As for defining public television in Spain, the framework of this law needs to lay down the general principles that are to govern the provision of public service and the requirements for and a way to control public financing.

Law 17/2006 on state-owned radio and television originated in the draft bill for the above-mentioned General Audiovisual Law of 2005 and we should not forget that both laws started to be developed at the same time, although the GAL has yet to be approved. Thus, the law that specifically regulates state-owned radio and television already concretely covers many of the principles incorporated into the draft bill for the GAL; predictably, Corporación RTVE will not be greatly affected when the new general law comes into force in the future.

However, once the GAL has been approved, several regional governments may have to pass the opportune provisions to proceed in some cases, so as to launch a process with their autonomous networks similar to what took recently place in today's Corporación RTVE in order to re-establish their economic situations and define a new financing model.

As for the management and financing of public broadcasting services, a new legal framework requires it to be a benchmark of stability and sufficiency for the provision of public services on the one hand, and an independent authority that oversees adequate compliance with public service missions with respect to the rules of free competition on the other. Hence, I do not share the opinion that advertising must be generally limited in public television, which would undoubtedly negatively affect the public coffers without necessarily boosting the income of private television broadcasting. Nevertheless, it should be possible to establish a series of restrictions that would lead to less advertising pressure on public television related to specific content, such as Spanish cinema or children's programming, by seeking a more qualitative than quantitative reduction.

However, the Government already intends to cut advertising by one minute per year, until 9 minutes per hour has been reached in 2011, which will mean between 60 and 80 million euros less in revenue for each minute no longer broadcast. Logically, Corporación RTVE will have to be compensated for this loss of income by the general national budgets to guarantee the provision of quality public service, maintain a balanced budget and avoid exogenous losses.

The initiatives other countries, such as France, have adopted in the area of financing public broadcasting do not seem applicable *a priori*, since they would mean placing public television financing in the hands of other sectors. Spain has assumed

mixed funding through advertising and the general national budgets and this model should be sustained from my point of view, in line with the conclusions reached by the Board to reform state-owned media in 2005. Likewise, if a canon for DTT licence-holders is levied on the bandwidth, a canon already paid by mobile telecom providers for the same concept, it would be senseless to allocate it directly to financing public television; it should correspond to the national administration instead.

The Audiovisual Communication Services Directive approved by the European Commission establishes that state aid cannot exceed the cost of providing public service and that the maximum net cost must be the difference between the total costs to the company providing public service and other income after compensations, something that leaves the door open for each year's budget deficit to be covered by public resources. In this sense, the criterion that all public programming should be a public service needs reinforcing; thus, 100% of the costs could be financed, should there be no other compensation. Certain entertainment formats that are hits with the viewing public may be as much of a public service as the news is. Hence, I don't believe we need to describe additional mechanisms for establishing the cost of public service at this time, since that is its main activity.

In accordance with the above and in relation to content, it is unacceptable for a public television to have to renounce *ex ante* certain content, because content that is premium and very commercially attractive today may not be tomorrow and vice versa. We have seen several examples of this in previous years, e.g., basketball and Formula 1, which were broadcast thanks to the efforts of public television in the past when the private sector was not attracted to them and which today, however, are qualified as premium.

### Convergence and an independent audiovisual media authority in Spain

Spain is the only EU country without an independent national media authority and in this sense, it has ignored the European Commission's recommendations. The time has undoubtedly come to create this body, especially since the Audiovisual Media without Frontiers Directive itself<sup>3</sup>, which was approved in December 2007, requires all Member States to have independent audiovisual authorities<sup>4</sup>.

As a precedent to encouraging its creation, public television in Spain has historically been handled by the Executive branch. However, in the preceding legislature it was the Parliament that unanimously approved the Law on state-owned radio and television and chose Corporación RTVE board members, which reveals a change in the sensibilities in governmental political power and the different parliamentary groups in connection with these aspects. Thus, conditions are ripe for the creation of a national audiovisual media board that looks towards the

future, an authority in step with the needs of a converging environment.

Directive 2007/65/EC of the European Parliament and of the Council of 11 December 2007, which amended Council Directive 89/552/EEC on the coordination of certain provisions laid down by law, regulation or administrative actions in Member States concerning the pursuit of television broadcasting activities, states in paragraph (65) of the preamble that "According to the duties conferred upon Member States by the Treaty, they are responsible for the transposition and effective implementation of this Directive. EU Member States are free to choose the appropriate instruments according to their legal traditions and established structures, and notably the form of their competent independent regulatory bodies, in order to be able to carry out their work in implementing this Directive impartially and transparently. More specifically, the instruments chosen by Member States should contribute to the promotion of media pluralism."

A new provision was inserted into the text of this Directive on cooperation among the Member States' regulatory bodies in the shape of Article 23.b, which lays down that "Member States shall take appropriate measures to provide each other and the Commission with the information necessary for the applications of the provisions of this Directive, in particular, the Articles 2, 2a and 3 hereof, notably through their independent regulatory bodies."

The Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions of 14 December 1999 (COM 1999/657 final) already addressed different aspects of audiovisual policy, from the necessary promotion of content to the promotion of sector self-regulation, including the problem of defining public broadcasting's role in the new digital age.

Thus, along these lines, in paragraph 6 entitled "Regulatory authorities" of Section 3 in the Communication on principles for the regulation of the audiovisual sector in the digital age, the European Commission laid down the following common guidelines for the development of regulatory authorities in the audiovisual sector:

- 1) Regulatory authorities should be independent of government and operators;
- 2) Content issues are essentially national in nature, being directly and closely connected to the cultural, social and democratic needs of a particular society; in line with the principle of subsidiarity, therefore, content regulation is primarily the responsibility of Member States;
- 3) Technological convergence requires increased co-operation between the regulators concerned (communication infrastructures, audiovisual sector, competition);
- 4) Regulatory authorities can contribute to the development and implementation of self-regulation. In this respect, the Commission will examine the utility of establishing a specific forum for European-level co-operation between regulators, operators and consumers in the audiovisual sector.

Thus, we see that similar conclusions are drawn from different approaches to competence and all include the constitution of regulatory authorities independent from both governments and sector stakeholders. These suitable authorities should be conscious of the converging environment, since nothing more has been done since the Communication of 1999 was approved over a decade ago to penetrate this situation, one in which audiovisual and telecommunications services have ended up configuring a market which requires an independent authority that uses market homogeneity criteria to address the diverse services provided. In this point, this new body and these competences should be integrated as an authority within the TMC in order to provide a response to these market demands.

Additionally, as sustained by the report presented in 1998 by Grup d'Alt Nivell (upon the initiative of Marcelino Oreja, who would later be Audiovisual Commissioner), the Member States started from highly varied places and regulatory structures stemming from their own political and cultural heritages, for which there is no one exclusive formula in common to approach what is in itself a consensus among them all: the need for these bodies as the best legal vehicle for preserving pluralism of opinion and information and the cultural, social and democratic needs of a certain society, as well as for maintaining a free and effectively competitive and dynamic market. All the Member States except Spain have granted these regulatory authorities a lesser or greater degree of autonomy and independence from their respective governments and market stakeholders, which is the result of the adaptation to each country's needs and demands and the political decisions adopted within the framework of each national legal code.

Thus, the process of debating and approving the future General Audiovisual Law should consider the expediency of creating within the text of the law itself an independent body comparable in scope and functions to those in the countries around us, such as Italy, France or England, which view the convergence process between the audiovisual and telecom services market as a fact, and within this framework, everything related to what we now call electronic communications, of which the internet is a part. Thanks to the autonomy, independence and training of its board members and the services ascribed to them, this body can continue to assume the competences needed until our country is on the same level as the group of more developed states in this area and can coordinate the policies to be applied in the different regional communities through opportune agreements with each of their audiovisual boards.

### **Structure and competences of the independent audiovisual regulatory body in Spain**

When the draft bill of the General Audiovisual Law was drawn up to create this board in 2005, it was suggested that it be

independent and work in coordination with the TMC, so that the boards could converge in the future. At present, there seems to be no reason for creating this board outside the TMC's scope, since there are many common fronts and synergies among the functions the two regulatory agencies are to exercise. One of the best options might include creating two complementary boards, one with telecom competences and the other with audiovisual ones, within the TMC's structure, i.e. models similar to those in the UK, Italy, the US or Canada. This organic proposal was already considered in the draft bill and did not manage to see the light in what would later be Law 22/1999 amending Law 25/1994, known as the Television without Frontiers Law.

Two boards in a single authority such as the TMC's, whose members would be designated by the Government through a procedure such as the one currently followed to appoint TMC board members and which would share the presidency, secretary and services, with the possibility of conducting joint sessions whenever needed for the issues, not only offers a simple solution that fits market needs at no cost to the public coffers, but also guarantees homogeneous regulation of the Spanish communications sector in accordance with the most advanced countries in this area in the heart of the EU framework and more relevantly, achieves a high degree of consensus.

Two aspects of the functions to be exercised stand out from the rest: in the first place, the proper application of regulations in the area of content (at the national level) must be independently monitored by specialised management coordinated with regional audiovisual authorities, and in the second place, clear administrative benchmarks for operators should be provided as far as coordination with the rest of the administration and regulatory bodies is concerned.

The board's action sphere should also include overseeing the public services provided by Corporación RTVE, monitoring proper market operations and intervening in the license renewal process.

An indispensable reference in the audiovisual board's development is respect for the values and principles proclaimed by the Spanish Constitution and especially the content of Article 20. The functions this independent audiovisual authority are to exercise within the TMC should include the following points:

- Guaranteeing and promoting respect for Constitutional values and especially, protecting pluralism, young people and children
- Guaranteeing the effective provision and universal access to audiovisual services
- Guaranteeing the exercise of users' rights to audiovisual services
- Monitoring transparency in the audiovisual market, guaranteeing social and political pluralism in access and the participations of citizens and different social groups in audiovisual media
- Promoting respect for free competition effectively among the different broadcasting channels, preventing the phenom-

na of concentration and overseeing transparency and advertising in the ownership of audiovisual media, as well as the free competition when granting licenses

- Guaranteeing a territorial, social and cultural balance in relation to the provision and reception of audiovisual services, promoting coordination between the different audiovisual authorities in each regional community
- Promoting respect for Constitutional values in the television and radio market
- Regulating audiovisual advertising
- Guaranteeing a framework for the stable financing of the audiovisual sector, be it managed directly or indirectly, above all working to ensure the provision of public service missions in radio and television broadcasting
- Promoting audiovisual production in Spain, including the different languages and cultures that exist there
- Promoting frameworks for co-regulation or self-regulation in the Spanish audiovisual sector

### **A new converging TMC for the telecom and audiovisual sectors**

During the coming 15 months, we will be witnessing a series of changes that will transform the Spanish audiovisual sector for both users and providers. These changes will allow viewers to enjoy an audiovisual offer with a better quality; the level of citizens' access to the Information Society will make a qualitative leap as well, because of the new service offers and easy access that DTT technology will furnish companies, which will operate in a totally liberalised market once the GAL has been approved.

The existing body with market competences in the area of audiovisual, telecom, telematic and interactive services - the Telecommunications Market Commission created by Law 12/1997 - has been seen to be a suitable solution for this converging environment, a proposal generically present in the recent debate this issue has aroused.

This solution includes creating an audiovisual board within the TMC parallel to its telecom board. The audiovisual board, which should be representative of Spanish society, should have the same number of members as the telecom board (nine) and share a president with it. The same staff should serve both boards; this solution would homogenise the manner of appointing members to the two boards. In any case, appointments should be transparent and based on criteria related to the candidates' appropriateness and knowledge of the sector and reflect the country's political and social circumstances.

Since Spain's regions enjoy competences in the area of social media within the framework of their territories, it is indispensable to integrate into the audiovisual board an "audiovisual cooperation commission" that includes representatives of the audiovisual authorities in the regions and the autonomous cities of Ceuta and Melilla. The commission's goal would be to

guarantee cooperation and the coordination of all audiovisual regulatory policies throughout the country.

In conclusion, it cannot be overlooked that a converging environment such as ours is today, with bundled “triple play” telecom offers (fixed voice, broadband and audiovisual services) and even “quadruple play” offers (the previous offers, plus mobile telephony), makes it necessary for the regulatory telecom authority - the Telecommunications Market Commission - to have competences in a market that is now in fact a multitude of converging services. Turning one’s back and remaining ignorant of the current status of the market we must regulate is like legislating while looking back at the past and once again, adding a text born obsolete to the official gazette. After so many years of need, the Spanish people deserve an independent audiovisual authority, a regulator in accordance with its situation and needs.

## Notes

- 1 Royal Decree-Law 6/1996 of 7 June on the liberalisation of telecoms. *Boletín Oficial del Estado* (BOE), of 8 June 1996 (No. 0139).
- 2 The eighth transitory provision of Law 32/2003 on the Telecommunications Market Commission’s competences in the area of encouraging competition in audiovisual services markets is as follows: “The Telecommunications Market Commission shall exercise competence functions in the area of encouraging competition in the audiovisual services markets pursuant to Law 12/1997 of 24 April on the liberalisation of telecommunications in the envisaged terms until new legislation on the audiovisual sector comes into force.”
- 3 See the reference by the Spanish Government’s Council of Ministers corresponding to the session of 14 August 2008 at <[http://www.la-moncloa.es/ConsejodeMinistros/Referencias/\\_2008/refc20080814.htm](http://www.la-moncloa.es/ConsejodeMinistros/Referencias/_2008/refc20080814.htm)>.
- 4 The reference literally reads as follows: “The Ministry of the Presidency will present before 31 March 2009 a draft bill for the general audiovisual law, as well as a draft bill for the law to create a National Audiovisual Media Board.”
- 5 Available at <<http://www.mpr.es/NR/rdonlyres/D03898BE-21B8-4CB8-BBD1-D1450E6FD7AD/73066/Informereformamediostitularidaddelestado.pdf>>.
- 6 Directive 2007/65/EC of the European Parliament and of the Council of 11 December 2007 amending Council Directive 89/552/EEC on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities.
- 7 Directive 2007/65/EC, Article 3.1.

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# Content convergence

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### Abstract

*The development and application of digital electronics within the audiovisual world, along with the incorporation of internet and the mobile telephone into the household sphere, have brought about a new composition in the systems for creating, producing, accessing, processing, storing and distributing audiovisual content with regard to both the mass media and audiences. This new situation accentuates the need for sector companies to establish a content convergence policy that covers the entire process, from the generation of content to its presentation to the public.*

### Key words

*Content convergence, production systems, content management, access, storing, interactivity, Internet, DTT, publishing, production tools.*

### Resum

*El desenvolupament i l'aplicació de l'electrònica digital dins el món audiovisual, juntament amb l'introducció d'internet i de la telefonia mòbil al món domèstic ha propiciat una nova configuració del sistema de creació, producció, accés, gestió, arxiu i difusió de continguts audiovisuals tant pel que fa als mitjans de comunicació com a l'audiència. Aquest nou context accentua la necessitat que les empreses del sector estableixin una política de convergència de continguts que abasti tot el procés, des de la generació de continguts fins a la seva presentació al públic.*

### Paraules clau

*Convergència de continguts, sistemes de producció, gestió de continguts, accés, arxiu, interactivitat, internet, TDT, publicació, eines de producció.*

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## Introduction

Since their creation and up to very recently, the production systems used to create content for radio (sound, voice, music), television (image, sound, graphics) and other media have been separate. The recording tools and the tools used by professionals, the working systems, technologies and supports from the archives and other sources and the elements used by the audience to access them all went to make up clearly differentiated and non-connectable worlds. In this environment, any possible transfer of information or content was one-off: very often it was related to interpersonal issues rather than structured flows of work and materials.

As from the first half of the 1990s, with the development and application of digital electronics in the audiovisual world, a significant part of the "format" barriers disappeared. At the same time, this presence of digital technology was also noticed in the domestic world and the world of the internet and mobile telephony appeared.

These changes have occurred and are still occurring with extraordinary speed. At the end of the 1990s, some key actions appeared proposing paradigmatic changes in the world

of production (multimedia journalism) and there were prophecies of "cataclysms" and the "disappearance" of traditional media. After some time, a part of these forecasts has been modified, as well as the financial speculations made about them.

Now that this absorbing wave has passed and the waters have abated, a new context has appeared that sets out and delimits possibilities, tools, processes and modes of access to content, both for professionals and for the audience.

## Concept

This context clearly shows the need to implement a policy of content convergence within firms in the industry, a policy that includes the whole value chain: the generation of content, its processing and storing and presentation to the public. It also includes, as an innovative element, the possibility to actively involve the public. However, this policy must be applied very carefully, as each medium has its own particularities and the whole approach with regard to creativity and language is fundamental.

## Content convergence and production infrastructures

The first point where this principle should be applied is located within what we might call “production infrastructures”. Included under this concept is the series of tools that allow industry professionals to access content, produce new content, share it with colleagues and coordinate with them when producing the final product.

### Online access

Online access to content is the basic element in the whole of production tools. Nowadays, this access means placing at the disposal of professionals all the content that “circulates” around the company. This must consist both of up-to-the-minute content as well as from the archives. It also means ease of sharing content with other team members and the possibility of coordinating with them. In the case of the Corporació Catalana de Mitjans Audiovisuals, this is equivalent to the access of professionals working on television and radio and also multimedia editors.

Such access also entails the possibility of easily accessing online other content that is outside the company, that might come from production houses, advertising agencies, dubbing agencies or other corporations, just to give a few examples. In this case, in addition to the tools required for this access, it is worth noting that there must also be policies of alliances and acquisitions to enable this online access to content outside the company itself with other organisations in the industry.

### Search tools

One of the basic elements of modern production infrastructures is being able to have, internally within the same company, powerful search tools that offer the possibility to get, quickly and “easily”, all the content a radio, television or multimedia professional needs to do their work.

In this case I would like to point out the prime importance of access being easy and fast. This can be seen if we just imagine a situation where, as is very habitual, a short time before the news or bulletin is to be broadcast, a news item “breaks” that requires access to archive material, be it contemporary or from 40 years ago, to explain the item to the audience or even to illustrate it with images.

Under this concept we also include the range of facilities provided to professionals so that they can allocate as much time possible to improving product quality instead of spending quite so much time on tasks of little added value (such as transferring tapes or looking for material that ultimately can't be found).

At the same time as tackling these search issues, it is also very important for search tools to be common to the whole organisation, both for television and radio professionals and

also those from other multimedia sections of the company. It's also good for them to be common for the different departments that go to make up each traditional medium: news, sports, programmes, etc.

## Tools for managing and creating content

At present, professionals from each of the professional media (radio, television, internet) have a series of specific network-based tools to manage and create content.

The first area with such tools within the audiovisual sector was radio. At the beginning of the 1990s, a series of tools appeared on the market that allowed radio professionals, journalists and creatives to access online, from their workplace, the content and materials required to do their job. They could also share these materials with their colleagues and work on them until the whole production was complete, practically independently.

Later on, at the end of the decade, television also started to provide its professionals with this facility. Afterwards the areas of internet and multimedia in general followed.

The solutions available on the market for radio, television or the internet were developed by different specialist firms in each industry. Apart from the odd exception, the aim was not common systems for the three media designed by companies that wished to take advantage of synergies or attempting to make products that served across the board.

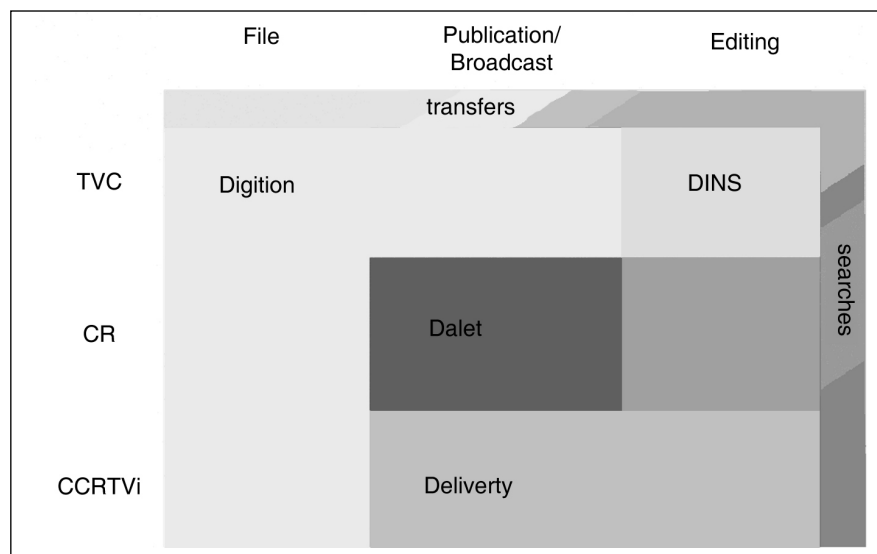
In this case, content convergence means a new generation of this kind of platform. In the first phase it is important to work with the same tool from each medium. At the beginning this could actually lead to a loss of the minute “adjustment” that each platform has assimilated in order to produce its products. The concept would lean more towards being interconnected, so that radio, television and internet professionals could share news items, archive material and content that is being produced. The aim would be to also share tools for communication, production management, searches and, in general, access to the information that most directly affects their work.

In diagram 1 we can see that Televisió de Catalunya, Catalunya Ràdio and CCRTV Interactiva:

- Share archive and content management tools (Digition).
- Have tools dedicated to content production, specific for each medium: Digition for TV3, Dalet for Catalunya Ràdio and Delivery for CCRTV Interactiva.
- The possibility is being looked at of creating an editing/coordination program (DINS) to ensure that the professionals from the three firms are well coordinated.

## Sharing content between media

Sharing content between media is therefore the other professional face of content convergence.

**Diagram 1. Structure of content management and creation tools**

Source: own.

The different professionals who produce products for audiences (TV viewers, listeners and internet users) should have at their disposal, at all times and in a simple, structured way, the whole audiovisual content of a multi-platform group.

This “whole” is meant in the broad sense. Both a radio journalist and a TV producer, a website or mobile content editor must all be able to access the whole of the organisation’s material. Moreover, this source material usually has complex issues of rights related to the content.

Generalised access includes both contemporary items and archive material and, in some cases, online access to sources belonging to external organisations, which have granted the right to their material.

Access means also being able to search and download content from your usual workplace.

### Projects across the board

Once an audiovisual corporation has the technical facilities we have described, work can start on carrying out audiovisual projects across the board, i.e. involving more than one medium.

This facet can give rise to interesting projects in the field of news when multi-support coverage is required for events or for structured coverage with public involvement.

This ‘across the board’ aspect can also be employed to produce high quality products that are benchmarks in their area. For example, productions such as *Guernica, pintura de guerra*, made at TV3. The interactive services of this production, developed by CCRTV Interactiva and TV3, broadened the viewer’s TV experience beyond the documentary. Through the website, digital terrestrial television (DTT) and Windows Media

Center, viewers discovered the story of the painting and how it had travelled around the world. Access was also provided to the biographies of people related to *Guernica*, as well as providing different analyses of the painting. Moreover, people could also take part in quiz linked to the information in the report and interactive content.

This product was of extraordinarily high quality, a leading trendsetter and prime example of content convergence, which was awarded the Grand Prix Internacional from URTI (Universitat Internacional de Ràdio i Televisió) and the International Interactive TV Awards of 2007.

With regard to the area of entertainment, for some time now the audiovisual industry has been moving along these lines. Although the socially successful experiences that have been carried out to date have been very much focused on financial returns, it should be noted that they have led to a high level of audience participation, with the public identifying with the product. Examples of this kind of phenomenon would be the different “people’s votes” within programmes such as *Fama iA bailar!* or *Operación Triunfo*.

### The archive and access to online content

The current technological environment and the series of tools available to our professionals mean that the concepts we have had to date of archive, access and online content are changing.

Conceptually, there are four key changes: effective access at any time, without restrictions (except those regarding copyright or authorisation), from different places and with the freedom to work on the content right from the start.

The objective of corporations such as our own must be to ensure that access by their professionals to their audiovisual

archives is the same as the access everyone has via internet search engines (Google, YouTube), in other words, 24/7 to all the indexed material, from different locations and with the possibility to download and work on content at any time.

If we reflect a little, we can observe that factors that were hitherto critical have lost importance:

- Physical location of the content and location in more than one place.
- Formats in which the original documents are stored.
- Age of the originals.

And, on the other hand, relatively new concepts have become important:

- Continuous, reliable, robust service.
- Secure access.
- Good metadata and good search facilities.
- Adaptation to new tools to update the system.

At the archive of the Corporació Catalana de Mitjans Audiovisuals (CCMA), where more than 60,000 hours of audiovisual content have been digitised and are accessible, what is important is authorisation for free access, the search tools to find the material and the working tools to produce new content based on these materials.

In fact, an authorised professional from any workplace within the CCMA, including the branches in different locations in Catalonia and Spain, and irrespective of the medium (television, radio or multimedia), has all these facilities and tools to work on content, which might be from that very day or from 15 years ago, and to leave behind a finished piece.

## Publication on different media

The application of this content convergence concept in the area of dissemination translates into the facility to get the content to the audience in the format or language the viewer or listener wants at any particular time.

A benchmark of what we are highlighting here is citizen information. Throughout the day, citizens access information via different media: radio when they get up, television in the kitchen while they have breakfast, text messages to their mobiles... Once in the car, again the radio and, at work and during the working day, they access information via the internet. When they go home, once again via the car radio and, at home, via the television and internet.

The approach of a corporation such as our own or any information service of a corporation includes getting news to the viewer, listener or user in the format they need, at the time they need it. What is required is an approach that is not so separated along the different media, as independent items, but global and coordinated between the media.

It's important to remember that a view of the whole range of what the receiver can be offered needs to be adopted, not only

via each medium separately. We must bear in mind that each medium (television, radio, internet, mobile information, interactive applications...) does not have the same audiovisual possibilities nor the same kind of language nor the same way of reaching the receiver. It is therefore essential to keep the media perfectly coordinated, at the same time as respecting each medium's format and language.

This desire to respect formats and languages is, per se, complex and is even more so when new technologies increasingly include the value of asynchronicity. On the radio there is the possibility of accessing content via podcasting and, on television, this is also possible thanks to IP services and registration systems. Using these new technological features, the audience can access the same programme in different ways based on registering and can even go from one part or to different parts of this content in a structured way.

## Production/publication tools

As we have explained in the previous paragraphs, much care must be taken in adapting content to each medium. We must not fall into the trap of thinking that the same tool can be used for content convergence in all media. In the future this might be possible but, at the moment and in the short-term, probably not.

Each medium has a language and particularities that make it special and the professionals working in this medium need tools that are perfectly adapted to these specifics. In this respect, the tools must not only be adapted for the work of each professional but rather so that the coordination of working groups in a corporation can depend on these tools.

Radio professionals need different tools to those employed by television professionals or those used by an editor of an internet portal.

In this case, for us, media convergence does not equal a "unification" of this kind of tool but rather the possibility to interconnect, facilitating the creation of a network and collaboration between media.

## Introducing audience participation

One point that should be valued and taken increasingly into account is that of audience participation. This is a broad, professional concept of participation that must be incorporated within the organisation, considering the possibilities offered now and in the future. Participation is a growing asset that must be valued as another tool, albeit remaining realistic and within the range of possibility.

When designing our infrastructure and equipment, and when thinking about disseminating and publishing our content, we believe it is fundamental to bear in mind the need to have a series of totally professional tools and processes so that these

possibilities can be used and taken advantage of.

Our audience has increasingly more powerful cameras, microphones, audiovisual production and graphic design tools in their homes and can connect to a network with us. It is therefore evident that we need to integrate the audience within our production structures.

A good example of this is the initiative carried out by the British channel, Channel Four, which has implemented an ambitious plan to involve the public.

Via its website, Channel Four has proposed "training" for possible collaborators, for anyone interested in producing an audiovisual product. Entitled FourDocs, it teaches viewers the rudiments of documentaries, gives instructions regarding format and duration and shows the most relevant products on the television channel. If broadcast, the person or team that has made the product is also paid.

FourDocs is really a good example of convergence and a benchmark of what can be done today with a mixture of television, internet and audience participation. Moreover, the quality of the final product is by no means slight.

### CTT, interactivity and media convergence

Before concluding, I would like to particularly mention DTT and interactivity. I would like to point out that DTT constitutes an advance in the transformation of audiovisual content towards our audience. It is in no way an end but rather a step forward; one more step both in terms of how content is "served" to the public and the chance for the public to interact with it.

Some years ago, the arrival of teletext meant that, in addition to the TV signal, we could also distribute information and complementary services to programming, among other content.

The rollout of DTT has presented new tools and new possibilities in carrying out this complementary task and has opened up a return channel.

The fact that it has not developed to the extent predicted by some experts does not mean, in any case, that the possibilities are insignificant and that we should necessarily turn our backs on it. The chance to improve the image and sound and the new possibilities of access are things that must reinforce the idea that we are currently undergoing a new phase and have not yet finished the race.

We should hope that, with the possibility of connection via DTT and IP, together with the increase in bandwidth available for homes, the new devices will notably extend the range of products of this type available to us.

In this case I would like to point out the R&D projects carried out at CCMA and funded as part of the research plans of the European Union, such as T-Govern, relating citizens and public administration, and the ARENA project, measuring digital TV audiences.

So we should not turn our backs on DTT or the interaction

that can result from it, but must appropriately follow its evolution and be prepared in case new opportunities for broadcasters arise within the next few years.

### Perspectives and strategy

Content convergence goes beyond a simple technological change and ultimately involves a change in philosophy in all spheres.

From the audience point of view, we can see that a relevant (and growing) proportion of the public following our programmes and content can be permanently connected to us. They connect throughout the day, switching between television, radio, internet and mobile phone.

This is a relatively new situation that is also evolving. Our audience, be they viewers, listeners or internet users, have increasingly more facilities, better and more portable equipment with more capacity and features. They also have better and more economical networks, with more capacity.

The other particularly relevant change regarding audience is the possibility to take part in the content. This participation goes beyond choosing in a vote or a game and starts to penetrate the area of creation or contribution of quality content on the part of the public. As in the above case, it is a situation in its initial stages and it is growing (users with better equipment, production tools and capacity to send information generated at home to the media).

With regard to media professionals, the situation is also new and open to evolution. For now, these professionals have access to online content which they can share with other colleagues and they also have good publication tools and access to archives. We can now think of creating across the board products that go beyond those of radio, television or multimedia and think of new possibilities for content for our audience. Clear examples of this are programmes aimed at children, news programmes, sports news, entertainment and a long etcetera.

In any case, we must be very prudent. In my opinion, the basis of everything is the product and not the platforms. The product, which might be simply for television or radio, is what must call the shots, while the platforms must offer the possibility to distribute it or open it up to new lines. Platforms per se, in my opinion, do not catch attention: the hook is the product.

It is therefore evident that the current situation is an invitation for reflection, both in terms of the audiovisual media and also in terms of our group. As from now we can experiment with and, as we have mentioned, think of carrying out new initiatives in the field of news (e.g. transforming the concept of "doing news" to "keeping the audience informed") and children's programmes (taking characters beyond television, to the internet, to games...) and even open up other lines in the area of participation.

We therefore need to advance together, experimenting with

these initiatives and getting to know them.

Although finding the perfect solution is difficult (if there such a thing as the perfect solution), what is true is that we cannot turn our backs on convergence, not from the point of view of production nor from that of distribution. We therefore have to change or experiment with the focus.

We believe that, without forgetting excellent professional caution, now is the time to be brave.

# The convergence of newsrooms in the era of the open garden

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### Abstract

*The digitalisation of information production and the consolidation of the internet as a tool of social communication have completely transformed the "walled garden" of the traditional media. In this context, convergence has turned out to be a media strategy to take on the challenges to journalism in this new digital, interactive and multimedia scenario. However, such convergence demands technological development, integrated newsrooms and multi-skilled journalists in order to be successful in traditional media and to become, therefore, a sustainable business model in the "open garden" of internet communication.*

### Key words

*Convergence, Internet, media, integration, journalism.*

### Resum

*La digitalització de la producció informativa i la consolidació d'internet com a eina de comunicació social han transformat el "jardí tancat" dels mitjans de comunicació tradicionals. La convergència s'erigeix en aquest context en una estratègia dels mitjans per afrontar el repte del periodisme en un nou entorn digital, interactiu i multimèdia. Aquesta convergència, però, exigeix desenvolupaments tecnològics, redaccions integrades i periodistes polivalents per tal que es porti a terme amb bons resultats al mitjans tradicionals i es converteixi, per tant, en un model de negoci sostenible al "jardí obert" de la comunicació a internet.*

### Paraules clau

*Convergència, internet, mitjans, integració, periodisme.*

*"The era of the walled garden is over [...] Future success on the Internet is about overcoming traditional thinking."*

**Arthur Sulzberger Jr,**

editor de *The New York Times*

The digitalisation of information production and the consolidation of the internet as a means of social communication and support for the distribution of content have altered the templates of the traditional media. Newspapers, radio and television have left behind their analogue and *monomedia* conception (Alves 2008) to advance towards their consolidation as digital and multimedia media. These days, there is no traditional means of communication that, besides their specific distribution channel, does not use the internet as a support for distributing content. This phenomenon – which some authors call the passage from the *linear medium* to the *network medium* (Singer 2008) – entails far-reaching transformations in the structure, organisation, relationship with the audience and the very business of the media.

By way of synthesis, the implications of the emergence of the internet in the media panorama can be studied from three essential perspectives (Sanchà 2005):

- Internet as a source of information. The relationship with sources and the existence of information sources on the internet has changed professional routines in modern journalism.

- Internet as a platform of dissemination. It is within this sphere that the concept of multimedia acquires its meaning, as it obliges the traditional media to adapt their content to the characteristics of a new communication support.

- Internet as a channel for relationship with the audience. Users use the internet to relate actively with the medium, taking part in the same communicative discourse and altering it.

In this context of transformation, convergence has become a polysemic concept, a sort of "in" word (Masdeu 2008), an objective, a trend and an excuse for those traditional media that are seeking to take on the challenges of the new digital and multimedia context by latching on to convergence processes without really knowing why. In these processes, we find plans to cut costs, to reduce journalist staff, to avoid duplicating work, to improve information production, to streamline the relationship with the audience, to look for new markets, etc. There is no traditional medium that has not, to a greater or lesser extent, set up its own newsroom convergence or integration plan (Ifra 2008) to face the "challenges of twenty-first century journalism" (Domingo *et al.* 2007), an expression that has become commonplace.

With the aim of demarcating the object of study and of finding a definition that embraces the complexity of these phenomena, we could consider the concept of convergence put forward by the group of researchers on the "Digital Convergence in the Media-Technologies" project:

"A multidimensional process that, facilitated by the widespread implementation of digital telecommunication technologies, affects the technological, business, professional and editorial sphere of the media and augurs the integration of formerly disaggregated tools, spaces, work methods and languages so that journalists produce content distributed over multiple platforms through languages pertaining to each one." (García Avilés *et al.* 2008)

In using this definition, it is important to note that convergence should be understood as a process, i.e. as a progressive phenomenon that includes both the media that have just adopted this strategy and those that display high levels of convergence in their structures. In this sense, the convergence continuum model of Dailey, Demo and Spillman (2003: 4) establishes five levels of cooperation in newsrooms that may help set levels of convergence:

- *Cross promotion*. The content of one medium is promoted in another. There is no collaboration between newsrooms.
- *Cloning*. The content of a medium is published without alteration on another support. The digital editions of some newspapers would be at this stage.
- *"Coopetition"*. There is collaboration through the sharing of information, but the own production of content is maintained. Cooperation and competition.
- *Content sharing*. The different media meet to exchange information and plan own content.
- *Full convergence*. This is full integration, where the different media share the assignments of subjects and work as a team to get the most out of each support.

The García Avilés definition of *convergence* described in this article already anticipates "digital telecommunication technologies" as an element facilitating this process. By contrast, there are many factors considered to be triggers or catalysts of media convergence. Schematically, we could cite the following:

- The decrease in the consumption of traditional media globally, in newspapers, radio and television.
- Audience fragmentation, with the distribution of users over different screens (television, mobile, computer, consoles, etc.).
- Greater competition for advertising revenue with the appearance of new actors on the communication scene.
- A progressive increase in the number of internet users, which makes it an increasingly more attractive market.
- The need to produce content for different supports and platforms in the same communication group.
- The deep-rooted nature of business concentration as a means of operation for multimedia groups.
- The consolidation of information as an ongoing service and not as a product managed in editions. Users want the information when and where they are at that time (here and now).

Despite the fact that the trends described so far present convergence as an inexorable and attractive trend for the media, it

would not be fair to complete this overview without referring to stances opposing convergence processes. Although it is true to say that the debate between newsroom integrationists and separatists appears to be coming down on the side of the former, numerous media directors still see drawbacks in having to compete on different supports with the same product. "You can't win the 100 metres and the marathon at the same Olympics," argues Torry Pedersen, managing director of *Verdens Gang*, the Norwegian newspaper that has decided to have separate newsrooms (Aunión 2008).

It is an opinion shared by Mario Tascón, former content director of Prisacom and present editor of Dixired. From his point of view, traditional and digital newsrooms are two worlds in conflict that work in different media and that require different professional profiles (Tascón 2007).

Over the following pages we will try to pose more elements of analysis of convergence processes. We will briefly tackle the role of technology as a necessary and decisive element in starting up convergence processes. We will see the effects of these integration processes on the newsroom structure and we will ascertain why the polyvalence of the journalist is fundamental in this context. Finally, we will ponder the business implications that result from these changes in the final part of the article.

### Technology as facilitator

The processes of convergence in newsrooms cannot be understood without the transformations that digitalisation has contributed in the tasks of information capture, production and distribution. Notwithstanding this, technology should be seen as a necessary and facilitating condition of convergence but not a trigger, a determinist bias maintained by the first theoretical approaches to convergence (Salaverría and García Avilés 2008: 33), but which has now been surpassed. There is a consensus in establishing convergence as a more complex process of triggers, as we have seen previously:

"Journalistic convergence should be tackled not as a technologically driven process but as a process that uses technological innovation to achieve specific objectives in certain environments. And this is the reason why each convergence project can have a different result." (Domingo *et al.* 2007: 3)

From this perspective, we can use three technological convergence variables to explain in what way digitalisation has fostered integration processes in the media (Salaverría and García Avilés 2008: 36):

1. *Instrumental convergence*. The computer has become the essential instrument for journalism. Other devices, such as photo cameras, video cameras or mobiles, have become part of information routines, but it is the computer that has become the functional integrating element of journalism.
2. *Convergence of applications*. The media have devoted resources to defining Content Management Systems (SGC)

capable of integrating all the content available in their information production in the same application. Texts, videos, photos, graphics, audio files, documentation material, user-generated content, etc. share the same space and are organised in the same database to facilitate their multiplatform distribution.

The Vocento group, for example, has a multimedia SGC that shares all the group's newsrooms. PrisaCom, the digital division of the Prisa group, has developed an SGC that uses all the group's web pages (newspaper, radio and television media), which allows its flagship, *El País*, to have audio and video resources from other media of the group to offer them on its website. Similarly, we should highlight the SGC used by the Corporació Catalana de Mitjans Audiovisuals (CCMA), which has a fairly powerful content repository to offer the videos of the broadcasts of the different television channels live and a la carte and, moreover, distribute this content on different digital platforms, such as the internet, telephone and interactive television (Domingo *et al.* 2007).

**3. Multiplatform distribution.** The ability to distribute digitalised content on multiple supports is one of the principal and most evident effects of the technological convergence of the media (Salaverría and García Avilés 2008: 37). It is a question of having the necessary technical infrastructure to distribute the content on any platform. They are platforms to which the integration of networks is providing new devices that call for new versions of the content to be designed and offered to the users. This is the case, for example, of the new Apple 3G iPhone, which has led websites like that of *El País* to have versions for mobile, PDAs, multimedia consoles such as PSP and now also a specific version for the iPhone.

One of the most attractive case studies from this perspective is that of the Agència Catalana de Notícies (ACN). Since it was founded in 1999, the ACN has been committed to incorporating technology as a work and distribution tool of its content.

"When an editor takes on the challenge of working for the ACN, they receive a backpack that includes their work tools (a laptop computer, a mobile telephone, a minidisc for recording digital audio, a microphone, a photo camera and a video camera). [...] They become multi-format editors capable of producing and adapting the information to the different supports (write a text, attach a voice clip, photos and, if necessary, record a video, semi-edit it and also post it on the net." (Gordillo and Nogué 2008: 53)

It is an innovative model that calls for a high degree of knowledge of the technology by the editor – who even takes on functions until now assigned to technicians – who not only requires the ability to capture the news event in multi-format but also has the responsibility for choosing what multimedia treatment each piece of information requires and how it should be distributed. This is a model that, besides the technological skills, calls for new ways of thinking and structuring the newsroom.

## The integrated newsroom

Media newsrooms have adapted their organisation chart to the degree of convergence of their operation. As we mentioned earlier, newsroom integration should be understood as a process with various stages of development, from the low level of convergence, where independent newsrooms occasionally collaborate, to the development of forms of full convergence, where all the journalists share the same space that produces content for different supports (Domingo *et al.* 2007: 4).

These situations are not only in response to a change in the physical layout of the newsroom or to the work flows that are established, but they also demand a "change of mentality" (Salaverría and García Avilés 2008: 39) in the different levels of journalistic production.

Juan Antonio Giner, director of Innovation International Media Consulting Group, has established the four critical points that a newsroom has to face in order to advance in multimedia integration (Giner 2008).

- Have editors who have a command of the multimedia world. "If the editor does not adapt to the multimedia challenge, you evidently need a new editor," he states.
- Create a new multimedia work flow, with live information 24 hours a day.
- Physically structure the newsroom to foster creative communication between the different areas, with open spaces and without divisions.
- Make a firm commitment to training.

At present, the most widespread forms of convergence involve collaboration between journalists from different newsrooms, the cross promotion of information content and the multimedia cover of urgent news or extraordinary events (Salaverría and García Avilés 2008: 39).

In its study into examples of integrated production in 58 Spanish media (Domingo *et al.* 2007: 15), the team of researchers came to the conclusion that the majority of newsroom convergence and integration initiatives occurred in local and regional media, basically due to the need to get the most benefit from small staff numbers in environments of convergence. By contrast, in the national media, more elaborate experiences occurred of multimedia integration and active participation of the user, given the need for significant technological developments that these media could undertake.

On the international scene, there are attractive examples of newsrooms that have started processes of integration. One of the most well-established is that of the Media General group, in which the newsrooms of the *Tampa Tribune* newspaper, the WFLA television broadcaster and the *TBO.com* digital newspaper work together. The media share the same space and the newsrooms work together, even though the content published adapt to the specific nature of each medium. The news director of WFLA, Forrest Carr, establishes seven levels of coopera-

tion between the newsrooms when explaining their experience (García Avilés 2002):

1. They share sources, subjects and ideas for future information.
2. They take better advantage of the resources in the cover of unforeseen events.
3. Most of the television camera operators take photographs for the other supports. Most of the newspaper's photographers use video cameras to capture video that can be used on television.
4. Journalists of the three newsrooms work together to produce specific subjects.
5. Various Tribune reporters collaborate in television and some of the WFLA correspondents write columns in the newspaper.
6. In major events, the cover with journalists from the three newsrooms is broader and more complete.
7. The integration of the three supports allows audience participation to be better fostered.

In Spain we have advanced experiences of integration with *La Voz de Almería* and *20 Minutos*. In the case of the Norwegian free newspaper Schibsted, integration comes about because editors produce content for both the printed and the digital edition over 24 hours.

"The central newsroom of *20 Minutos* has to be open 24 hours a day so that the editors are continuously generating content (not just information, but also entertainment, services, participation, etc.) and a management board decides at all times what should be done: whether to publish immediately on the website or on SMS, keep it for the next edition of the paper, hold on to it for a few hours, share it at the same time with the different supports, etc." (Escobar 2006)

Apart from the case of the ACN agency, which, as we have seen, has a decentralised newsroom that affords its editors a great deal of autonomy, most initiatives related to newsroom integration have two basic characteristics: on the one hand, they have a multimedia newsroom where the information flow is centralised and which tries to provide coverage of events from a multi-support perspective. And on the other, they have a coordination desk, which selects the type of cover to be provided for each event and the supports that will participate in it. In the case of *20 Minutos*, for example, the coordination desk is in the shape of a letter H, such that at the centre is the management of the newspaper, while on each side are the managers of each of the editions: the printed edition and the online edition.

### The polyvalent journalist

All of these structures require certain professional skills of the journalists to take on the challenge of working in an integrated

multimedia newsroom. These skills are brought together in what has become called the "polyvalent journalist", capable of "producing news in any medium using any necessary technological tool at any point of the process" (Domingo *et al.* 2007: 7).

In this sense, various authors agree on the need to establish two different professional profiles when speaking of polyvalent journalists (Salaverría 2003):

- *Multi-task journalist*. This refers to the professionals capable of taking on different tasks corresponding to different supports.
- *Multiplatform journalist*. This corresponds to journalists, generally specialists in one area, who use their knowledge to work in different supports, albeit always with the same subject as the central core.

Creating these polyvalent professional teams calls for intensive investment by the media in training in order to ensure the abilities and skills of the journalists when they work on different supports. These skills can be shown in three different areas (Micó 2006):

- *Media skills*. These are the ability to work in different supports, knowing the specific rules of each one.
- *Thematic skills*. Referring to the ability to tackle information from different sections.
- *Technical skills*. Understood as the necessary skills for producing information for different platforms.

The editors with the ACN referred to above are a good example of this triple polyvalence in their day-to-day work. They are polyvalent because they create content for different supports on different subjects – the specialisation of the ACN field editors is geographical and not thematic – and they have to possess the necessary technical skills to distribute the message to the agency because, as it is a decentralised newsroom based on teleworking, the editor has to be technically autonomous.

However, these transformations to the professional profile of the journalist are not entirely risk-free. There are those who see polyvalence as a business desire to cut expenses at the cost of impoverishing content (García Avilés 2002). The need to devote more resources to repackaging the information for the different supports may lead to a reduction in the number of professionals in contact with reality and information sources; professionals who, in addition, will have to devote efforts to multimedia content management.

Rintala and Suolanen (2003, quoted in Salaverría and García Avilés 2008: 42) summarise the transformations of professional profiles on the basis of research conducted in Finland:

- *Transfer of tasks*. Journalists undertake new tasks that were previously given to other professionals.
- *Fusion of roles*. Certain activities that were previously done by two or more professionals are now done by just one.
- *Increase in tasks*. The existence of multiple supports increases the tasks entrusted to the journalist, who in many cases has to adapt their professional routines to the needs of the different platforms.

To this it should be added that the professional in the traditional media has to adapt to a new communicative environment, with new ways of presenting information, new languages that integrate hypertext and audiovisual content, new requirements that make immediacy prevail in the distribution of the content and a participative audience that questions the role of the expert journalist in some areas (Sancha 2005).

This leads prestigious analyst Vin Crosbie (2008) to state that “if an editor continues to offer the same selection of content online that they offered in their printed product, there’s no convergence that will save them.” Until the appearance of the internet, the journalist was the centre of information production, they acted as gatekeeper, they controlled access to the information and they had the power of being the creator of socially accepted opinion. However, consolidation of the internet has democratised access to information and questioned the preponderance of the journalist in their social environment. The user – and not the journalist – is now at the centre of the communication process. As Dan Gilmor (2004) likes to reiterate, “journalism today is a conversation rather than a lecture”, in which professionals have to get used to being just one more speaker.

### Convergence in the company

Besides the technological, organisational and professional implications we have looked at in studying the phenomenon of media convergence, this analysis would be incomplete if we did not include a business perspective of the phenomenon, and it is true to say that newsroom integration affects the very economic model of the traditional media.

Mario Tascón, former director of Prisacom, sometimes tells the story of Craig Newmark, founder of the popular Craigslist<sup>1</sup> website, who was at a dinner some years ago with leading managers and directors from the USA’s east coast newspapers. By popularising his business model, which is based on free small ads over the internet, they accused him of drastically reducing the turnover of small ads, the private preserve of the traditional press in the USA. According to the newspaper managers, Newmark had got it wrong in launching Craigslist – which only charges to post some specific advertisements – because he had destroyed a prosperous business valued at hundreds of millions of dollars. Craig Newmark’s opinion, in contrast, was very different. His website was a huge success as, despite having reduced the turnover from small ads, he now held the majority of them.

Apart from the anecdote, this passage illustrates one of the present characteristics that mark the business model in the field of the media.

- The audience of the traditional media is reduced. The increasingly more fragmented audiences are distributed between the different screens available (computer, mobile, console, television, etc.) and the traditional media such as radio and newspapers.

- New actors fight for the advertising market. The lion’s share of advertising investment continues to be with traditional business, but new internet-related media – more modest than the Craigslist example – are taking a large part of this market.

- The new advertising market on the internet is not closed in the way that it was in the traditional media. Quite the opposite in fact: the media represent a modest percentage of advertising investment on the internet. In the same way that Craigslist can take most of the small ads market, three actors account for 70% of advertising investment in Spain: Google, Yahoo and Microsoft (Tascón 2007).

In an excellent article published recently, Frédéric Filloux, director of the international division of the Schibsted group, and Jean-Louis Gassée, partner in Allegis Capital, openly explain what the profitability threshold of the media is on the internet. According to their calculations (Filloux and Gassée 2008), 8.3 million single users a month are required to cover the expenses of a quality medium on the internet with a production structure comparable to that of a traditional medium. The result is evident: low turnover media, such as digital newspapers, cannot take on the costs of creating a large newsroom. Despite the increase in advertising turnover on the internet, an exclusively online quality medium is not feasible.

This evidence has sparked the debate on media convergence in the communication environment. If revenue, albeit diminished, continues to be in the traditional media, newsroom integration becomes the only alternative for the creation of quality content on the internet. In the words of consultant Juan Varela (2008), it is only with the revenue from traditional media that the costs of a quality online publication can be financed. And this is not a one-off situation or the product of a specific moment: the calculations establish that at the same rate of fall in advertising investment in the traditional media and of growth in the digital media in Spain, the profitability threshold may be achieved in 2014 or 2015.

It has to be the traditional media – those that have been criticised because they have been unable to adapt to the communication demands of the internet – that commit to newsroom convergence to create solid communication structures on the internet, with numerous and specialist newsrooms, able to take on the challenge of creating content on the web, to exploit the multimedia possibilities, to push interaction experiments forward and to foster the role of the active audience. Only this way will we gain the time needed to mature the market and to find the business model of quality media on the internet.

In an interview pending publication (Jané 2008), Chris Anderson, editor of the prestigious *Wired* magazine, answered the question “which of the two versions of *Wired* is more successful, the paper version or the online version?” with: “In dollars, the printed version. In audience, the online version”. The challenge of the traditional media on the internet will be to know how to combine both circumstances.

### By way of conclusion

The expression “walled garden” is used on the internet to refer to a browsing environment where the information and the websites that the user can access is controlled. Some internet access providers use it to keep the user’s browsing in a specific area of their web. AOL (previously America Online) is a good example of a walled garden browsing service.

On 22 October 2008, Arthur Sulzberger, president and editor of *The New York Times*, gave a lecture as part of the Webbyconnect in California. During his speech, he used the simile of the walled garden to refer to the situation of the media before the emergence of the internet:

“The era of the walled garden is over [...] Future success on the internet is about overcoming traditional thinking.” (Sulzberger 2008.)

For years, the media have been able to manage their interests in the walled garden of their business. The emergence of digital content has ended up tearing the walls down. Newsroom convergence becomes a valid alternative so that the media begin to carve out a place in the open garden that, for them, information on the internet has become.

### Note

- 1 *Craigslist.org* is the biggest small ads website in the USA and the world. It has 25 workers and moves 9,000 million pages viewed a month. In 2007 it had a turnover of 44 million euros and it forecasts 65 million for 2008.

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# The polyvalent journalist within the framework of business convergence<sup>1</sup>

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## Abstract

*A growing number of the media is undergoing this complex process known as "convergence". This is a phenomenon with repercussions for companies, technology, content and professionals, and is made up of some of the following aspects: integrated production, polyvalent journalism, multi-platform distribution and audience participation. But companies' perception of this transformation, on the one hand, and the perception of professionals on the other, is quite different. And they also disagree when it comes to identifying its causes and goals. This article particularly analyses the role played by polyvalent journalists within this context and describes the arguments for and against such a figure.*

## Key words

*Convergence, journalistic polyvalence, polyvalent journalist, integrated newsroom.*

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## Resum

*Un nombre creixent de mitjans està experimentant aquest complex procés anomenat "convergència". Es tracta d'un fenomen que té repercussions en les empreses, la tecnologia, els continguts i els professionals, i que es plasma en alguns dels aspectes següents: producció integrada, polivalència periodística, distribució multiplataforma i audiència participativa. Però la percepció que tenen d'aquesta transformació les empreses, per una banda, i els professionals, per l'altra, és ben diferent. I també divergeixen a l'hora d'identificar-ne les causes i els objectius. Aquest article analitza, en particular, el paper que desenvolupa el periodista polivalent en aquest context, i descriu els arguments a favor i en contra d'aquesta figura.*

## Paraules clau

*Convergència, polivalència periodística, periodista polivalent, redacció integrada.*

## Definition and scope of convergence

If there has been one phenomenon that has characterised the communications industry in recent years it has been convergence. Or confluence, cooperation, coordination, newsroom integration, synergies or multimedia, as this process, which began in the United States but which now extends worldwide, has been given a number of names.

Professionals and academics have popularised this word in recent years; however, the term began to be applied in the communication field some three decades ago. A polysemic and dynamic term like this has led to numerous approaches from a whole host of perspectives. There are as many ways of understanding the concept as there are projects in development (Silcock and Keith, 2006). Definitions originating from the professional sphere, which tend to focus on specific aspects – such as the configuration of newsrooms and production processes – have little to do with universities, which are generally more extensive. Recent work by Salaverría, García Avilés and Masip provide a detailed review of the literature on convergence (Salaverría and García Avilés, 2008; Salaverría, García Avilés and Masip, 2008). For the purposes of this article, we will be using the conceptual delimitation proposed by these authors:

"It is a multidimensional process that, facilitated by the wide-

spread implementation of digital telecommunication technologies, affects the technological, business, professional and editorial sphere of the media and augurs the integration of formerly disaggregated tools, spaces, work methods and languages so that journalists produce content that is distributed over multiple platforms through the languages appropriate to each one." (García Avilés, Salaverría and Masip, 2008)

Convergence has been the focus of a great many recent professional conferences at an international level. Since 2006, this transformation has been the main topic at the world editors' meeting. The 2008 slogan, for example, was "Integrated newsrooms: why, how and when." At last year's edition, the Newsroom Barometer revealed that 86% of editors surveyed (700 throughout the world) believe that digital and print newsrooms will soon merge, 83% believe that journalists will soon have to produce content for all types of media and 70% of those who maintain circulation indexes forecast the integration of newsrooms within a few years (Chainon, 2008).

Entrepreneurs, therefore, see this as a guaranteed way of restructuring the print media. However, we need to stop seeing convergence as a desperate measure for saving the press. Groups with powerful television divisions, such as Media General (Florida), Group Tribune (Chicago) and Bello

Corporations (Dallas), have been behind the most high-profile processes in the United States. In Europe, some of the most noteworthy experiences have been applied in public audiovisual corporations: the BBC in Great Britain, SVT in Sweden, NRK in Norway, DR in Denmark and YLE in Finland.

To a large extent, convergence is a reaction to the confused situation that the industry has been experiencing for more than ten years. The audience for the traditional media, primarily the press, is falling. Newspaper circulation in the United States is dropping every year by around 5% and the number of viewers is also decreasing. In 2007, the number of Spanish newspapers sold was 86 for every one thousand inhabitants, 17 fewer than in 2000 ("Dissemination...", 2008). Running parallel to this are the changes to information consumption habits. The internet has now overtaken newspapers as a source of information among Americans; in terms of the under-30s, internet is first, level with television (Pew Research Center, 2008). Some 15% of the traffic that news sites receive comes from Google (Andrews, 2007), underlining just how little interest thousands of users have in the headlines, i.e. brands. Publics are becoming atomised, they are finding out the news through mobile devices and consuming more information, but in less time. Advertising revenue is becoming less, while the competition to maintain it is on the rise. The current crisis situation is a delicate balancing act for profit and loss accounts, especially in digital media, which, with few exceptions, are not profitable.

### Concentration by system

In short, communication entrepreneurs have felt that convergence may help them restructure systems and products for adaptation to the demands of the twenty-first century audience. This process has come in many guises, but there is only one dimension that acts as an umbrella embracing the rest: business. In the field of the communications business, convergence affects both organisations and content production and use. It is impossible to identify one single reason to explain why a growing number of media choose to go with this strategy. Despite this, the phenomenon would not have emerged if the relevant conditions, along two basic lines, had not been in place: new business structures and digitalisation.

During the 1980s, agencies, newspapers, magazines, television and radio, all five operated on the basis of analogue technology, coexisting (more or less) in harmony but independently. The following decade brought about the digitalisation of companies and, with this concept, convergence came onto the scene. The printed, audiovisual and cybernetic media began cooperating to reduce production processes and benefit from the advantages offered by each individual support. At that time, analogue and digital technology still coexisted. However, this circumstance underwent drastic changes in the new millennium, with the absolute hegemony of the second environment, the mushrooming of the internet and the proliferation of

new platforms. It was at that moment that a business concentration and media diversification process began to take off, from a monomedia philosophy to a multimedia philosophy. Prisa, one of the pioneers, is the paradigmatic case in Spain, but almost all Spanish groups have followed the same path: RCS MediaGroup and Recoletos, Godó, Planeta, Mediapro.

However, the commitment of business towards media diversification is not exclusive to large-scale groups. As Guimerà *et al.*, point out, as of 2005, and especially since 2008, local communication cannot be understood in Catalonia "without referring to proximity-based multimedia groups" (Guimerà *et al.*, pending publication). In their opinion, one of the elements which has characterised this environment over the last two decades has been the progressive consolidation of types of concentration that have created private conglomerates that manage a range of media in one area or different zones, which have transformed local content spread over several supports into the key to their business.

One of the clearest cases is the Segre Group. Created on the foundations of Prensà Lleridana, the public limited company that publishes the newspaper that gives its name to the group, it took an important step during the 1990s with Segre Ràdio. In addition, in 2008, it expanded the number of FM frequencies: from two to three. The group moved into the world of analogue television in 2001 and, thanks to the terrestrial digital television bid (DTT), established itself as one of the leading operators in the country by securing four concessions, so enabling it to cover the whole of the Lleida region. Segre has also been present in the free press since 2006 through a local edition of the *ADN* newspaper.

Companies such as Edicions Intercomarcals, Prensà d'Osona, Publicacions Penedès, La Veu de l'Ebre, etc. have developed along similar lines. Curiously, local communication has experienced infrequent concentration, such as the accumulation (horizontal) of televisions or expansion towards other media, from the audiovisual area and not the press, which has historically been the case at a national, state and international level (Guimerà *et al.*, pending publication). For example, Vallès Serveis de Televisió has an interest in seven DTT concessions, is the parent company of Canal Català TV and has spread to the press (shareholder in the *A Sabadell+* and *A Terrassa+* publisher).

### The digital condition

Together with business concentration and diversification, digitalisation is the other element without which it would be impossible to imagine convergence processes. The great changes in the field of information production began with the implementation of computerised newsrooms which, in the case of Spain, was rolled out between the end of the 1980s and the early 1990s. From a purely technological point of view, television professionals, for example, had already experienced the

introduction of video to replace film, the appearance of the Betacam system, etc. These years saw the birth of the information age, marked by the philosophy of Electronic News Gathering (ENG).

Consequently, electronic journalism meant that a single person was in charge of the entire recording process, as was already the case in radio. In the audiovisual environment, the new technology provided much faster, more fluid and more immediate recording. It also meant that, with compact editing equipment, the reporter, who had gone to where the events were unfolding, could record the piece and send it to the newsroom in minutes (Micó, 2006a). The second great revolution in this field began at the end of the 1990s. This constituted a change which, for some authors (Bandrés *et al.*, 2000), was even more profound than the introduction of video or the use of satellite: digitalisation.

This advance consisted of replacing analogue technology with numerical systems. In the press, the computerisation of newsrooms did not release journalists from some of the traditional routines but, in an overall sense they benefited from greater ease in the production of news, saving time and control over the end result. Besides this, companies spent less money and, at the same time, offered more competitive, higher-quality material.

As a whole, the digitalisation of communication companies meant that all information could be condensed into a common language based on zeros and ones, which meant that it could be reused and subsequently exploited through distribution via multiple supports, which were different from the one on which it had originally been produced: the web, mobile telephony, PDAs. All this thanks to an instrument that was becoming increasingly common: the computer.

### Journalistic polyvalence

A complicated economic context, but with a favourable business structure and established technological innovations, has provided the industry with the right conditions for tackling an uncertain future and new business models, very often thanks to convergence. The strategies developed by companies have been very diverse and, generally, have avoided the maximalist positions that see this phenomenon, convergence, as a linear process which culminates in full integration, understood as the optimum scenario to be achieved as compulsory. The models that prevail in Catalonia and throughout Spain have been based on cooperation among professionals from different newsrooms and the multimedia treatment of news that can be broadcast over different platforms.

In this new context, journalists have had to take on tasks that were traditionally carried out by other professionals, forcing them to develop a more complex and demanding profile. This worker, the polyvalent (multi-skilled) or multimedia journalist, has to produce content for a range of supports (media polyva-

lence), and/or has to take charge of the whole production process or a large part of it (technological polyvalence), and/or deal with news from different environments or sections (thematic polyvalence) (Micó, 2006b).

Despite the fact that the terms “polyvalent journalist” and “multimedia journalist” are often used indistinctly, Salaverría, García Avilés and Masip (2007) distinguish different levels of polyvalence:

- **Level 0. Monomedia and non-polyvalent journalist.** The journalist works exclusively for one medium and carries out a single task (writing, photography, etc.)
- **Level 1. Multimedia and non-polyvalent journalist.** The journalist works for more than one platform and carries out the same work in each (production, editing, etc.)
- **Level 2. Monomedia and polyvalent journalist.** The journalist works for a single medium, but carries out a number of tasks (writing, editing, etc.)
- **Level 3. Multimedia and polyvalent journalist.** The journalist works for different media and produces material for different platforms and also carries out the corresponding tasks for different journalistic disciplines (writing, photography, editing, speaking, etc.)

More modest media were the first to adopt the figure of the polyvalent journalist, often as a means of ensuring survival. However, there are larger companies and groups that have chosen similar solutions. Although this condition is not essential, the profile of the polyvalent journalist is starting to be implemented in media that have progressed along the path of integration, sometimes after having gone through a prior phase represented by newsrooms coordinated through “multimedia boards”, where polyvalence, if nothing else, is optional at the moment (García Avilés and Carvajal, 2008).

Vocento was one of the first Spanish groups to take up convergence as a general strategy. For this reason, it applied a number of solutions: from newsroom integration to coordination between independent centres of work. As a result, a multimedia board has been created at *Hoy. Diario de Extremadura* that includes all the platforms that the group has in that autonomous community: the printed newspaper, website (hoy.es), radio (Punto Ràdio Extremadura) and television (Telefrontera). This ensures that all supports are complemented in terms of news coverage. *La verdad de Murcia* and *laverdad.es*, on the one hand, and Vocento radio and television broadcasters in the region (Punto Radio and Punto TV), on the other, also have a unique form of collaboration. The newspaper editor acts as convergence coordinator between the two newsrooms: first, for printed and internet media, and, second, audiovisual media. On this occasion, the media belong to different groups (García Avilés and Carvajal, 2008). At *Ideal*, a publication also owned by Vocento, newspaper journalists take part on a cyclical basis in what they call the *multimedia bubble*, a type of small integrated newsroom, a test bed, which, at the same time, fosters synergies and joint work between platforms.

When two initially independent newsrooms combine to form a single place of work, a maximum point, although not necessarily an optimum point, of convergence is reached. The most well-known example in Spain is that of *20 minutos*, which merged the print and digital newspaper newsrooms, even though it has since ended up separating them. The director of this free newspaper used reasons of a business nature – doing away with duplicated work and improved management of personnel – and of a journalistic nature – offering improved products on any support – to justify this remodelling, which was subsequently undone. (Escobar, 2006).

Since September 2007, *El Mundo's* Communication, Science and Sports editors have been working in both print media and for the online edition. Some 50 professionals from the Novotécnica group, which includes *La Voz de Almería*, Cadena Ser Almería and Localia TV Almería, also work in a single newsroom. Around 70% of journalists in the block are multimedia, i.e. they are able to produce pieces for any of the three platforms (García Avilés and Carvajal, 2008).

The last to sign up to this movement was *El País*. Despite the fact that its managers have traditionally been opposed to newsroom integration, in light of the crisis that the newspaper business is undergoing they have taken the decision to “re-establish” the newspaper and merge paper newspapers and digital edition places of work (*“El País...”*, 2009). Given all this, it is still difficult to find single newsrooms that feed different platforms with information: press, web, television and radio. At most, some press offices, such as that of FC Barcelona, operate like this.

In the state audiovisual field, the figure of the multimedia journalist is less common than in the press. They frequently appear in small media, where media and thematic polyvalence is an economic necessity. Among large television channels, this is still an exception, although there have been moves in this direction, such as Euskal Irrati Telebista (EITB). The television, radio and internet journalists of the Basque public broadcaster co-exist in the same building under the supervision of a multimedia board, which provides editorial coordination. Although each writer works for one support, it is possible that those who want to can report for the other platforms.

However, one of the most advanced and definite examples of polyvalent journalism in Spain did not originate at an integrated centre, quite the opposite in fact, but at a decentralised newsroom. This is the case of the Agència Catalana de Notícies (ACN), a medium, which, since its creation in 1999, has proposed the figure of the multimedia journalist who informs through writing, photographs and other audiovisual resources (Gordillo and Nogué, 2008).

The explanation in economic terms given by ACN managers when they reveal their model is similar to the one used by Corporació Catalana de Mitjans Audiovisuals (CCMA) directors to defend their “confluence” project, as we shall see later on (Masdeu, 2008). The internet enabled them to weave a virtu-

al network to reach, in the words of the director and one of the agency’s assistant directors, potential customers “minimising production costs” (Gordillo and Nogué, 2008: 52). The investment in infrastructure that classic teletype broadcasting required would have made a new agency in the region addressed especially at the proximity media unfeasible. However, with its own usage template, the company was able to establish it and, in only a few years, it has grown considerably.

In addition, from the start, the ACN promoted a multimedia journalistic profile, an option which led companies from other media to observe them with bewilderment, until they were used to it, or until some of them had to follow their example, especially the smaller companies. This convergence by principle exists alongside what could be termed “divergence by system”, as the agency has a decentralised structure, with its head office in Girona, a regional office in Barcelona, and most writers teleworking.

The fifty or so journalists taken on around the country communicate with each other by mobile, e-mail and instant messaging or chat rooms. In other words, in an age of concentration where group directors ask themselves whether a possible single newsroom (for their newspaper, cyber newspaper, radio and television) would help them save money, this virtual newsroom emerges as a strong contender. Analysing the current panorama of the sector in terms of comparison is a huge mistake. The market shows that each environment, each group, each medium demands a different solution. There are no universal answers. In any case, none has been found to date and each case needs to be studied in detail. However, this does not mean that there are no formulas that would inspire other companies. In fact, the traditional agencies of ANSA (Italy) and LUSA (Portugal) have already stated their interest in the “ACN model”, and have established “collaboration links” (Gordillo and Nogué, 2008: 59).

### Professional critiques, economic reasons

Companies see in convergence, in any of its forms, a valid strategy for existing in a changing context marked by uncertainties. Initially, the advantages are numerous: resources are shared, expenses are cut, time taken to produce information is reduced (the creation of new productions can be automated, for example, for mobile devices), gains in efficiency are made and profitability is improved as journalists can devote the time saved to other tasks.

At the CCMA, for example, the proposed convergence announced sought, among other aims, to make the most of resources, i.e. efficiency, which would consist of “sharing information and resources and coordinating the publication of the product” (Masdeu, 2008: 86). Here is a justification that combined the commitment to a new way of working (“confluence”) with the aim of getting greater yield from work, while at the

same time reducing expenses (a logical and licit ambition in any company, whether it is public or private).

Similarly, convergence allows the audience (and advertisers) to be transferred between media, the brand to be strengthened and extra revenue to be generated (such as with new payment services), and it also enables the group's revenue to be increased through advertising, for example, with block offers to appear on a number of platforms. The manager of Badalona Comunicació, Joan Montornès, sees this system as helping to "design commercial strategies [...] that work. The advertisers value our offering them impacts in three media that can reach different publics by contracting a single pack, at an affordable price" (Montornès, 2007: 12).

In defence of the polyvalent journalist, the professional component is accentuated at the cost of the economic one, even though the latter is always present. According to its champions, this figure has greater control over the pieces, so achieving greater unity and internal coherence, as they are the sole author. In addition, they add, thanks to technology, they have greater capacity for action and freedom to take on any current event of interest. In all, as the theory goes, it results in the improved quality of the end products.

The critics disagree. Furthermore, the editors, who are the main driving force, appear to give them an argument when they confess that integrated newsrooms, polyvalent journalists or outsourcing will not necessarily mean an improvement to the quality of journalistic productions. It is true to say that 45% of those surveyed by the Newsroom Barometer feel that quality will increase this way; however, 28% think the exact opposite. It should be highlighted that in the 2006 edition of the same study, those who defended the argument that the quality of journalism would increase stood at 50% (Chainon, 2008).

The reservations expressed at the figure of the polyvalent journalist and integrated newsrooms are divided into two blocks: professional and legal-labour. Besides the loss of quality, the former includes the following:

- **Homogenisation of discourses.** Convergence reduces the number of media voices and makes the content uniform, so diluting the sometimes relevant nuances that would come out of different newsrooms that now have to be merged for economic criteria (Cottle, 1999). According to this hypothesis, pluralism would be harmed.

- **Different journalistic cultures.** For different authors (Silcock and Keith, 2006; Singer, 2004; Killebrew, 2002), it is difficult for the work dynamics of the press, radio, television and the internet – media with different styles, routines, values and rhythms – to coincide in order to work in a synchronised manner. This was the argument used by the more refractive groups that led to an eventual confluence of newsrooms among CCMA media (Domingo, (Masip and Micó, 2008). However, professional experiences point to the key to success in integrating newsrooms lying in a change to production processes. If the way of working is not redesigned, journalists will find it diffi-

cult to adapt to the new challenges.

- **Language and profile diversity.** As stated in the definition almost at the start of this article, journalists who produce content for multiple platforms have to adjust to the languages of each, which is why they need specific skills. However, there are writers who do not have these skills and neither are they in a position to learn them (it is more difficult to train an employee with experience than a new one). Despite this, journalistic production, particularly on the internet, is increasingly more multimedia and less monomedia ((Micó and Masip, 2008). A printed newspaper is still a long way from being an audiovisual news bulletin; however, it is often difficult to pinpoint any differences between a cyber newspaper and the information portal of a television channel. In this second block of cases, journalists urgently need to be polyvalent.

- **Dumbing-down of style and narrative codes.** Despite the apparent contradiction with the above argument, there is a need to remember those voices which state that the style and narrative codes specific to each medium may be harmed due to the work of some reporters who have to work simultaneously for different supports and who do not know how to (or cannot) use the particularities of each language.

In terms of the setbacks derived from convergence and polyvalent journalism based on legal and employment arguments, the most often cited include:

- **A decline in working conditions.** The production of pieces in different formats for different supports and the adaptation of content to the respective languages and peculiarities mean an overload of work for journalists. The time invested in each piece is less than previously. As a consequence, quality is reduced, information is more superficial, and even includes mistakes (Bulla, 2002). In addition, the new demands mean that the working day has to be extended. A study by the National Union of Journalists revealed that working hours for a quarter of British writers have changed following the introduction of digital media into their companies; some 75% of those surveyed stated that they work longer hours since the integration of newsrooms (National Union of Journalists, 2007).

- **Smaller workforces.** If the tasks of different profiles from the past are concentrated into a single professional, who, in addition, is able to work for several platforms, it could be interpreted as being possible to get rid of certain figures. According to this thinking, the polyvalent journalist carries out the same work (or even more) than a group of employees with different skills. Staffing cutbacks announced in the world's media support this concern.

- **Lack of professional and financial recognition.** Despite taking on more tasks, the journalist does not receive greater recognition, either from the professional or financial point of view. From the professional perspective, online journalists, for example, have often been looked down on within the group. From the financial perspective, new attributions have almost never been accompanied by increases in salaries. In the case of *La*

*Verdad de Murcia*, journalists who voluntarily decided to produce information for other platforms did so without any financial recompense (García Avilés and Carvajal, 2008). There are, however, exceptions, such as the *Diari de Girona*, where journalists are paid for the photographs they take that end up being published. The editor of the digital version of the *Financial Times*, Paul Maidment, says: "The only way for companies to value paper and digital newspaper journalists is for them to share working conditions and the system of remuneration" (quoted by García Avilés, 2006: 37).

- **Different working agreements and salary boards.** When newsrooms have to be merged of media, which, although they belong to the same group, are regulated by different agreements and salaries, another difficulty raises its head. Professionals with better working and salary conditions may see the changes as a threat to their status. Logically, the journalists in a less favourable situation – usually online journalists – tend to be the main defenders of the convergence, which they see as an opportunity to bring themselves level with their colleagues (Domingo, Masip and Micó, 2008). Tension also rises when journalists are assigned tasks that fall outside their profile description or the duties regulated by the collective agreement. Conflicts such as these are resolved by a financial agreement between the company and writer or simply by the abandonment of the project.

- **Management of copyright.** Convergence in general, and in particular the figure of the polyvalent journalist, arising from the merging or coordination of several newsrooms, cannot be studied without taking into consideration the consequences of the management of copyright associated with the authorship of the information. If the journalists' contracts do not expressly state otherwise, the material produced for a medium cannot be reproduced by another company, even though they are both part of the same group. Equally, content broadcast assignments in media other than their own – for example, the adaptation of a television report for a website – must be accompanied by the corresponding assignment agreement and payment.

Resistance to change is to be expected in any organisation. The best tactics for overcoming it include training and clear leadership, which may be accompanied by a certain ability to persuade. For innovation to be implemented appropriately, the skill of company managers is key to involving journalists, informing them about the aim of the process and making them participants in the procedure. It is vital that personnel view the transformation as an opportunity to make their work in the new media context easier and not as a financial measure imposed so as to reduce staffing levels and minimise costs at any price. One of the reasons for the icy reception of the CCMA confluence project by its staff is due to insufficient internal communication (Domingo, Masip and Micó, 2008).

BBC multimedia journalist Ben Hammersley says that companies confuse convergence with it being a short-cut to obtaining the same (or, even, greater) informational performance from

fewer personnel (and, therefore, fewer expenses). And therein lies the rub. Despite his experience, Hammersley feels that it is not possible to produce good journalism when working for more than two media at the same time, above all if one of them is television, a support, which, according to him, demands greater dedication. The professional has within their reach numerous multimedia tools, but they should not use them all at once, but rather, in each case, they need to decide the most appropriate one to tell a story.<sup>2</sup>

The aim would be to ensure that all professionals think as multimedia journalists and that at least a significant number of them could understand what it means and which format they should use and then spend time on it. The British journalist's approach has little in common with the idea of the one-man-band who has to cover an event, take the photographs and record the audio and video, as straight after they have to get a news story ready for the online newspaper, then broadcast live on radio and, finally, get a piece together for the television news. Ben Hammersley says that the work of the polyvalent journalist makes a lot of sense when it comes to following long-term events, in the form of extensive reports; however, he does not recommend this *modus operandi* for current affairs and breaking news.

Apart from decisive leadership and the involvement of employees to make initiatives work, such as the ones described so far, training is also needed. Opposition to convergence has often been due to employees being incorrectly prepared. In principle, this was the case at *20 minutos* and *Novotécnica* where journalists complained because they felt that they had not received the necessary training to tackle a newsroom integration process such as this successfully (García Avilés and Carvajal, 2008). However, editors are aware that the best way to improve the quality of their products is to invest in training (Chainon, 2008).

## Conclusions

As we have seen, if the aim is to ensure that innovation like this gels, the business model needs changing and a new journalistic template fostering, based on information quality and the development of imaginative formulas for generating income. Despite the more conservative position, this solution is not always present in classically structured media. In any event, the answer is not to reduce staff levels – although sometimes the dynamics of certain companies would need rationalising – and the search for short-term results.

Obviously, this approach is difficult to marry with a crisis such as the current one. The Newsroom Barometer study mentioned above provides information that is as significant as it is worrying: the generalisation of integrated newsrooms, multimedia journalists and external services will not necessarily mean improved quality of information productions. The news coming from certain Spanish communication groups confirms this. In

order to tackle the recession, Vocento plans, among other measures, to integrate radio and television, close or sell<sup>3</sup> regional media offices and get rid of over a thousand jobs ("Adjustment Plan...", 2008).

In more humble media, both generalisation of the profile of the polyvalent journalist and implementation of integrated newsrooms tend to obey a need, which, as the subject suggests, becomes a virtue. This need may spell success for a project, even though it may erode its quality. In this sense, the director of Canal Blau, Xavier Abelló, resolves: "Despite technical problems [...] that arise depending on the synergies [polyvalent informer], these practices may go a long way to ensuring the existence of audiovisual media in certain medium and small cities [...]. It may be that a text the two media want to use could not exploit the possibilities offered by television, yet, however, it would ensure the economic feasibility of an audiovisual project in a medium or small city." (Abelló, 2007: 14).

In any of its forms, convergence is without a shadow of a doubt a central aspect in today's journalism industry. However, we are faced with an erratic phenomenon that does not generate a consensus and does not offer a single universal application model. We also need to add to this the difficulty in measuring the success of current initiatives. Is it enough to take a hypothetical increase in advertising revenue into account? Lower running costs? Or should we be looking at qualitative criteria and criteria for improving processes and ways of working?

The answer is neither simple nor exclusive, although it does seem that economic indicators do prevail, especially during times of crisis like the current one. Two recent cases exemplify this. A few weeks ago, the *20 minutos* newspaper made public the results of an internal survey that gave a favourable assessment of the professional side to the merging of paper and digital newsrooms (Escolar, 2008); however, in an interview to 233 grados ("Newsrooms...", 2009) on 24 January, the director of 20minutos.es, Joan F. Domene, announced the separation of the two media's newsrooms. The *El País* newspaper, traditionally against unification but which has now communicated its decision to integrate its newsrooms as of 1 March ("El País...", 2009), finds itself in the opposite position.

## Notes

- 1 This article was written within the framework of the "Digital convergence in the media-professionals" R&D project (ref. SEJ2006-14828-C06), funded by the Ministry of Education and Science.
- 2 Lecture given at the Blanquerna Faculty of Communication of the Ramon Llull University on 2 July 2008.
- 3 At the time of this article going to press, it was announced that Malaga City Council had bought the local television channel Vocento for 1.5 million euros.

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# Media convergence and the battle for the audience

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## Abstract

*Media convergence has been written about for the last 25 years, almost always from a very inward-looking standpoint, on how digital technology and the internet phenomenon are changing professional profiles and altering the ways in which content is produced and distributed. The real challenge for the media, however, is not internal but in the market, and involves attending to the different moments of consumption of the same user. This will require multiple platforms on a range of supports and devices, where the real integration is that of the intangibles (brand, credibility, trust), and whose aim is to obtain more audience, lock in their loyalty even when using different channels, and improve their segmentation.*

**Key words:** *media convergence, digital convergence, moment of consumption, media group, audience.*

## Resum

*La convergència dels mitjans ha estat tractada per diferents autors al llarg dels darrers 25 anys, gairebé sempre amb una mirada molt interna sobre com la tecnologia digital i el fenomen d'internet modifiquen el perfil dels professionals i alteren les maneres de produir i distribuir els continguts. El veritable repte dels mitjans, però, no és intern sinó de mercat i consisteix a atendre els diferents moments de consum d'un mateix usuari. Per aconseguir-ho cal disposar de múltiples plataformes en diferents suports i dispositius, en què la veritable integració és la dels intangibles (marca, credibilitat, confiança) i l'objectiu és obtenir més audiència, fidelitzar-la malgrat que utilitzi diferents canals i millorar-ne la segmentació.*

## Paraules clau

*Convergència dels mitjans, convergència digital, moment de consum, grup de mitjans, audiència.*

## On the concept of media convergence

The process of reflection on media convergence considerably predates the present explosion of digital technologies, the internet and the network times we live in. The earliest academic reference dates from 1983, when Ithiel de Sola Pool<sup>1</sup> (1917-1984), founder of MIT's Political Science Department, published *The Technologies of Freedom*. Pool had studied Nazi and Communist propaganda and had already seen the relationship between communications and politics. Among his contributions<sup>2</sup> is the idea of a convergence that "is blurring the lines between media, even between point-to-point communications, such as the post, telephone and telegraph, and mass communications, such as the press, radio, and television (...). So the one-to-one relationship that used to exist between a medium and its use is eroding". Pool was a visionary, and Henry Jenkins,<sup>3</sup> until recently Director of the MIT Comparative Media Studies Program and considered the present-day McLuhan, calls him the "prophet of convergence".<sup>4</sup>

But Pool's holistic and social vision became blurred by the force with which the new technologies were developing. In 1995 Nicholas Negroponte published his *Being Digital*, and popularised a line of argument somewhat marked by technological determinism. He claimed that the changeover from

analogue to digital supports was the reason behind the convergence of media and content that would change communications and society. It seemed that convergence would mean the concentration of all devices in one, probably a computer, and that this would be the only port of consumption for any medium - printed press, television, radio or cinema. However that was not all: convergence would not only be seen in consumer technology but also in productive technology. Everything was turning digital, and the same tools were being used for writing in digital newspapers and their printed equivalents. Technology and the tools derived from it were the cause, and convergence was the result.

This view is still very much to the fore in many of the analyses made, but another key concept has been incorporated: the economy. In a recent article,<sup>5</sup> journalist Juan Varela explains that media convergence is the only solution in a scenario where loss of income has combined with the appearance of new competitors who are investing much less in creating quality content. Information is expensive and it is difficult to be profitable giving general cover with tailor-made content while competing against simple compilers or the increasingly frequent hyper-specialised niche proposals. In spite of this, Frédéric Filloux, French director of the Norwegian group Schibsted (publisher of the *20 Minutos* free newspaper in

Spain) had already explained<sup>6</sup> that if convergence was only technological then perhaps it would not be the solution to the media's economic ills. According to Filloux's calculations, the main European and American dailies needed a volume of income that they could never achieve on the internet. With current income from advertising on the internet (between 0.15 and 0.30 euros per unique visitor per month), an editorial team of 100 would need more than eight million unique visitors per month to be able to meet its costs. According to Varela,<sup>7</sup> in 2007 *El País* obtained eight euros of advertising income per reader and month, whereas Prisacom (which produces Elpaís.com and all the group's other web sites) only managed 0.21 euros in advertising per unique visitor per month. Vocento, leader in the regional press, obtained 6.15 euros per month per reader, while the group's web pages brought in 0.30 euros per unique visitor per month. So if convergence is nothing more than a change from analogue to digital, the future looks very uncertain. Media convergence cannot be explained as just the incorporation of new technologies to deal with times of crisis.

In 2003 Ramón Salaverría, Universitat de Navarra, was already asking for a broader view be taken.<sup>8</sup> As he saw it, when discussing media convergence, four dimensions have to be considered:

- **Entrepreneurial dimension:** communications companies are diversifying, and even within the same group we find different media that require to be coordinated both economically and editorially, all the more so now that the arrival of the internet has forced us to take a fresh look at our models.

- **Technological dimension:** the technology associated with the internet favours separate organisation of online staff, equipped with their own tools and not coordinated from the main editorial team. Efforts are now being made to resolve this by re-integration. Current content management solutions involve a single editorial team that can handle multiple platforms.

- **Professional dimension:** new profiles are coming in - more multi-tasking (research, composition, editing, layout, illustration, publication) and more multi-channel work (writing for both digital and paper editions, taking part in radio chat programmes, running a blog etc.).

- **Communicative dimension:** the internet allows integration of previously separate communications codes (audiovisual with television, auditory with radio, textual with press), also bringing in new options like simulators, infographics, 3-D reproductions etc.

According to Salaverría, these four dimensions are at different levels of development. In his opinion, although the first two (entrepreneurial and technological) have been around for 20 years, the professional and above all communicative dimensions are much newer and the challenge for companies is to develop them properly.

## Audiences and media convergence

Broadly, Negroponete, Valera, Filloux and Salaverría view media convergence as a phenomenon that arises from technology, economics, management and professional evolution. But what all their analyses have in common is that they focus on media companies and professionals rather than on their audiences.

These days, all users of the different media can afford their access costs. Anyone can buy a newspaper, listen to the radio, watch television, access the internet, download a podcast etc. The real problem is having time to access the content. So now it is users' time rather than their money that the media are competing for. This is known as the *economics of attention*.

True convergence is what happens inside each consumer. The strategy is to bring together the moments of time they spend with us, moments that we have no option but to service through different media which then converge in the user and his or her multiple social interactions. The most important issue is not that consumers produce information but that they process it on multiple supports and metabolise it collectively, giving rise to some not very linear and so far little known forms of reading, which Henry Jenkins calls *transmedia storytelling*.

In these days of social networks and transmedia storytelling, media convergence is not so much concerned with integrating multiple devices in one or with magic formulae against the crisis, to cite two of the most frequently repeated arguments. In Jenkins' words: "the old idea of convergence was that all devices would converge into one central device that did everything for you. What we are now seeing is that hardware is diverging while content converges".<sup>9</sup> Far from being "all-in-one", media convergence is using multiple supports and tools, and is distributing content on a whole range of channels. The only part of the issuing medium that survives in this process is its brand. In media convergence, consumers are being transformed and the media reduced to a brand.

Jenkins talks about convergence as the media's "big bang", where old and new media clash, popular and corporate media are crossed, producer's and consumer's powers are combined, but all in ways that are impossible to predict. This is not just a context in which consumers are now known as *prosumers* because they also produce content, but a whole new environment, where consumption must be seen as a collective process and a cultural dynamic.

As Jenkins says, old media never die. No new medium kills its predecessor. TV will not disappear as a medium, nor will newspapers, but they will certainly change how they use technologies to produce and distribute their content. One example could be the soon-to-arrive mobile television: what little we have at the moment consists of a mobile adaptation of content created for conventional television (for example *TV3minutes*),<sup>10</sup> but these are only rehearsals for more specific productions. The same thing happened with on-line newspapers: at first they only published the printed edition in on-line support, but now

all major newspapers have digital versions where the print edition is only a marginal part of their offer.

As might be expected, in this new context the individual media are losing ground and media groups are taking over. Their ability to coordinate printed, audiovisual and digital media under the same roof makes it more likely that groups can attend to each user at his or her different moments of consumption. In this regard, the media groups Prisa, Planeta and the Godó Group have been systematically mapping a range of media to ensure their presence across radio, television, press and the internet. Conversely, the major public channels including RTVE (Spanish) and CCMA (Catalan) are closely focussed on radio and television and have are poorly represented in the other media, which may lead to problems in their attempts to serve their audience at different moments of consumption.

### The media and the convergence of intangibles

The main asset of any medium is its brand, ahead of its production processes or its technology. Creating a brand that its audience associates with specific values is difficult and expensive, and the best way to make it pay its way is to exploit it across all available platforms (the internet, television, the printed press etc.), supports (audio, video, text etc.) and devices (computers, mobile telephones, DTT, DVD, cinemas etc.). This is the most strategic option: to construct identifying values that can be recognised in any channel. Meanwhile economies of scale and technical or organisational synergies are merely the logical optimisation of operations and costs common to every activity.

The more visible the brand and the more moments of consumption it is associated with, the more powerful its deployment. If a communications offer aims to become our first-choice option it will have to be at our side every morning when we are eating our breakfast (newspaper?), driving to work (radio station?), while at work (segmented RSS?), talking to friends (mobile phone?) or in the evening after dinner (television?). Every time the brand misses one of these moments of consumption, it runs the risk of its user finding a more comprehensive alternative.

In the media, technical and economic convergence are operational matters only relevant to internal organisation. While they affect how the media organise and create content, on their own they offer no guarantee of a strategy to deal with customers' moments of consumption. The media should not be interpreting the concept of convergence by looking inwards, but by looking outwards, at the audience that they wish to service and its increasing mobility and capacity to access information in multiple formats. That is, they must stop seeing convergence as just technical or economic engineering and start harnessing it for servicing customers and gaining their loyalty.

### The battle of the audience ... and segmentation

Some years ago, Chris Anderson<sup>11</sup> developed the concept of *long tail*<sup>12</sup> to explain that in today's context of digital products and low transaction costs, what makes niche proposals so interesting is their potential world market, making profits for initiatives that would not have been viable in the local market. Anderson continues to be a lucid and outspoken interpreter of the network society and digital progress and their affect on business strategies. In 2008 he published a new and highly influential article<sup>13</sup> in which he argues that service provision must be free for the end user. The internet has made users accustomed to not paying for most of the services they enjoy: a powerful search engine, electronic address, space to publish videos, option of a personal blog, access to specific content etc. This is already the norm in radio and television stations, which do not try to make money directly from audiences but seek audiences to attract advertising, although the digital press, for example, has repeatedly tried to make readers pay to access certain content, with poor results.

When service is free for the end user the media are plunged into an audience war, conducted over two variables that must go hand in hand: volume and segmentation. Interest is declining in both volume without segmentation and extensive segmentation without minimum volume. So putting together Anderson's two concepts, initiatives must be free and for long-tail markets.

When viewed as a strategy for satisfying each user's different moments of consumption, media convergence can also become a strategy for improving segmentation (of users but also of their moments of consumption). This in turn will lead to improved exploitation of advertising and better economic returns. A media group that knows who consumes parts of its content, and at which specific moments, will not only be better placed to orientate its formats and their editorial treatment, but will also be more attractive for the business models that will make it viable.

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**Notes**

- 1 <[http://web.mit.edu/m-i-t/profiles/profile\\_ithiel.html](http://web.mit.edu/m-i-t/profiles/profile_ithiel.html)>
- 2 <<http://web.mit.edu/comm-forum/papers/etheredge.html>>
- 3 <<http://www.henryjenkins.org>>
- 4 <<http://books.google.com/books?id=RIRVNikT06YC&printsec=frontcover&dq=Convergence+Culture&ei=dMciSZ7IOJSWMozA1IMD>>
- 5 <[http://www.soitu.es/soitu/2008/10/01/sociedadcablea-da/1222857641\\_723544.html](http://www.soitu.es/soitu/2008/10/01/sociedadcablea-da/1222857641_723544.html)>
- 6 <<http://www.mondaynote.com/?p=961>>
- 7 <[http://www.soitu.es/soitu/2008/10/01/sociedadcablea-da/1222857641\\_723544.html](http://www.soitu.es/soitu/2008/10/01/sociedadcablea-da/1222857641_723544.html)>
- 8 <<http://chasqui.comunica.org/81/salaverria81.htm>>
- 9 <<http://www.amphibia.com.ar/convergencia-de-medios-de-donde-viene-y-que-es-i>>
- 10 <<http://www.tv3.cat/tv3minuts>>
- 11 <[http://es.wikipedia.org/wiki/Chris\\_Anderson](http://es.wikipedia.org/wiki/Chris_Anderson)>
- 12 <<http://www.thelongtail.com>>
- 13 <[http://www.wired.com/techbiz/it/magazine/16-03/ff\\_free?currentPage=all](http://www.wired.com/techbiz/it/magazine/16-03/ff_free?currentPage=all)>

# Comparing online risks faced by European children: Reflections on youthful internet use in Britain, Germany and Spain<sup>1</sup>

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## Abstract

European research and policy is paying growing attention to the risks faced by children as they use the internet. The EU Kids Online network has recently scoped the available findings, comparing research across 21 European countries in order to identify both cross-national similarities and differences across Europe. This article first presents the justification and methodology for a cross-national approach, then overviews the key findings. On the basis of a classification of countries according to children's internet use and risk, the article then focuses on three contrasting countries: Britain (classified as high use, high risk), Germany (classified as medium use, low risk) and Spain (classified as low use, medium risk). Findings and policy initiatives can thus be meaningfully compared across these countries

## Key words

*Internet's use, children, online risk experiences, teenagers, EU Kids Online.*

## Resum

La recerca i la política europees presten cada cop més atenció als riscos que afronten els infants quan utilitzen internet. La xarxa EU Kids Online ha analitzat recentment les conclusions disponibles comparant la recerca duta a terme en 21 països europeus per tal de determinar les semblances i les diferències. Aquest article presenta en primer lloc la justificació i la metodologia per a un enfocament internacional i a continuació analitza les conclusions més importants. A partir d'una classificació dels països segons l'ús d'internet per part dels infants i el risc que comporta, l'article se centra en tres països amb resultats diferents: el Regne Unit (ús elevat, risc alt), Alemanya (ús mitjà, risc baix) i Espanya (ús baix, mitjà). Les conclusions i les iniciatives polítiques poden ser útils quan es comparen entre aquests països.

## Paraules clau

*Ús d'internet, infants, experiències de risc en línia, joves, EU Kids Online.*

## Introduction: Is the internet risky for children?

Across Europe, children and young people are gaining access to the internet and online technologies at a rapid pace. Cross-national differences in children's internet use remain substantial, ranging from less than a third of children online in Greece and Bulgaria to over two thirds in Estonia and Denmark (Eurobarometer 2006). Growing public concerns about online risk in many countries often overshadow early optimism regarding the benefits of internet access for children. To understand what the internet may afford children and their families, both in terms of their education, leisure, participation and community and, more negatively, in terms of the risk of harm, this growing use of the internet and online technologies is being closely tracked by empirical research.

The EU Kids Online network asserts that a cross-national

perspective is vital to understand whether, how and why children have different experiences online in different countries.<sup>2</sup> Thus the network asks, what can be learned of the similarities and differences in children's risk experiences across 21 countries? Its work is based on the comparison of available evidence from recently completed studies, reported in various languages. By 2008, over 400 studies had been identified, coded and compared within the network (see Hasebrink, Livingstone, & Haddon 2008). Focusing on three exemplar countries, this article highlights some of the key findings in order to draw out the implications for European research and policy.

But first, a note of caution is necessary. Most of the available evidence concerns teenagers rather than younger children. Most of it derives from surveys of self-reported risk of harm rather than direct evidence of harm. And there are many ques-

tions entering the policy agenda that have not yet been addressed by social science research (Staksrud, Livingstone, & Haddon 2007). We know most, therefore, about the incidence and demography of risky experiences among online teenagers – in other words, about the activities and encounters which may be associated with a probability of harm. Asking about risky experiences raises some difficult methodological issues also (see Lobe, Livingstone, & Haddon 2007). For example, children and adults do not always agree on definitions – to children, making new friends or disclosing personal information online is an opportunity to extend their social network, but to adults, especially parents, it is regarded as risky.

Although risks are particularly difficult to define in culturally-consensual ways, and they are difficult to research in methodologically-rigorous and ethically-responsible ways, a classification of 12 categories of risk was proposed by Hasebrink et al (2008) as likely to be relevant across Europe (and beyond):

This distinguishes content risks, in which the child is a recipient of unwelcome or inappropriate mass communication, from contact risks, in which the child is a participant of risky peer or personal communication, and both are further distinguished from a third category, that of conduct risk in which the child is positioned as an actor, contributing to or producing risky content or contact.

The variety of risks can be further categorised in terms of the motivations of online producers – notably commercial, aggressive, sexual and values-related motivations – resulting in the classification shown below. Although this does not address the ambiguity in distinguishing risks from opportunities discussed earlier, it does usefully organise the available research evidence on the incidence of online risk experiences into the following twelve cells.

As noted above, some of these cells contain rather little research evidence. The analysis that follows concentrates pri-

marily on the areas where research has been conducted in many if not all European countries (as shaded grey in Table 1).

### Classifying European countries by online risks for children

Our strategy was first to note the degree of cross-national similarity before addressing differences. Significantly, the overall rank order of risks appeared more or less common across the 21 countries whose findings have been compared by the EU Kids Online network. Thus, notwithstanding cross-national variations, it appears that:

- giving out personal information is the most common risk (approximately half of online teenagers);
- seeing pornography is the second most common risk at around 4 in 10 across Europe;
- seeing violent or hateful content is third most common risk (at approx one third of teens);
- being bullied/harassed/stalked affects around 1 in 5 or 6 teens online;
- receiving unwanted sexual comments is experienced by between 1 in 10 teens (Germany, Ireland, Portugal) but closer to 1 in 3 or 4 teens in Iceland, Norway, UK and Sweden, rising 1 in 2 in Poland;
- meeting an online contact offline is the least common but arguably most dangerous risk, showing considerable consistency in the figures across Europe at around 9% (1 in 11) online teens going to such meetings, rising to 1 in 5 in Poland, Sweden and the Czech Republic.

Moreover, in several countries, a degree of distress or feeling uncomfortable or threatened was reported by 15%-20% of online teens, suggesting, perhaps, the proportion for whom risk

**Table 1: A classification of online risks to children**

|                                                   | Commercial                           | Aggressive                         | Sexual                                   | Values                                                 |
|---------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------------|--------------------------------------------------------|
| <b>Content</b><br><i>-Child as a recipient</i>    | Advertising, spam, sponsorship       | Violent/ hateful content           | Pornographic or unwelcome sexual content | Racism, biased or misleading info/ advice (e.g. drugs) |
| <b>Contact</b><br><i>- Child as a participant</i> | Tracking/ harvesting personal info   | Being bullied, stalked or harassed | Meeting strangers, being groomed         | Self-harm, unwelcome persuasion                        |
| <b>Conduct</b><br><i>- Child as an actor</i>      | Gambling, hacking, illegal downloads | Bullying or harassing another      | Creating and uploading porn material     | Providing advice e.g. suicide/pro-anorexic chat        |

Source: EU Kids Online (Hasebrink, Livingstone and Haddon 2008)

poses a degree of harm. Findings from the pan-European Eurobarometer survey (2006) suggest that, according to their parents, children encounter more online risk through home than school use (though this may be because parents know little of their children's use at school). However, among those children who use the internet in an internet café or at a friend's house, these are also risky locations, according to parents (especially compared with school use).

Not all children's experiences are the same, of course. Our review of studies conducted in different countries suggested a series of demographic differences which, for the most part, are fairly similar across Europe. Specifically, use of the internet increases with age, at least up until the mid teens, when usage may peak. While this trend holds across Europe, in high use countries, children get online younger and this has implications for risk – notable since high risk countries (see later) include low and high use countries. Generally, it seems that older teenagers encounter more online risks than younger children, though the question of how younger children cope with online risk remains little researched. In almost all countries, higher SES households are more likely to provide their children with access to the internet, this resulting in greater or more frequent use among more advantaged children. It also appears that lower class children are more exposed to risk online.

The findings also suggest that boys use the internet for longer and in more places than girls do, and that girls and boys differ in the online activities they engage in: girls prefer activities that involve communication, content creation and collaboration; boys prefer competition, consumption and action. There are also gender differences in risk: boys appear more likely to seek out offensive or violent content, to access pornographic content or be sent links to pornographic websites, to meet somebody offline that they have met online and to give out personal information; girls appear more likely to be upset by offensive, violent and pornographic material, to chat online with strangers, to receive unwanted sexual comments and to be asked for personal information but to be wary of providing it to strangers; both boys and girls are at risk of online harassment and bullying.

The differences identified across countries were also substantial. These were used to construct a classification of countries in terms of children's online use and risk. Although generally European children are gaining access to the internet, differences in access and use remain, enabling a country classification based on the percentage of children who use the internet. Also striking is the diversity of online risk figures obtained across countries, suggesting a classification of countries based on the likelihood of children's experiencing online risk. Putting these two classifications together produced Table 2.

This classification suggests the following points:

- high use of the internet is rarely if ever associated with low risk;
- low use of the internet may be associated with high risk but not vice versa;

**Table 2: A classification of countries by online risk to children**

| Online risk   | Children's internet use     |                                      |                                            |
|---------------|-----------------------------|--------------------------------------|--------------------------------------------|
|               | <i>Low</i>                  | <i>Medium</i>                        | <i>High</i>                                |
| <i>Low</i>    | Cyprus<br>Italy             | France<br>Germany                    |                                            |
| <i>Medium</i> | Greece<br>Portugal<br>Spain | Austria<br>Ireland                   | Belgium<br>Denmark<br>Sweden               |
| <i>High</i>   | Bulgaria                    | Poland<br>Slovenia<br>Czech Republic | Estonia<br>The Netherlands<br>Norway<br>UK |

Source: Hasebrink, Livingstone and Haddon (2008)

- high use, high risk countries are, for the most part, wealthy Northern European countries;
- medium use, high risk situations are characteristic of new entrants to the EC;
- Southern European countries tend to be relatively lower in risk, though there are differences among them.

Putting this another way around, we might conclude that, as a broad generality:

- Northern European countries tend to be "high use, high risk";
- Southern European countries tend to be "low use, variable risk";
- Eastern European countries can be characterised as "new use, new risk".

To explore and begin to explain the implications of this classification, we now examine the specific findings in three contrasting countries.

### UK – high use, high risk

In the UK, the UK Children Go Online project surveyed a national sample of 1,511 9–19 year olds in 2004, together with 906 of the parents of 9–17 year olds, finding that the vast majority of children and young people access the internet – whether at home (74%) or at school (92%). Most children and young people use it daily (41%) or weekly (42%); and only 13% are occasional users (i.e. use it less than once a week) or non-users (3%) (Livingstone & Bober 2005). Households with

children are significantly more likely to have access than others (Ofcom 2007) and by 2008, 83% of 7-16 year olds had gained internet access at home, 25% of them having access in their bedroom (ChildWise 2008). These relatively high figures for access and use do not mean that all children are 'digital natives', for some are still inexperienced or lacking in internet literacy, this being especially but not only among the minority who lack access at home (Livingstone 2008).

So, what risks do UK children encounter online? The UK Children Go Online survey of 9-19 year olds found that, among those who used the internet at least weekly, 57% had seen online porn, 31% had seen violent and 11% had seen racist content (Livingstone & Bober 2005). Further, 31% had received sexual comments online and 28% had been sent unsolicited sexual material. A third had received bullying comments online and 8% had gone to a meeting with someone first met online. Further analysis revealed that teenagers who encounter risks related to online communication tend to be more dissatisfied with their own lives and more sensation-seeking; they also tend to describe themselves as more confident online than offline and to be positive about the value of anonymous online communication (Livingstone & Helsper, 2007). It also appears that children report mixed reactions to online risks. Of those who have come into contact with pornography on the internet, 54% claim not to be bothered by it, 14% disliked what they saw and 20% were 'disgusted', 8% wished they had never seen it, though 7% thought it was interesting and 7% enjoyed it. In short, half claim to be unaffected, but a significant minority did not like it, one fifth (especially girls and younger children) claiming to have been disgusted.

Recent years have seen increased concern in the UK with cyberbullying, as offline bullying is transferred to online bullying and harassment. It seems thus far that most bullying is still primarily offline: a 2006 survey of 4772 school pupils reported that 69% pupils were bullied in past year and that half of those were physically hurt; nonetheless, 7% said they had received unpleasant or bullying emails/IM/text messages (Bullying UK, 2006). But bullying increasing occurs online also: a survey of 770 11-19 year olds found that 20% had been bullied/ via text/internet/email and that 73% knew the person, though for 26% this was by a stranger; further, 10% had a photo taken of them that made them feel uncomfortable, embarrassed or threatened, and 17% said it was sent to others; last, 11% said they'd sent a bullying or threatening message to someone - this problem, like other online risks, is made worse insofar as children often tell no-one of these experiences (NCH/Tesco Mobile 2005).

Strikingly, for a wide range of risky experiences, parents systematically underestimate the frequency with which their children encounter such risks. Or, to put this rather more cautiously, for we cannot know 'the truth' of the matter, children report considerably higher levels of problematic online experiences than is recognised by their parents. For example, nearly half (46%) of 9-19 year-olds who go online at least once a week

say that they have given out personal information while only 5% of parents think their child has given out such information. Similarly, although as we saw above, 57% of these young people have come into contact with pornography on the internet, only 16% of their parents believe this to have occurred. And again, while one in three say they have received nasty or sexual comments online, only 7% of parents think that their child has received sexual comments, and only 4% think that their child has been bullied online (Livingstone & Bober 2005).

One difficulty here is that children and young people claim greater online self-efficacy than do their parents: 37% consider themselves 'advanced' or 'expert' vs. 15% of parents. Thus it seems that, even in a country where the internet is well-established in most homes, parents struggle to manage – or even to know about – their children's internet use. Indeed, parental uncertainty, combined with a rapid pace of cultural change and considerable government and educational pressure to get all children online, means that the policy challenges to keep children reasonably safe online are considerable.

### Germany – medium use, low risk

Compared to the UK, German children have been less likely to access the internet. However, given the ongoing fast diffusion of online access in all European countries this difference is going to disappear since all indicators support the hypothesis that in the near future almost all children and young people will at least occasionally use the internet. According to preliminary results from the most recent representative survey among 12-19 year olds (MPFS 2008), in 2008 more than four in five young people (84%) used the internet at least several times per week. 71% of the 12-19 year olds had their own computer – for the first time this figure was higher than for TV sets (61%) – 50% were able to go online in their bedroom.

One important difference between Germany (and Spain, see below) on the one hand and the UK on the other hand is related to the place where children use the internet. According to the Eurobarometer 2005/2006 Safer Internet survey, UK children (0-17 years) were clearly more likely to use the internet at school (58%) than at home (45%); for German children the opposite was true (at school: 26%, at home: 39%; Hasebrink, et al. 2008). This might indicate a less ambitious public policy in Germany, with less support for internet use at schools and other public places (Krotz & Hasebrink 2001). Alternatively, it might indicate that German parents are particularly interested in supporting their children's internet use. In any case, since it is likely that the places where children are online are connected with specific risks, the countries provide quite different conditions for potential harmful experiences and for political and pedagogical means to support a safer use of the internet.

Regarding the risks that German children encounter online, the empirical evidence is still quite weak since most empirical studies have focused on access, usage and online activities.

The lack of dedicated studies on online risks might be one reason for a relatively low level of online risk awareness and the classification of Germany as a "low risk country". Another reason might be that in the last years the risk-related public discourse in Germany has been dominated by the issue of computer games and their influence on violent behaviours. Some cases of school-shootings were the driving forces of this particular public attention for games. Nevertheless, it can be stated that parents attribute a considerable risk potential to the internet in general and see the necessity of (primarily legal) protection. The younger the children, the higher the percentage of parents who state that protection of minors is needed (Schumacher 2005).

As for empirical evidence of online risks, in 2006 more than one third of the 12-19 years old users of chat rooms reported that they had met unpleasant people in a chat room several times (boys: 30%; girls: 44%) (MPFS 2006). In 2007 more than half of the users of chat rooms were asked by strangers for his/her address, phone number and name (boys: 47%, girls 59%). In this respect girls were much more careful than boys: only 11% (boys: 19%) provided the information, 48% did not (boys: 28%) (MPFS 2007). Gender differences were also stated in relation to problematic mobile content (Grimm & Rhein 2007). Boys were more aware of problematic films with violent, sexual or Nazi-related content than girls. In comparison to boys, girls were more aware of self-produced videos in which others are beaten up or shown in embarrassing situations.

Particular interest has been paid to risks linked to the use of mobile media. In 2007 87% of 12-19 year olds had already heard about brutal and/or pornographic videos on mobile phones (2006: 77%); 34% (2006: 33%) claimed they had heard that their friends had received such kind of content; and 9% (2006: 7%) stated that they themselves had received violent or sexual films on their mobile (MPFS 2006, 2007). The comparison between 2006 and 2007 indicates that there is increasing awareness of and also slightly increasing likelihood of contacts with brutal and/or pornographic content. Almost one third (29% in 2007) of the 12-19 year olds have already seen a film of a beating. This kind of experience is closely linked to level of education: whereas only 21% of those with the highest level of education have witnessed such a "happy slapping", this figure was 30% for the medium level and 44% with the lowest level of education. These results indicate that "happy slapping" is a particular problem in the lower educated groups.

To sum up, the empirical evidence of online risks and related coping strategies among German children and adolescents is rather weak. A shift from studies on online access and usage to research on effects and issues of literacy is urgently needed. The existing findings point to the fact that online use is rapidly increasing. Therefore the online risks, which are known from other countries with higher internet diffusion rates, are becoming a normal part of children's everyday life.

### Spain – low use, medium risk

According to the Networked Readiness Index (NRI) of 2007-2008, Spain occupies the 16th place out of 19 Western European Countries. ICT penetration rates in Spain are consistently lower than the average for EU countries (45% vs. 66% for all households; 55% vs. 66% for households with children), except in broadband internet access, where its penetration rate is higher and closer to the EU average (39% vs. 42%) (Eurostat 2007). With usage varying by age, research shows that 7% of 11 year olds, 26% of 14 year olds and 58% of 17 year olds use the internet (Red.es, 2007).

In 2007, 62% of children between 10 and 15 years of age accessed internet at home, 56% accessed internet at school, 33% accessed internet at a friend's house or a relative's house, 21% accessed it in public places, 16% in a cyber-café and 4% in other places (INE, 2007). The average amount of time spent online is fairly high – among 12-21 year olds with internet access at home, average daily use is 163 minutes (or 17 hours a week) and two in three report going online every day. Intriguingly, much of their use, especially among 15-17 year olds is after 11 pm. Among users, 37% use the internet for social interaction, 21% use it for playing and entertainment, 19% use it in order to look for information, 14% for consumer activities (purchasing goods or downloading music or games) and 8% use it in order to obtain information about employment or to look for a job. Most (70%) of these 12-21 year olds claim to have their use of the internet under control, but 21% say that they probably use it too much and 4% confess to being addicted to it (Fundación Sistema 2006).

The evidence for risks online is fairly sparse in Spain. However, research shows that although most (78%) say they would never arrange to meet in person someone they had contacted on the internet, 18% said that they would go to such a meeting. Most (91%) also say they would never send a message to someone to make him/her feel uncomfortable) or use a private data base to obtain private information, 85% claim never to visit pornographic websites, and 83% say they would not enter someone's e-mail account or private website. Overall, only 11% express fear regarding online (Fundación Sistema 2006).

In general, sexual or violent content is not regarded by children as a potential risk, although they tend to avoid pornographic content as it is often connected to viruses. Violent content is not seen as shocking for children as they do not feel material online is any worse than the images shown daily on television. Bullying is basically understood in terms of face-to-face abuse rather than something associated with the internet. Thus children's concerns about the internet centre less on harmful content or contact and instead on potential attacks by virus. Older children also worry about having their password stolen. However, contact with strangers provides the third perceived source of risk, especially for younger children, as they fear being misled by someone who is pretending to be some-

one else, and girls aged 12 to 14 are aware of the risk they may expose themselves to when using a webcam.

Parents are far more aware of the risks which their children may encounter whilst using the internet and it is they who impress upon their children not to give personal information or to make contact with strangers online. However, parental levels of computer literacy are quite low. Although some research suggests high use of filtering technology by Spanish families (45% of households with children aged 10-15, according to INE 2007), other research suggests much lower figures – among six focus groups with 12-17 year olds, only one teenager had a filter (Garitaonandia & Garmendia 2007). Most parental control centres on restricting the amount of time children are allowed to spend on the computer, because it is perceived as distracting them from their homework – not because parents are concerned about the nature of children's online activities.

### Implications for research and policy

In Western thinking about childhood, risk anxiety has become 'a constant and pervasive feature of everyday consciousness' (Jackson & Scott 1999: 88). Such anxiety is undoubtedly reflected in European parents concerns about their children's use of the internet and this in turn potentially undermines the aim of European policy regarding the Information Society, namely to encourage greater use of the internet by everyone.<sup>3</sup> Thus the issue of internet safety awareness and risk prevention is becoming more prominent on the public policy agenda across Europe. This in turn must be grounded in empirical research, as this provides a realistic assessment of the degree and nature of actual risk facing children and young people as they go online.

This article reports on the classification of types of online risk developed by the EU Kids Online network, using this to overview the available empirical evidence. This reveals, first, that some kinds of risk that merit policy attention have been very little researched – commercial risks, for example, or the risks associated with self-harm or suicide websites. These neglected risks, plus newer risks associated for example with the spread of mobile technology and the emergence of cyberbullying, are all priorities for the future research agenda, along with the imperative of updating existing evidence regarding risks of aggressive or sexual content and contact. In countries where evidence is sparse – including Germany and Spain – this is a particular priority.<sup>4</sup> Second, it can be concluded that, for the cases in which research has been conducted in most countries, there are some common features of the online experience across Europe. The rank ordering of risks presented above – ranging from the very common experience of disclosing personal information to the relatively rare experience of going to a meeting with a contact first encountered online – is similar in each country. Third, it appears that there are some significant

cross-national variations in the experience of online risk, this inviting detailed examination of the conditions of internet use in different countries.

This article has presented the UK as a society where high use leads both to considerable online opportunities for children but also the experience of relatively high levels of online risk. It seems that, given an established culture of going online, the experience of risks has become commonplace precisely because so many have gained confidence in exploring the contents and services afforded by the internet. The UK Children Go Online project found that the more opportunities they take up, the more risks, they encounter and vice versa (Livingstone & Helsper, *in press*). Several factors explain this picture: first, a vast amount of material is available online in the English language beyond that produced by the UK; further, by comparison with many other European countries, the UK education system has long and vigorously promoted internet access and use in all schools, often ahead of home access (Krotz & Hasebrink 2001).<sup>5</sup>

If such a positive correlation between opportunities and risks exists in other countries also, this will complicate policy interventions, since attempts to increase online opportunities (education, participation, creativity, etc) may increase risks, while attempts to prevent risks often work through limiting use and thus restricting opportunities (Livingstone & Helsper, *in press*). However, at present, levels of online risk are lower in many European countries, including Spain and Germany. As the classification of countries presented in Table 2 shows, there is no necessary relation between amount of use and amount of risk, though it may be predicted that as levels of internet use increase in Spain and Germany, among others, children's encounter with online risk is likely to increase.

Striking as an absence in our review of empirical research is the question of coping: although there is some sporadic information available about the array of coping strategies children employ when faced with online risk (Eurobarometer 2007), these are not yet systematically studied and nor, significantly, is their effectiveness evaluated (Staksrud & Livingstone, *in press*). One fairly common response, for many children, is to turn to friends when something goes wrong on the internet; turning to parents for guidance is characteristic only of young children. One reason children report is their fear that parents will restrict their use of the internet if they reveal any problems.

Cross-national research also reveals differences in parental strategies of mediating their children's use of the internet. Analysis of the Eurobarometer survey also showed that, across countries, those in which a higher percentage of parents claim their children have encountered harmful content tend also to be those in which parents estimate their children to have a lower ability to cope with these potentially harmful encounters (Hasebrink, Livingstone, & Haddon 2008).<sup>6</sup> This suggests that, as national experiences with online risk rise, parents become less confident that their children are prepared for such risks. This clearly suggests that awareness raising and guidance on

appropriate responses to risk – for both parents and children – remains a requirement even when the internet has become more familiar.

On the assumption that the degree of television mediation practiced reveals parents' willingness to mediate domestic media, the gap between parental mediation of television (where they feel competent) and the internet (where they may feel unskilled, even though the risks are greater) is revealed by research to be as follows. In Austria, Italy, Poland, Portugal, Slovenia and Spain, parents of internet users set rules for television more than they do for the internet. In Denmark, Estonia, Netherlands and Sweden, parents set more rules for the internet than for television. In Belgium, Germany, Greece, Ireland and the UK, parental rules are more or less equivalent. In short, in many high use countries, parents mediate the internet more than they do television. In low use countries, by contrast, they are more likely to mediate television – suggesting a regulation gap in low use countries (i.e. parents are evidently willing to mediate, since they do so for television, but lack either awareness or skills to mediate the internet to a similar degree).

Adding to the public agenda regarding children's internet use is the recent recognition that children are not only, on occasion, victims of risky encounters but that they may also be the perpetrators. Cyberbullying especially has risen fast up the agenda of concerns among parents and politicians. In the UK, a body of empirical research already informs and guides the policy interventions underway in schools to attempt to raise awareness and reduce cyberbullying. In Germany, with its relatively lower diffusion of online access and usage, the public discourse on potential risks is still dominated by content risks, especially those related to violence (- again a contrast with the UK, where the content risks that capture public attention are primarily concerned with pornography). Here European policy can usefully learn from research in America where recent findings reveal that perpetrators of online bullying or harassment are, themselves, often also the victims of abuse (Ybarra, et al, 2006); it would be false to draw a sharp line between victims and perpetrators.

As should by now be clear, there is also a difficult line to be drawn between encouraging media and public panics regarding online risks and a degree of complacency, sometimes evident among both parents and children as well as policy makers in some countries. For example, the tendency of Spanish youngsters to worry only about viruses or stolen passwords suggests the need for greater awareness of content, contact and conduct risks. On the other hand, the high anxiety of some British parents, stimulated by the tabloid press, could usefully be reduced, perhaps by raising awareness of constructive coping strategies and encouraging open conversation between parents and children. Not only is more empirical research needed, but so too is an up to date and contextually-specific awareness programme in all countries. Last, we note that in some countries<sup>8</sup> and at a European level also,<sup>9</sup> discussions are

underway by industry and regulators so that risk reduction is not left entirely to children and parents; the degree to which the online environment can itself become less risky to children has yet to be determined.

## Notes

- 1 This paper draws on the work of the 'EU Kids Online' network ([www.eukidsonline.net](http://www.eukidsonline.net)), funded by the EC Safer Internet plus Programme. We especially acknowledge network members who contributed to Work Package 3: Verónica Donoso, Cédric Fluckiger, Jos de Haan, Leslie Haddon, Lucyna Kirwil, Yiannis Laouris, Bojana Lobe, Jivka Marinova, Helen McQuillan, Kjartan Olafsson, Pille Pruulmann-Vengerfeldt, Katia Segers, José Alberto Simões, Vaclav Stetka, Liza Tsaliki, Anna Van Cauwenberge and Thomas Wold.
- 2 The EU Kids Online network examines research findings from 21 member states into how children and young people use the internet and new online technologies. This three year collaboration aims to identify comparable findings across Europe and to evaluate the social, cultural and regulatory influences affecting online opportunities and risks, in order to inform policy. It is charting available data, identifying best practice in research methodology, pinpointing gaps and identifying factors that shape the capability of European research institutions.
- 3 Married with children under 18, 34.3% use internet almost every day and 51.2% at least once a week. "Encuesta de Hábitos y Prácticas culturales en España 2006-2007", Spanish Ministry of Culture, <<http://www.mcu.es/estadisticas/index.html>>
- 4 See also "Estudio sobre seguridad en el uso de las nuevas tecnologías de la información y la comunicación entre los menores", Centro Tecnológico de la Información y la Comunicación (<<http://internetyfamilia.asturiastelecentros.com>>).
- 5 See the 2006 Ministerial Riga Declaration on ICT for an inclusive society, signed by 34 European countries, available at <[http://ec.europa.eu/information\\_society/events/ict\\_riga\\_2006/doc/declaration\\_riga.pdf](http://ec.europa.eu/information_society/events/ict_riga_2006/doc/declaration_riga.pdf)>
- 6 In fact, one of the studies mentioned above (Fundación Sistema, 2006) asked some questions about risk related to patterns of behaviour, but the question was formulated in such a way that it probably led to an underestimation of the real figures. The statements which began with "I would never do ...." probably encouraged children to hide some of their behaviour whilst using the internet instead of being truthful.
- 7 In 2006, virtually all schools were online, with an average of 231 connected computers per secondary school (BESA, 2006); the current policy is to provide financial and technical support to encourage the remaining quarter of households with children to get online.
- 8 As discussed in Hasebrink et al (2008), high ability to cope is claimed for children in Austria, Belgium, Cyprus, Denmark, France, Germany, and the UK; low ability to cope is claimed in Bulgaria, Estonia, Greece, Portugal and Spain (intermediate countries are

Czech Republic, Ireland, Poland, Slovenia and Sweden). Across countries, findings for coping are negatively correlated with parents' perception that their child has encountered harmful content on the internet, indicating that high risk countries tend to have low perceived coping skills and vice versa. Note that this correlation does not hold at an individual level (i.e. it cannot be said that if a parent claims their child has encountered harmful content, that parent is also more likely to think their child can cope).

9 For example, see :

<[http://www.dcsf.gov.uk/pns/DisplayPN.cgi?pn\\_id=2007\\_0212](http://www.dcsf.gov.uk/pns/DisplayPN.cgi?pn_id=2007_0212)>

10 In the UK, for example, 2008 sees the introduction of a new UK Council for Child Internet Safety; see:

<[http://www.dcsf.gov.uk/pns/DisplayPN.cgi?pn\\_id=2008\\_0215](http://www.dcsf.gov.uk/pns/DisplayPN.cgi?pn_id=2008_0215)>

11 See EC Safer Internet plus Programme, at:

<[http://ec.europa.eu/information\\_society/activities/sip/index\\_en.htm](http://ec.europa.eu/information_society/activities/sip/index_en.htm)>

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# Myth, digitalism and technological convergence: hegemonic discourses and political economics

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### Abstract

*This article goes over the findings of an analysis of the structure, function and narrative of the dominant pro-digital discourse to date, that which takes technological change as an unequivocal and irreversible driving force of social change and offers a future full of promises of global progress. By means of this analysis, the conclusion drawn is that the profound "mythagogic" nature of this discourse, a character that actually and paradoxically impedes progress in constructing the society promised by its own narrative.*

### Key words

*Myth, digitalism, technological convergence.*

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### Resum

*En aquest article s'exposen els resultats de l'anàlisi de l'estructura, la funció i la narrativa del discurs digitalista dominant fins avui, aquell que pren el canvi tecnològic com a motor inequívoc i irreversible de canvi social i ofereix un futur ple de promeses de progrés global. A través d'aquesta anàlisi la conclusió que se'n desprèn és la del profund caràcter mitagògic d'aquest discurs, caràcter que impedeix, de fet, i paradoxalment, avançar en la construcció de la societat promesa per la seva pròpia narrativa.*

### Paraules clau

*Mite, digitalisme, convergència tecnològica*

## Myth, digitalism and technological convergences: hegemonic discourses and political economics

As described by Siegfried Jäger (2003), social discourses are a flow of knowledge, of all the knowledge accumulated in the history of a society, which changes constantly and influences the way the conditions of its members are formed and the structure of their organisations and institutions. Far from being homogeneous, social discourses are formed on the basis of texts that are woven together and become, at the same time, affluent narratives with increased social impact. Accordingly, their formation is the product of complex interactions between different subjects or groups of individuals in which some naturally retain more power in their production, broadcast or control than others.

The hegemonic discourse that has surrounded digital technologies up to now, as well as the discourse on their impacts, obeys this logic as well. This article goes over the findings of an analysis of the structure, function and narrative of the dominant pro-digital discourse to date, that which takes technological change as an unequivocal and irreversible driving force of social change and offers a future full of promises of global progress. By means of this analysis, the conclusion drawn is that the profound "mythagogic" nature of this discourse, a character that actually and paradoxically impedes progress in constructing the society promised by its own narrative. To justify this assertion, we shall consider the historical roots and

*topoi* or current propositions this discourse draw strength from, after the inevitable clarification of terminology,

## 1. On myth and the mythagogic

A discussion of the concept of myth encompasses a number of different perspectives that range from the aesthetic, poetic and philosophical, including the psychoanalytic, to the socio-logical-anthropological and ritualistic-co-religious, to name a few. One of the features these narratives have in common is that they can be qualified as mythological<sup>1</sup> in their *totalising* aspiration, i.e., the intention to provide and embrace an explanation for and solution to all areas of life. One good example is the hegemonic discourse on digital communication technologies (DCTs).

In a remarkable effort of synthesis, several classic authors in the field, such as Kirk (1985), contend that a mythological discourse is one that is public, has a typical, iterative structure, develops different functions, is useful in relation to its transmitters' and receivers' needs, power or status and has different social meanings. Another characteristic of myth, which may be a determinant, is its an-historic condition – wherein it eliminates linear time and the possible changes it involves (Paramio 1971) – or static condition, in the words of Lévi-Strauss, since it is "identical to itself" and constitutes a closed system in which a finite number of elements are combined in

different “opportunities for explanation” (Lévi-Strauss 1987).

In other words, “Myths do not, so to speak, get us anywhere. While there are myths about progress, myths do not themselves ‘progress’” (Harpur 2006: 133).

Hence, the function of mythological discourse is not to scientifically attest to reality - if this were indeed possible - even though many narratives that obey this logic consider what is presented as a certified tale of what society seems to be or what takes place in it. In this sense, Roland Barthes considers myth to be a remnant of reality, since it conceals nothing: “Its function is to deform, not to obliterate” (Barthes 2000: 213). According to the French semiologist, mythologisation proceeds to a naturalisation or objectification of reality whereby it is presented as a part of an action foreign to human intervention.

These attitudes can be described as *mythical* or *mythagogic* (Paramio 1971), since they forge a muddled relationship between a myth’s content and the contrasting versions of reality, as if we were facing the version of an observer who, despite looking through a keyhole, insists he is taking in the whole room, instead of just a part. Those with a *mythagogic attitude* insist on touting this deformation or partial remnant as a logical model for interpreting reality. This way of thinking or attitude admits no divergent interpretations that may call into question its approach to certain social processes or issues and that, moreover, stands as a totalising discourse in an ideology with a dominating, hegemonic vocation that hampers and hinders a complex contact with the reality it informs.

In Mesopotamian mythology, the world was born from an *Apsus* or “primordial waters”. In our opinion, the discourse on digital technologies and the splash they have made in areas such as journalism are just one among many tributaries in a hegemonic torrent of mythagogic discourse that also encompasses *digital democracy* or the e-economy, to cite other discursive sources that emanate from the same source. In addition to sharing the same narrative structure, the former also spring from the *Apsus* of *digital myth*, which is the favourite cosmogony for defining the Information Society.

## 2. The background

However, this mythagogic attitude toward the innovation or change digital technologies provide is not a coincidence, quite the contrary; a not-disinterested impulse can be detected behind it.

An analysis of the historical roots of the pro-digital narrative that has prevailed until now shows that it has been the product of discursive interaction and iteration primarily among four categories of stakeholders: academics, economists, politicians and the mass media (the last of which have economic and political dimensions as well).

The first stakeholders - scientific and cultural elites - soon reveal themselves to be “the ideologists of the Internet revolution and epigones of politicians and industrialists” (Wolton

2000: 51). Some of the authors who drive the most promethean narrative around DCTs in these circles are not even alive today, but have been reinvented by their disciples or followers, e.g., Pierre Teilhard de Chardin (1881-1955) and his *noosphere*, or virtual sphere of thought that he added to the geosphere and biosphere, which denotes the materialisation of the result of the fusion between information and energy. The fascination that this Jesuit priest, palaeontologist and philosopher’s work has aroused in the techno-utopians of the late twentieth century has led to the recent reissue of his original or commented works and his rebirth as a cyber-prophet (Teilhard and King 1999; Teilhard 2001, 2004; King, U. 1998; King, T. M. 2005; Fabel and St. John 2003; Savary 2007). In *Techgnosis. Myth, Magic, and Mysticism in the Age of Information* (1998), Eric Davis has attested to how Teilhard’s religious imagery continues to fuel most pro-digital utopias.

More recent, but also foreign to the digital explosion in the late twentieth century was Marshall McLuhan (1911-1980), whose relentless technological determinism (“The medium is the message”) would be used to update Teilhard’s ideas. McLuhan would very successfully mix Teilhard’s concepts with his own (e.g., the Gutenberg Galaxy and the global village) and use them to attempt to explain how technologies determine society, while systematically omitting any politico-economic dimension in his analysis. This would not prevent McLuhan from continuing to be the object of debate as a cyber-visionary or his books from being recommended at many universities (McLuhan 1964, 1969, 1967, 1998) through other contemporary authors, such as his disciple Derrick de Kerckhove (1995, 1997).

All in all, the most cumbersome work related to digital evangelism from the academic world corresponds to Nicholas Negroponte (1943-), the great apostle of the total rupture “with the world of atoms”. Co-founder of two major media mouthpieces for digital change - *Wired* magazine and the MediaLab at MIT - Negroponte would blend the classic promethean discourse with neo-liberal logic (and reap generous funds from it for his laboratory - probably the world’s most significant techno-utopia factory - something that cannot be overlooked). Negroponte’s an-historical, a-political and an-economic analysis highlights the impossibility of halting change, the inevitability of this change and the dispensability of the State and public policies in an environment managed by digital convergence. Rereading his best-seller *Being Digital* (1995) today requires as great a leap of faith as it did when it was published.

The second major evangelisers of the digital myth, who extracted a number of ideas from the above, are the corporate ideologues spearheaded by Toffler and Bill Gates and followed by a long list of bestselling authors supported by major private foundations, above all in the US. Whereas Alvin and Heidi Toffler (Toffler 1970, 1980) were the great creators of scenarios of expectation through which the general public would familiarise itself with techno-informational rhetoric (always an

annihilator of the nation-state in Toffler's case, which would be fêted by many of the conservative think-tanks that feed off his ideas (the World Futures Society, the Institute for the Future, the Hudson Institute, etc.), Bill Gates (1995, 1999) is responsible for the myth's utmost popularisation (understood as mass divulgation to a non-intellectual public). The simplification of the mythagogic pro-digital discourse by Microsoft's founder enabled it to permeate each and every corner of the planet. Gates' words contain nothing new: all the old stereotypes (rupture with the past, an-historical character, negation of external reality, inevitability of change) are reiterated to justifying market capitalism in the end. However, the clamour for a cyber-utopia in a neoliberal scenario has an especially ironic background here, considering the person proposing it: Gates is the planet's first multibillionaire thanks to a market monopoly (nothing less than 90% of all PCs in the world use his software) that today is still far from a scenario of perfect competition, of the "capitalism without friction" evangelised by Gates in his particular utopia.

To conclude, among all the evangelists of mythagogic digital discourses from the private sphere we must also mention the Progress and Freedom Foundation,<sup>2</sup> a think tank headquartered in Washington that openly proclaims as its mission the study of the "digital revolution" and its consequences on public policies, without dissimulating its goal of educating opinion-makers, leaders of public opinion and the public in general about the need to limit government, expand the market and guarantee individual sovereignty in the digital age now more than ever.

In the arena of politics, the mythagogic attitude has also been present in the wide-ranging series of reports and plans for the Information Society that have been launched since the early 1970s, although the triumph of what Mattelart calls "the mystique of the number" (Mattelart 2000, 2002) is one that particularly stands out. According to this author, the embryo of the notion of a society governed by information can be found in an irrational ennobling of the *figure*, of the *datum*, which would grow as of the Enlightenment. From thereon in, the consideration of reason as the font and foundation of authority would have – impossible not to highlight this – enormous positive consequences for humanity when embarking upon (but not yet reaching the end of) the road to snuffing out the tyranny of the few over the many and organising society on the basis of fairer and more solidarity-based criteria (which also still faces a long haul). Yet, perverse consequences would also emanate from this historical turning point, such as quantification used as the measure of all things. The birth of statistics in seventeenth-century Germany was a harbinger of this later absurdity. The *Staatskunde* or *Staatswissenschaft*, i.e., political science, would now equate datum with authority on the basis of its very name. From that time on, anything that was not a datum, i.e., measurable, would not be information, i.e., would not be relevant.

This obsession for quantification as a way of endowing

authority to what is being quantified has thoroughly impregnated all public policies since Fritz Machlup's attempts to measure the weight of information in countries' gross national product in the 1960s (Machlup 1962). The informational plans by practically all the world's major nations would be governed by this mythagogic vision: a totalising vision of the reach of digital phenomenon that we can only expect to obtain by its quantification in figures. From NASA's first request to Nixon (1970), the JACUDI Plan in Japan (1971) and the famous Porat (1977) or Nora-Minc reports (1978) to the narrative of the information highways in the 1990s by politicians in the US (spearheaded by Al Gore) and Jacques Delors' White Book (1994) or the Bangemann Reports (1995, 1997) in Europe and the subsequent national policies they would drive in European countries, the mantra is always the same. Determinism guarantees technology's ability to solve modern societies' political and economic problems; to a lesser or greater degree, utopia would incorporate mystical or salvific ingredients (e.g., the renaissance of the theological synergism between man and God advocated by Jonehi Masuda in Japan, 1980); information would be conceived as instrumental and restricted (information is eminently that which can emanate from computers and be transferred by telecommunications); the obsession to constitute a useful countable matrix for politicians would be ubiquitous (which would establish an economic-based view of the Internet in society that prioritises market goals before goals related to its protection as a means of social communication); and all of this in addition to the universal demand for the economic privatisation of the sectors involved as the only way to ensure the maximum development of DCT's potential.

Little need be added about the mass media, since they function essentially as a-critical repeaters of all promethean messages, no matter how farfetched. In this sense, we recall the outlandish comparison of Windows proffered by a Catalan newspaper when it at last worked: the newspaper asserted that it was the greatest invention in history, surpassing any other earlier technology. A more recent example of technological exaltation can be found in the analysis made by Internet fans of the US presidential elections of November 2008, when they went so far as to christen the new US president Obama 2.0. For disseminators of the cyber-promethean myth, the most characteristic feature of Obama's campaign was the history-making use made of new technologies, which – they contend – explain his widespread social support. However, they fail to notice that the use of the Internet was just another tool in a pre-existing movement of social support and that the candidate based his strategy primarily on a strong, active presence in the street and on traditional door-to-door campaigning by legions of collaborating supporters.

Certainly, historical references must be made to appraise this dominant narrative, but not with the amnesia that has been characterising the media and the overwhelming majority of contemporary intellectuals until today.

The most paradoxical aspect of the mythagoric discourse on DCTs is not precisely its disruptive character, as we are led to believe, but rather its enormous similarities to earlier mythagoric discourses. One need not delve very deeply to notice that recent and contemporary discourses are full of ideological propositions that not only are not new ideas, but have also been shared by all earlier techno-utopian narratives. Vincent Mosco has brilliantly summarised this contemporary historical amnesia, which fails to recall that before digitalism's exaltation, the world had already exalted the telegraph, electricity, the telephone, radio and television in a similar, if not identical manner (all the following quotations have been borrowed from Mosco 2004: 117-140).

On library shelves (and still in some bookshops) and Internet websites we can still find texts that speak of "the universal brotherhood of mankind", "the annihilation of space and time in the transmission of intelligence" or the overcoming of the social and economic divide and the social harmony and cohesion the telegraph would bring. Among many options, we will choose the words of only one journalist: thanks to the new telegraph lines being laid across the oceans, the telegraph would make "humanity's magnificent heart beat like a sun causing "wars to finish and a reign of peace to be established in the world".

Similar, if not more exaggerated claims were made about electricity, with the addition that the gradual illumination of city streets would endow them with a magical aura that would turn towns into spectacles of lights and shadows described in words that directly evoke the "hallucination" William Gibson entertained in his description of cyberspace in his mythical novel *Neuromancer* (1984).

Things went beyond that with the telephone. The advent of this technology was considered synonymous with the arrival of a new, unprecedented era. The information available to everyone in the same way would stimulate democracy, because "the telephone makes us all equal". Adverts for the first telephones portrayed them as harbingers of a new social order, a tool that could "save the nation".

Many, if not all, the promises made about the telegraph, electricity and telephone were made about radio. This new tool would allow citizens to get closer to the sources of power, improve the quality of political oratory, outpace the printed word as an educational resource and change lives, especially for the youngest generations, who were best positioned to understand the new technology. The president of General Electric and owner of RCA described it as "a means to achieve lasting peace all over the world", which Marconi affirmed, and many of the first radio commentators highlighted how politics would improve, since the authorities' speeches would be broadcast live.

The exaltation of television passed through two major stages - its birth and the appearance of cable television - yet in both cases, television transformed the education system and was touted as a revolutionary tool for educating the youngest stu-

dents. Cable, moreover, would be the first technology to deserve to be the object of the analogy of the "Information Highway". One of the most famous texts on the promises of the medium's future, *The Future of Television* (Dunlap 1942), was equally convinced that it was the tool that would manage to bring about the cherished desire to achieve long-lasting "peace and freedom for all".

Revolutionary democratic transformations, an irreversible and unstoppable rupture with the past and redemptive promises, i.e., morally liberating social justice. Peace in the world, social harmony and a humanity interconnected by global communication. The resolution of conflicts, inequalities, wars and ignorance. In short, a long list of repeatedly broken promises that have reached our times intact in what Mattelart describes as "the ideology of redemption through networks" (Mattelart 2000).

### 3. *Topoi* or current propositions

The mythagoric discourse concerning digital technologies and their impact on society therefore has a number of far-reaching historical roots and is a product of a narration with fractal growth fuelled by several recursive and iterative discourses with a similar structure that together form the global narrative on the Information Society or Age.

This is a chaotic order in which, as previously mentioned, stakeholders and epistemological perspectives converge from disperse social areas, yet with the sufficient material means to be capable of projecting their discourses in the public arena. Thus, we find public institutions that adopt these discourses as a programme for social development, economic institutions that offer a new production system, academic institutions devoted to digital bounties and the communicative revolutions sparked by DCTs, which includes courses on them in the study plans of new universities and finally, communication professionals who submissively accept them as a radical rupture in the ways they do their jobs. Diverse voices for one single discourse, one single structure and one message. A by no means new cacophony, as we have seen, that is also being reproduced in the heart of the different social areas in which it is propagated.

The academic world is a paradigmatic example. Most theoretical contributions by authors in mainland Spain are little more than variations in an uncritical spirit (López López, Orihuela, Parra and Álvarez, Merayo, to cite a few) - except for honourable exceptions (Díaz Noci and Salaverria, among others) - on landmark texts by their colleagues (e.g., Gillmor, Deuze, Landow, Nielsen, Oostendorp and Nimwegen,). At the same time, these contributions are characterised by constituting an ever-narrowing handful of authors who quote each other.

This narrative coincidence is even more evident when the discourse fragments into *topoi* or ideological propositions that the different contemporary narratives on the digital myth have in common.

**Table 1. Synthesis of the *topoi* or propositions on the digital myth**

- The conception of history as progress.
- The consideration of the current situation as the advent of a “new age”.
- Scientific and technical progress as the driver of social change.
- Hegemony of instrumental reason.
- Technologisation as an improvement in the quality of life.
- Belief in a rational society.
- Knowledge-based meritocracy.

Source: Almiron and Jarque, 2008

Each and every one of these proposals is shared by the pre-digital techno-utopias that surfaced during the course of the twentieth century. The digital myth only limits itself to updating or reviving propositions in which:

*a) History is progress*, the product of linear, cumulative advancement, of improvement of stages and civilising improvements in which its continuity, discontinuity or semi-discontinuity are omitted, that take us back to outmoded conjectures in theory or imply substantial ruptures. A depiction of our societies since the Enlightenment as systems oriented towards a future open to the infinite with progressive content. Thus, progress becomes an acceleration of the times of social development and a reduction of historical periods that are surpassed.

*b) Each new stage is described as the advent of a “new age”* of rupture or revolution: “We have gone from the Gutenberg galaxy to the Internet galaxy” (Castells 2001). A necessary rupture with the past to justify a theory of the ends, the death of politics and the ideologies or history that prevents any type of learning from the fonts of the past.

*c) Scientific and technical progress is a historical driver of change and the future.* Society advances when there is technological innovation, which permeates all social realms with political, social, economic and cultural improvements, etc.. A mechanically positive, a-critical reading of science and scientific-based discourse.

*d) The triumph of instrumental reason is accepted or celebrated*, for which digital scientific progress offers a better and greater domination of nature, with the consequent social improvements.

*e) A lifestyle in which technologisation prevails as a means of improving all spheres is adulated.* Optimum job conditions, in their habitat, or the implementation of intellectual skills, all areas in which technology is presented as a *sine qua non* condition. Furthermore, technology involves an unflinching change in training and knowledge priorities to

acquire social value, most with a more technical profile or command of the tools meant to stimulate social change.

*f) The belief in a rational society is widespread* when the media incorporates the possibility of disseminating and sharing collective knowledge. Democratic depth is reduced to the fiction of a mythified, social sphere in which each person can express and break with the monopoly of institutional mediators. In itself and without further material supports, the exchange of knowledge is viewed as a regulator of life in society that improves the living conditions of individuals by making them freer and more critical, among other questions.

*g) A system of social promotion based on a meritocracy regulated by knowledge is assumed.* A salary hierarchy based on intellectual skills is defended and rising social status is linked to the degree of training. The mythagoric prodigital discourse exalts knowledge and information as the linchpins for articulating new societies and their social, political and economic relationships.

Because of their multiple contradictions, all these propositions are precariously supported by the political economics of a digital myth, whose narrative is not only profoundly fundamentalist as regards technology, but also very conservative in its political, social and economic aspects.

#### 4. Conclusions

The above-mentioned propositions are unfulfilled promises, in the same way that systematically occurred with the proposals presented in earlier periods by successive revolutions in communications.

Furthermore, they all move along a broad spectrum that spans ideological postures that encompass a naïve or superficial analysis of contemporary reality and social history to propagandistic seekers of new markets. They are easily formulated lemmas or watchwords, yet dubious anchors to reality that function because they are simple explanations in which above all, any reference to the material conditions individuals suffer or discussions on how power is distributed in our societies is negated.

One paradigmatic example is the enthusiastic welcome given to concepts so empty of content such as the “digital crack” or “technological literacy” by political parties, which has led to considering universal access to the Internet a priority, or in DCTs as an element of social justice that nevertheless shuns any criticism of the education system, its faults or its underfunding.

True advancement is thus impossible as long as the past and potential alternative futures are only conceived as uninteresting spectres. If the promises of the future do not imbibe from the

man of memory and rigorous observation of the present, today, like yesterday, they will be little more than fables that serve concrete interests. The analysis of the discourses, function and political economics of the myth not only sheds considerable light on these interests, but also on the need to defeat and demythologise them.

## Notes

- 1 Mythological: belonging to mythology or myth.
- 2 <<http://www.pff.org>>
- 3 The quotes in the text are from the first versions of the works in order to comply with the objective of properly situating the evolution of discourses in time; in cases where a translation is available, it is indicated in brackets.

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# The emergence of new imagery in quality television fiction<sup>1</sup>

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## Abstract

*An analysis of successful US series, both in terms of audience and critics, such as The West Wing (NBC 1999-2006), Lost (ABC 2004- ), Desperate Housewives (ABC 2004- ), House, M.D. (Fox 2004- ) and CSI: Crime Scene Investigation (CBS 2000- ) allows us to state that the traditional themes and myths survive in TV fiction, irrespective of the conditioning factors for production in the audiovisual industry, sharing space with a new self-referential TV imaginary. The recurrence of themes and myths belongs to the area of the signified (content plane) and meta-television references reside in the area of the signifier (expression plane), with the corresponding consequences with regard to creativity and the originality of the products. Inter-textuality obeys the pleasure of recognition, as the new TV imaginary arises and adapts itself to the audiences' new interests. The meta-television references can be structured along the lines of a TV grid, depending on their intention to devour and unite the rest of the TV programming. The meta-television nature is considered to be a characteristic of the medium's degree of maturity, as well as self-reference and hypervisibility.*

## Key words

*Intertextuality, thematic recurrence, mythical recurrence, metatelevision reference, US quality television series.*

## Resum

*L'anàlisi de sèries nord-americanes d'èxit de públic i de crítica com El ala oeste de la Casa Blanca (The West Wing, NBC 1999-2006), Perdidos (Lost, ABC 2004-), Mujeres desesperadas (Desperate Housewives, ABC 2004-), House (House, M.D., Fox 2004-) i CSI: Las Vegas (CSI: Crime Scene Investigation, CBS 2000-) ens permet afirmar que els temes i els mites tradicionals perviuen en la ficció televisiva, independentment dels condicionants productius de la indústria audiovisual, compartint espai amb un nou imaginari televisiu autoreferencial. La recurrència temàtica i mítica pertany a l'àmbit del signficat (pla del contingut) i les referències metatelevisives es troben en l'àmbit del signficant (pla de l'expressió), amb les corresponents conseqüències quant a la creativitat i l'originalitat dels productes. La intertextualitat obeeix al plaer del reconeixement, ja que el nou imaginari televisiu sorgeix adaptant-se als nous interessos de l'audiència. Les referències metatelevisives es poden estructurar en funció d'una graella televisiva, d'acord amb la seva intencionalitat fagocitadora i aglutinadora de la resta de programació televisiva. El caràcter metatelevisiu es considera una característica pròpia del grau de maduresa del mitjà, així com l'autoreferencialitat i la hipervisibilitat.*

## Paraules clau

*Intertextualitat, recurrència temàtica i mítica, referències metatelevisives, sèries televisives estatunidenques de qualitat.*

## Introduction: corpus of analysis

This article examines the emergence and existence of new imagery in quality American television fiction, which today co-exists with myths and traditional themes. The emergence of new imagery<sup>2</sup> can be seen by analysing a number of quality American television series representative of the drama genre: *The West Wing*, (NBC 1999-2006), *CSI: Las Vegas* (*CSI: Crime Scene Investigation*, CBS 2000-), *Lost*, (ABC 2004-), *Desperate Housewives*, (ABC 2004-) and *House, M.D.*, (Fox 2004-). Each of these series is paradigmatic of a concrete sub-genre - political, detective, adventure and science fiction, soap operas and hospital dramas, respectively - and all are expo-

nents of the revival of quality television, known as the golden age of drama (Longworth 2000-2002). The terms "quality TV" (Jancovich and Lyons 2003 and Feuer, Kerr and Vahimagi 1984) and "must-see TV" (Jancovich and Lyons 2003) refer to a type of television that has retrieved quality as an emblem<sup>3</sup> in the oscillation between the totally interchangeable fiction and reality genres (Vilches 2004: 6). These programmes are outside the "flow" of television (Williams 1974) and have become must-see TV, thanks to their style or audience response. We consider these terms more appropriate than the term "cult series" (Tous 2006), since the series in question do not belong to a restricted audience, as is true of cult products, but are rather commercial mainstream hits (see Gwenllian-

Jones and Pearson 2004). As audiovisual products, US fiction television series are conditioned by productive logic, thematic recurrence and genericity.

### 1. Productive logic

The conception of thematic synergies is based on the logic of the audiovisual market to boost profits by extracting them from ideas and products. American television's hypertextuality<sup>4</sup> is joined by Western culture's intertextual character, which is fostered by production conditions. Television production in America has been characterised by internal hypertextuality from the start. Terms typically used by the industry to refer to repetition devices are spin-off, franchise, thematisation, cloning, copy-cat and fanfic (fan fiction). Epigones, hypertextual continuation and commercial diegetic expansion also belong to this realm.<sup>5</sup> The various repetition devices originate in a desire to profit from a successful idea. Paradigmatic examples of repetition devices are the cloned franchises spun-off from a matrix series (*CSI: Las Vegas*, *CSI: Miami* and *CSI: New York*),<sup>6</sup> as well as the epigones rooted in a certain product, such as *Invasion* (ABC: 2005-) and *Threshold* (CBS: 2005-) which are take-offs of *Lost*.

### 2. Genericity

New genres that are created usually reference the theoretical underpinnings of their corresponding genealogies and genre hybridisation reinforces genre brands to facilitate viewer recognition. A genre's function and recurrence to meta-television is thus consolidated, since this allows the maximum diversification of information in a uniformity of formulas (Wolf 1984: 194). We differentiate between optional and obligatory genre recurrence (Ryan 1979) and thematic recurrence *per se*, i.e., themes that reappear regardless of genre. Just as the medium of television encourages viewers' recognition of genres, competition among genres (generic visual experience)<sup>7</sup> conditions viewership.

### 3. Thematic recurrence (culture)

Nowadays, recurrence and reference may occur because of the impossibility of escaping the above, given the saturation of themes and characters in fiction (Barthes 1968, Genette 1982 and Kristeva 1966 and 1996). Thematic recurrence is characterised by the maintenance of a mythical strain that has survived in the cultural tradition and is present in the American television series we have analysed.

Thematic synergies impoverish the cultural atmosphere, which is still fuelled by the traditional myths and themes underlying cultural productions (Tomasevskij 1982), although they are on the wane as television's maturity as a medium and its consequent self-reference wax. Recurrent ingredients are those that remain in a textual production although they are not valid in relation to the genre. The selection of themes from a limited repertoire is constitutive of the narrative.

Thematic recurrence is characterised by the repetition of a

motif (we observed the reiteration of the recurrence in the series we analysed), which is not limited to the hypertext-hypotext (Genette 1982) relationship, but ranges beyond it; thus, the literary motif's genealogy can be traced and the anthropological reasons for its survival and presence in cultural production can be studied. Mythic recurrence contains the myth's communication.

The articulation of novelty and change is produced by the audience's and creators' desire to present familiar themes in contemporary television series as if they were new. The stratification and hybridisation of the texts guarantee the presence of the dichotomies of *continuity* and *change*, *stability* and *novelty* (Duch 1995), especially in a serial product. Permanence allows viewers to know what they can expect; change and novelty ensure a renewed interest in the product. Thematic recurrence can be broken down into literary, biblical and religious, scholarly and thematic and mythical recurrence.<sup>8</sup>

## 2. Thematic recurrence versus meta-television references

The analysis of themes in these five television series requires a differentiation between thematic recurrence and meta-television references. As we have said on other occasions (Tous 2004), thematic recurrence consists in the reiteration of themes in cultural productions, the constant reappearance of a series of ingredients of literary origin - or literary coincidence with a common mythic origin. Thematic recurrence is a function of the mythic relationship among several ingredients of a motif or theme that lasts over time without any relationship to the regularities of genre inherent in the motif or theme in question. Recurrence originates in repetition, which is a *sine qua non* condition, yet it does not suffice. What differentiates thematic recurrence from meta-television references is the repetition's meaning. References are mere repetition for descriptive, parodistic or clichéd, stereotypical purposes. These references' sole function is to parody or use socially shared referents for a broader audience; they have no other communicative function. The meta-television references in the series we analysed have been divided into categories according to television programming that include intra-episodic references to the same series and references to other series, game shows, music, advertising, news, films or comics and cartoons.<sup>9</sup> The number of references to one of these typologies, in addition to other references (historical and political in *The West Wing*, sports, video games and the Internet in *House*), characterises series and are profiled according to audience, seeking the pleasure of recognition.

As for the term "meta-television", the available nomenclature differentiates among three major television ages from the medium's advent to when the series in this study began to air: paleotelevision, neotelevision (Eco 1983 and Casetti and Odin 1990) and meta-television (Olson 1987, 1990 and Carlón 2006) or post-television (Missika 2006<sup>10</sup> and Imbert 2007 and 2008).<sup>11</sup>

**Table 1. The typology and function of hypertextual relationships**

|                         |                                   |                                  |                |                     |
|-------------------------|-----------------------------------|----------------------------------|----------------|---------------------|
| Function                | Satirical, ironic, parodistic     | Serious, not satirical, pastiche | Descriptive    |                     |
|                         |                                   |                                  | Metaphorical   |                     |
|                         |                                   |                                  | Referentiality | Meta-televisual     |
|                         |                                   |                                  |                | Thematic recurrence |
| Degree of signification | Significant (plane of expression) | Significant (plane of content)   |                |                     |
| Relationship            | Transformation                    | Imitation                        |                |                     |

Source: The author

### The typology and function of hypertextual relationships

We propose a *typology* and *function* of *hypertextual* relationships, followed by a *morphological typology* below, all of which stem from an analysis of references in the five television series.

The classification table of hypertextual relationships above is based on Genette (1982: 38). A text's descriptive, metaphorical or referential function stem from its hypertextual relationships. Quantitatively, the references as a whole belong to the signifier (plane of expression), because of their lack of meaning. Their function can be parodistic, self-referential or character building and belongs to meaning (plane of contents) in cases of thematic recurrence.

Another case of parody is Sawyer's customary use of reference when he addresses the other survivors on the island: he calls Jack "Doc" as of the pilot episode ("Whatever you say, Doc, You're the hero") and Walt is called "Tattoo", the name of a character in *Fantasy Island* (ABC 1978-1984), who was a sort of assistant to the protagonist.<sup>12</sup> The classification of self-referential references by television programming has already been mentioned: the meta-televisual references in the five series, which belong to the signifier, coincide in a common area and are conditioned by and condition collective imagery.

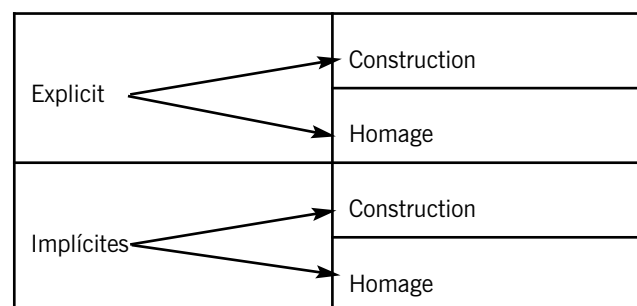
As for character construction, we highlight the cases of *House* (for the explicit references that reinforce those implicit in Sherlock Holmes, the hypotext upon which House's character is configured), Grissom in *CSI* and Bartlet in *The West Wing* (scholarly references by characters characterised by the conjunction of leadership and knowledge).

The different hypertextual references have a completely heterogeneous morphology that can be classified as follows: as a homage – the occasional quotation or allusion – or for construction (imitation of its hypotext). The references may be explicit or implicit.

The occasional quotation or allusion can be found, e.g., in the reference to *Basic Instinct* that evokes the famous scene

### Morphological typology

#### References



in which Sharon Stone is forbidden to smoke. The suspect explicitly mentions the film and the actress.<sup>13</sup> Also in *CSI*, in the recurrent case of the prostitute and the redeemer, Nick comments: "This ain't *Pretty Woman*."<sup>14</sup> The constructive quotation takes place in a scene, dialogue or reference that imitates its hypotext (Genette 1982), e.g., the luxury of a mansion that conceals vices or criminal behaviour.<sup>15</sup> The references may be explicit, such as Bras' reference to the series *Cops*<sup>16</sup> or Nick's above-mentioned reference to *Pretty Woman*. Or they may be implicit, such as the unspecified homage to Medea, which is nevertheless ascertained by the reiteration of parricide by mothers in watery environments. The citation can be verbal ("I could cause a scene like in *Silence of the Lambs*"),<sup>17</sup> visual (the recreation of the scene in *Ghost*<sup>18</sup> or *The Portrait of Dorian Gray*)<sup>19</sup> or scenic, which mixes verbal and visual citations.

### 4. Cases of thematic recurrence in the series analysed

The five series we analysed allow us to affirm that contemporary American audiovisual narrative is still laced with thematic recurrence and that, at the same time, the repetition of inter-

textual references in television is especially important in the area of meta-televisual and self-referential references.

Regardless of the source of thematic recurrence, the themes are subordinate to the constellations with which Durand organises the human imagination (Durand 1960). Recurrent thematic figurations are reiterated (and updated) from a synchronic point of view, thanks to the mythic ingredient that shapes some of the themes, in sync with the use of thematic recurrence in audiovisual narrative.

The permanence of several thematic recurrences that coincide in different kinds of series and subgenres allows us to continue to cite the existence of thematic recurrence. In more than one of the series we have analysed, we noted the thematic recurrence of the father figure - the search for a father (*The West Wing* and *House*), the sacrificial princess (*Lost* and *CSI*), the prostitute and the redeemer (*The West Wing* and *CSI*), the doppelganger (*Lost* and *Desperate Housewives*) and the pairing of antithetical characters for comic purposes (*Desperate Housewives* and *The West Wing*). Audiovisual products were analysed in relation to their genre or genres (diachronic perspective) for a subsequent updating of themes and myths (synchronic perspective). The methodology used for the synchronic analysis of myths and themes was based on the diachronic comparativism of Ginzburg (1989), Dumézil (1973), Nagy (2006) and Lévi-Strauss (1969) and Propp (1940).

The search for the father is a literary theme that has been articulated in the US hospital genre since the father-son relationship of Dr. Right (Dr. Kildare [NBC 1961-1966] and Marcus Welby, M.D. [ABC 1969-1976]) until today's conflictive relationship in *House* and *Lost*. In *House*'s case, the relationships between Chase and House and their respective fathers becomes a subversion of genre as well as theme.<sup>20</sup> Chase is conflicted about his father because of his abandonment of the family ("Cursed", 1.13) and neither is his father-son relationship normal. This conflict is a frequent occurrence in the hospital series of the 1990s and first decade of this century, the "new hospital dramas", in Jacobs' words (2003): Grey in *Grey's Anatomy* (ABC 2005-) and Doug Ross in *ER* (NBC 1994-). Respect for the father figure is associated with the hierarchical relationship and transmission of knowledge of the TV series of the 1950s and 1960s. The sceptical society of the late twentieth and early twenty-first centuries is portrayed as not lacking in paternal referents, but rather in conflict with them. The search for the father, one of the recurrent themes in the history of literature, is introduced into medical drama in its negative and conflicted version.<sup>21</sup>

The father figure is also primordial in *The West Wing* but, in this case, it is because President Bartlet's paternalism coincides with the recovery of national pride the series incites. The American political genre had an initial cinematographic phase of praising the president (Lincoln in *The Birth of a Nation*, D. W. Griffith 1915), followed by connivance between presidents and television, in no way incompatible with political satire. The president's image also suffered in the convulsive 1970s from

the social point of view and as regards repercussions in the media (*All the President's Men*, Alan Pakula 1976) (Crawley 2006). *The West Wing* revives the early presidents' good image, without obviating their facet as men of action, exacerbated in the late 1990s (*Air Force One*, Wolfgang Petersen 1997) or the link between personal life and respect for the institution (*The President and Miss Wade*, *The American President*, Rob Reiner 1995, whose screenplay was written by Aaron Sorkin). Bartlet is a Nobel Prize Winner in Economics, the most scholarly character in *The West Wing*; in short, his character is constructed from paternalism, morality and intellectuality.

In *Lost*, Claire acts as a sacrificial princess and Ethan Rom as a threatening animal. Rom threatens to keep killing off the characters one by one (sustaining the invariant element of tales in which dragons used to carry off one maiden every night) if they do not give Claire back to him to act as bait for trapping the other characters ("Homecoming", 1.15). Agent Sara Sidle in *CSI* offers to act as bait for a dangerous serial killer ("The Strip Strangler", 1.23). There are four basic ingredients in this motif: a kidnapping, a woman, a killer and a hero. The motif is made up of the actors' functions and Greimas' model canonical narrative schema (Greimas 1976, 1979). The reason for the reiteration of the sacrificial princess motif is thus three-sided, made up of the sacrificial and sacrificed woman, rapacious snake (Propp 1987: 318-319) and the hero who saves the town.

Another thematic recurrence in the series we are analysing is the close relationship between a male protagonist and a prostitute, present in the characters of Nick and Kristy in *CSI* ("I-15 Murders", 1.11; "Boom", 1.13) as well as Sam and Laurie in *The West Wing*. The consequences are identical in the two series: the protagonist's repentance, discontent with hierarchical superiors and the perverse utilisation of antagonists. The motif is two-sided: the dangerous woman and the redemptive man. A male character with positive value attributes forges a friendship and maintains sexual relations with a prostitute. This references the man who sins, yet distances himself from the woman (the femme fatale) in order to redeem himself. Nick, the motif's protagonist in *CSI*, makes an explicit allusion to the film, "This ain't *Pretty Woman*" ("Boom", 1.13), which characterises self-referential quotations. As a biblical motif, it refers to Jesus and Maria Magdalena. The two cases of recurrence observed in these series demonstrate the validity of the traditional opposition of the saintly, angelical woman and the prostitute, the perfidious vampire. A redemptive saving role or resistance to temptation is reserved for the man. Gubern refers to it as a "cultural masculinist archetype" (Gubern 2002: 61).

The figure of the double or doppelganger was articulated during *Desperate Housewives*' first season: the explicitly dual characters are Dana/Zach, Mary Alice/Angela, Maisy/Deirdre. This duality correlates with the concealment of identity, while is linked to the mystery of the first season's main plot. The characters' duplicity fans the intrigue before their identities are

revealed.<sup>22</sup> In *Lost*, the series combines inner and external alterity or 'otherness'. The genre of adventure in an unknown land is an artistic or communicative depiction of the discovery of oneself and thus, of this duality and is materialised in the children in *Lord of the Flies* (William Golding 1954) who turn into savages and the encounter of the characters in *Lost* with their most profound Ids (basically thanks to analepses), to provide two examples. The term *doppelgänger* is used to describe this theme, which is especially popular in fantasy and science fiction and virtually synonymous with inner alterity.

The paring of antithetical characters for comic relief can be found in *The West Wing* and *Desperate Housewives*. To a large extent, the comic elements in the latter stem from the character of Susan (Teri Hatcher) and her relationship with Edie (Nicolette Sheridan). The relationship not only is based on Susan's nature as a feminine clown, but is similar to the couples whose humour originated in their antagonism (Stan Laurel and Oliver Hardy, Quixote and Sancho Panza, Lord John Marbury and Leo in *The West Wing* ("Lord John Marbury", 1.11.)). The combination of two antagonistic characters linked by a friendship or rivalry is a frequently used device in cultural productions. In most cases, one of the two is more intelligent than the other, an imbalance that gives rise to comic situations.

An analysis of the series' themes and genres ratifies Navarro's dominant hypothesis (1914), Jauss' horizon of expectations (1977) and the genre's relevance as a social institution (Newcomb 1974 and Neale 1980). Thus, series such as *CSI* and *Lost* reference the myth of Prometheus (progress), in *CSI*'s case with extremely conservative nuances, while *Lost* adds the supernatural theme to it; *Desperate Housewives* is articulated on the basis of "Bovary-ism" and ambiguity, because of the *doppelgänger* and the idyllic gardens that conceal vice and criminal behaviour (typical of Lynch's films); *House* contains the figure of the mad genius and the search for the father and *The West Wing* contains the same father figure, yet in a reverential manner that constitutes the series' focal point: the recovery of national pride.

## 5. The characteristics of series in the meta-television age

Our analysis allows us to affirm the existence of several characteristics common to all the series in the corpus:

- They are subject to editing
- They acquire maturity
- They condition collective imagery
- They are fragmentary
- They are agglutinating and phagocytic
- They are lax and mythical

The establishment of television invariants is a symptom of the medium's maturity and the machinery's hypervisibility: the medium's maturity is the source of both the use of meta-tele-

vision references as well as their specification. Self-referentiality consists in adhering to a common area easily recognised by viewers, with no meaning other than mere transmission. Intertextual meta-television recurrences do not have the meaning typical of thematic and mythical recurrences; instead they take on new, eminently socio-cultural, widely understood meanings. Villanueva notes that the existence of literary invariants requires a literary theory (Villanueva 1994), in the same way that television invariants require a television theory, since they are the drivers of copying and reproduction on television and fulfil the same function as literary invariants.

Television programming tends to elasticity and dynamism, conditioned by the uniformity of certain programmes. As is true of non-fiction, the unique spaces contain diverse ones and the diverse ones are increasingly similar (Deleuze 1968; Calabrese 1989). Television programming's apparently thematic standardisation contains a certain multiplicity: the focus on a single theme from a multitude of perspectives. This two-fold process is the source of the container programmes (*Celebrity Big Brother*), paradigmatic of meta-television, which are characterised by their attempts to condense television's flow. The structural mechanism of repetition inherent in television programming comes together in a series of typically meta-televisual products that, obeying this two-fold process, contain, although in fragments, several programmes in the line-up and fill them with a series of identical products, which reinforces televisual self-referentiality. In an inversion of the process, the series analysed in this corpus attempt to contain the entire line-up.

At a time in which television is more self-referential than ever, creators are relying on television invariants as referents and endowing them with the same or even greater importance than traditional referents (literary, classical, biblical). The origin of thematic recurrences changes realm because they must fulfil their purpose: being recognisable to the audience.

Recurrence activates the pleasure of recognition in viewers, which is also its justification: the universes of recurrence and referentiality actively seek an easily identifiable, common social universe for their receptors. This explains the recent and gradual emergence of meta-televisual and audiovisual recurrence that has not yet replaced traditional literary, biblical, scholarly, thematic and mythical references and will probably never completely do so; instead, we should speak of mutations. Thematic and mythic recurrences are among the first to be established in the area of Information and Communication Technologies (ICTs); thus, their survival is ensured.

One pillar of recurrence is the pleasure of recognition. Creators must be sure that audiences recognise the referents they use. The type of target reader (Eco 1986) can be inferred by the type of thematic references that shape a series. In *House*'s case, references to the Internet, video games, cartoons, comics and sports refer to a juvenile or teenage, almost geeky audience. That is why references evolve and vary over time, because one of their goals is to spark the pleasure of

recognition in accordance with narrative's consolatory purpose (Eco; Calabrese 1987: 53).

Thematic recurrence belongs to the plane of contents (meaning, concept, *mythos*) despite the inevitable stratification, since the updating of myths is a constant in the cultural tradition; the survival of form, to paraphrase Ginzburg, amounts to substantial evidence of meaning (Ginzburg 1989: 54). This process is equivalent to the perpetuation of myth through ritual (Dumézil 1970). Quantitatively, references, especially meta-television ones, belong to the signifier (plane of expression) because of their lack of signification.

Overall, the series of references make up, in Ryan's words (2005), a new space that is conditioned by the type of audience and conditions it, with undeniable consequences for collective imagery.

Both digital thematic specialisation as well as the multiplication and fragmentation of a theme that invades the television line-up should be related to television's current status as elements inherent to the meta-television that characterises television programming. The analysed series are fragmentary and stratified in terms of themes and references. Hybridisation and stratification through themes and formulas have been proven to work; they are one of the current systems of ideation. Television narration has become a repertoire of themes, myths and motifs fashioned on the basis of fragments, by strata.

In an age of audience fragmentation, the recurrent use of themes and myths is driven by the need to connect with a wide-ranging, heterogeneous public. The increasing number of American meta-televisual references that complement the growing use of recurrence is taking place in step with the rising Americanisation of the cable age. Myths and recurrent themes survive in ICTs.

Texts are constructed on the basis of fragments in a stratification not only of cultural standards, genres and themes, but also of very diverse reference sources. Intergenericity and interdiscursivity live side by side with self-referentiality in the audiovisual texts analysed.

Television has a final, culminating, agglutinating role in the transactions, flows and interrelations of the cultural atmosphere (Wallace 1990). The American TV series analysed borrow from fiction and non-fiction. *Lost*'s decision to opt for a handful of modern Swiss Family Robinsons is due to a certain socioeconomic, historical-cultural context that explains the weight of reason as the driver of change typical of myth, an exaltation of our technophile times in accordance with the dominant hypothesis of its own period. The bundles of themes and relationships established among them – mythemes – make up the text and its intertextual relationships (Lévi-Strauss 1969), yet not as ingredients of a concrete myth, but rather as ingredients of a televisual and thus, mythic narration (Silverstone 1981: 112).

The audience decodes the themes and myths in their complex, stratified organisation. Observing the ingredients and figurations present in a number of cultural products allows us to

note a series of similarities that can be classified into thematic, archetypal or mythic recurrences. Some of these recurrences – the three types encompassed in *thematic recurrence* terminology, since we are addressing the reappearance of narrative themes – lead us to the *mythos*, the generative matrix of concrete texts, abstract for each myth and not universalist (Duch 1995: 173). Hence, we observe the presence of myth as a way of understanding human beings in their social cohesion-seeking and legitimating function (see Tous 2004: 41).

Propp (1940) claimed that myths are not reliable reproductions of rites, but rather narrations that outlive their backgrounds. We believe that an understanding of recurrence – the reason why literary or cultural motifs continue to be present in the cultural tradition – will come from its origin as rite, myth and ritual (Dumézil 1970).

## Notes

- 1 This article is based on the author's doctoral thesis entitled *El text audiovisual: anàlisi des d'una perspectiva mediològica* (Tous 2008), an analysis of the first season of the five American series mentioned.
- 2 Olson (1987, 1990) coined the term *meta-television*, which referred to the first cases of meta-television references in the 1980s.
- 3 *Today's golden age of drama* (Longworth 2000-2002) has two golden ages as precedents: the first is characterised by anthological series (1948-1956) and the second takes place in the 1980s and 90s, with series such as *Hill Street Blues* (NBC 1981-1987) and *ER* (NBC 1994-).
- 4 Understood as Gérard Genette's defined it in his book *Palimpsestes* (1982). See below.
- 5 We propose this term to refer to products customarily associated with the merchandising generated from a television series and advertised through the programme's official website, within an oligarchic market.
- 6 The project for a fourth spin-off, *CSI: London*, which was to star Clive Owen, was stillborn.
- 7 We interpret genre competition or visual genre experience as the fact that television viewers' newly acquired sophistication contributes to genre hybridisation processes, because of thematic saturation in earlier periods.
- 8 As examples of literary intertextual recurrence, *Lost* contains a host of references to *The Lord of the Flies*, *Moby Dick*, *Divine Comedy*, *Heart of Darkness*, *Robinson Crusoe* and *The Mysterious Island* etc.. The series also contains abundant religious and biblical references, such as: "And the meek shall inherit the Earth", New Testament, Matthew, Chap. 5, Verse 5. Sermon on the Mount, Beatitudes ("The Moth", 1.7). As an example of scholarly recurrence, the Latin quoted by Bartlet in *The West Wing*: ("He shall, from time to time", 1.12). An example of thematic recurrence is the use of the *doppelgänger* in *Desperate Housewives* (see the development of this point in the article).

- 9 A few illustrative examples of intra-episodic reference can be found in *CSI* in "Crate'n Burial" (1.3.) and "Grave danger" (5.23 and 5.24), which share the motif of a person buried alive who is freed by the team of forensic scientists; in *Lost*, in reference to another series, Hurley calls the policeman who takes Kate into custody shortly before he dies "Johnny Fever" from *WKRP Radio Cincinnati* (CBS 1978-1982) ("Tabula rasa", 1.3); again in *CSI*, reference to game shows: the homicide investigator, referring to how placidly the three brothers died: "You're watching *Wheel of Fortune* and..." ("\$35K O.B.O.", 1.18). One example of a musical reference in *The West Wing* is when Josh can't get Schubert's Ave Maria out of his head; he listens to it with CJ ("The Crackpots and These Women", 1.5.); in *CSI*, an example of a reference to advertising is when Catherine, not finding proof because of a serial killer's extreme pulchritude, refers to him as "Mr. Clean" ("The Strip Strangler", 1.23); an example of informative references in *House* are the allusions to the Axis of Evil: "House: But unless I've been named as the fourth part of the Axis of Evil..." ("Mob rules", 1.15). An example of cinema reference in *Desperate Housewives* are Bree and Rex's family dinners, very similar to those in *American Beauty*, dinners "with elevator music", as Jane says to Caroline, her mother, in *American Beauty* (pilot, "Impossible", 1.15). In *House*, an example of a reference to a cartoon and a comic is when House says to Foreman: "Look at your house and take Scooby with you" ("The Honeymoon", 1.22).
- 10 According to Missika (2006), institutional information is constituted by paleotelevision, "info-shows", neotelevision and fusion, post-television.
- 11 IMBERT, G., *El transformismo televisivo. Postelevisión e imaginarios sociales*. Madrid: Cátedra, 2008.
- 12 All the Best Cowboys Have Daddy Issues", 1.11.
- 13 "Blood Drop", 1.7. They exemplify the morphological typology with cases observed in *CSI: Las Vegas*.
- 14 "Boom", 1.13.
- 15 "Running to Stand Still", 1.6, and "Come Back to Me", 1.10, *Desperate Housewives*; "Change of Partners", *CSI*.
- 16 "Unfriendly Skies", 1.9.
- 17 "Evaluation Day", 1.22.
- 18 "Who Are You?", 1.6.
- 19 "Justice is Served", 1.21.
- 20 Contemporary audiovisual narrative, especially in the US, is characterised by genre hybridisation, subversion and crisis.
- 21 Cf. Steiner 1974.
- 22 Deirdre is the perfect partner for Mike and at the same time a drug addict who sells her own son and admits sexually blackmailing a policeman. Maisy Gibbons is an authoritarian mother at the strict school Bardcliff and Wisteria Lane's prostitute. In Maisy's case, the duality references the course and mystery of her double life. The reverse is true in Martha/Felicia's case: there are two identical people who develop different functions. They are so alike that they can be confused, like Les Sòsies and Menaechmi, the two characters in Plautus' comedies who were the source of the French words *sosie* and *ménechme*

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# Television fiction on TV3 and Catalan cultural identity: case study of the situation comedy *Plats bruts*

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## Abstract

*Most research on television has focused on compartmented descriptions of the medium. So we learn about production routines, the channels' business structures, programming design, the results of qualitative and quantitative discourse analyses, and even find a few studies on television consumption. This division of studies into subjects, possibly due to the complexity of the television environment, means that we have few visions of the medium as a whole. In other words, it is hard to find results in the same study that take into account the diverse processes in which television is involved. Conversely, while scientific-academic production has described the engineering and recorded the techniques and processes of the media's different structures, little intelligible light has been shed on reception related to the production field and to culture. This is the starting point of the doctoral thesis produced by the author of this article, which presents some of its results.*

## Key words

*Cultural identity, fiction TV series, TV3, reception*

## Resum

*La majoria de les recerques que s'han dut a terme sobre l'àmbit televisiu s'han dedicat a fer descripcions parcel·lades del mitjà. D'aquesta manera coneixem les rutines productives, l'estructura empresarial de les cadenes, el disseny de la programació, els resultats d'anàlisis qualitatives i quantitatives dels discursos i, en menor grau, trobem estudis sobre el consum televisiu. Aquesta divisió temàtica dels estudis, possiblement deguda a la complexitat de l'entorn televisiu, fa que comptem amb poques visions de conjunt sobre aquest mitjà. És a dir, és difícil obtenir, d'un mateix estudi, resultats que tinguin en compte els diversos processos en els quals intervé la televisió. D'altra banda, la producció científicoacadèmica s'ha encarregat de descriure l'enginyeria i registrar les tècniques i els processos de les diverses estructures dels mitjans, però les pistes cap a un coneixement de la recepció relacionada amb el camp de la producció i amb la cultura encara són poc intel·ligibles. Tot això constitueix el punt de partida de la tesi doctoral que ha dut a terme l'autora d'aquest article, que ens presenta una part dels seus resultats.*

## Paraules clau

*Identitat cultural, sèries de ficció, TV3, recepció*

## Objectives and methodology

Our research is a work of introspection on the television industry which starts by observing a macro-genre. The key areas of our analysis are the creation process, the audiovisual text and the reception of fiction. We set out to study the fiction produced by TV3, a channel belonging to the public broadcaster Televisió de Catalunya (TVC), and we focus on one series, a situation comedy. We chose the autonomous Catalan channel due to proximity with the context. The subject of the study is the situation comedy *Plats bruts* (Dirty Dishes), broadcast by TV3. We analyse the episodes "Tinc nació" (I have a nation) and "Tinc espelma" (I have a candle). We chose a situation comedy because production of this format is relatively recent in Spain and Catalonia compared with the American and British markets, so its audience is also new. In this regard, there is also something of a vacuum in analysis of the genre. Our interests lie in finding out how fiction is constructed as

narration, if there are cultural identity referents, and what are the use, appropriation and consumption by the subjects of the identity-based representations appearing in the audiovisual products.

The logistics of our enquiry are expressed in the methodological framework that brings together the different lines of our analysis. The first describes how a fiction series is produced, from information acquired during in-depth interviews held with its directors and scriptwriters. The second focuses on studying the series' content, its characters, the description of its context, the topics and the narrative structure of the genre. We use textual analysis to study the series and to examine each of the parts that go to make up a situation comedy. In this phase we identify the different representations, in context and space, that allude to cultural issues. We discover the devices of the genre, the narration and its characters.

The third line consists of a qualitative analysis of the series' reception, which helps us to understand how the audience

relates to televised fiction. Discussion groups are a tool towards conducting an ethnographic analysis and explore the appropriation and reconfiguration of significations that occur in the consumption of a fiction series. We use this technique to explore the type of significations or representations which identify the subjects as familiar, and which of these let them create an idea of the collective or social reality or common space. This is one way of replying to the question: “¿Cómo me siento?” (How do I feel?), which James Lull (1997) suggests should be investigated when debating cultural identity.

The relevance of applying the methodological tools used in the research is justified by the basic idea of communication: sender, message and receiver. In other words, the scriptwriters of the episodes in question and the series coordinators were interviewed. The context of the series' production and the medium on which it was transmitted were described. We could say that the process of transmitting the message was explored, in this case two episodes from a series. Discussion groups were also organised to study reception, learning how the message, the series and the specific episode were decoded. From here on we consider the need to close the circle by analysing the message, the discourse constructed by the episodes. This architectural methodology is in fact just an analytical follow-up of the life cycle of a cultural product which will allow us to explain a communicative process in great detail. Our analysis bases its methodological structure on the “circuit of culture” proposed by Stuart Hall (1997), involving several processes including representation, regulation, consumption, production and identity. In general, we try to understand what happens with the content of a piece of televised fiction in a specific genre. This is a way of explaining how the media create meaningful proposals that form part of our daily lives, and how these are reorganised, diluted and reinforced by being consumed. Consequently, the subjects are active agents in the continuous and permanent construction of representations and references that allude to spaces in our everyday lives, particularly that of identity.

The study of televised fiction as a producer of identity-based referents in a cultural context is justified by the need to work with the category of “culture” linked to the mass media, particularly television. Furthermore, the study of television genres is essential because it offers a level of analysis that includes the cultural and discursive aspects of communication (Larsen 1993).

The analysis of the production of television fiction, of audiovisual texts and their consumption is important for several reasons. Firstly, it creates knowledge about interrelationships between the elements of this triad (television, identity, culture), and secondly, it records cultural representations, their realisation and their operationalisation. It is also important because it lets us investigate the characteristics of the referential elements of cultural identity within a global context. The final objective of this line of research is to serve as a precedent for the design of cultural production policies for television channels consistent with the social context and to revive the social bond as the public service function of television.

## Theoretical notes

All communication involves an input of identity-based representation, in the words of Dominique Wolton: “There is no communication without identity” (Wolton 1995: 277). These words explain the reconfiguration of the place occupied by the media within the social structure, since they are no longer mere suppliers of information and are seen as mediators, and not only between the real and represented worlds. In sociological terms, in both cases the media, both as suppliers and mediators, exercise the role of social agents.

In its various modes of expression, public or private, television maintains different relationships with society and other social agents. “The strength of television is precisely that it is simultaneously a transnational factor of communication and an agent of national sovereignty. Its originality lies in being two things: an element of social bonding in the heart of a national community, and an element of communication between different national identities” (Wolton 1995: 290). To conclude, we would say that according to James Lull (1990), television ritual acts on three levels: on culture, on the family environment and on the subjects.

Cultural studies are the theoretical pillar of our investigation because they bring together two categories that had become separated: products and culture. One of the main interests of this line of research is the social contextualisation of the studies. Stuart Hall (1997), a precursor of this approach, applies it to the media and defines them as producers of signifieds. He analyses the circulation and consumption of media products and asks how audiences use and/or decode their content to produce other signifieds. For Hall, representation through language is a central element in the process of producing signifieds.

David Morley (1998) cites Evans to explain that the analysis of the media in cultural studies has taken two directions: one expresses the idea of an active audience and the other argues that the media content is polysemic and open to interpretation. Hall describes it differently in his article “Encoding-Decoding” (Hall 1987), in which he confers the same freedom of action on the text and the reader; the latter can choose from preferential content, and the media content tries to supply these preferences.

Every media text defines its signifieds by their context, through a collective process of constructing meaning. Therefore the meaning of the text arises from the confrontation between the text and its addressee (Hall 1987). So Hall involves the production, circulation, distribution and consumption of cultural products in the construction of social imaginaries. In this case, “the power of television viewers to reinterpret signifieds is hardly comparable with the discursive power of the centralised media institutions when constructing texts that the television viewer then interprets, and to think otherwise is nonsense” (Morley 1998: 434). It is this relativisation of the sovereignty of the television viewer faced with media content, explained by Morley, to which this research adheres.

## Results

The explanation of the results follows the same order as our methodological design. First we describe the data obtained in the in-depth interviews, then we set out what we observed in the textual analysis, and finally we note the findings obtained in the discussion groups.

### In-depth interviews

From the creative team of *Plats bruts* we interviewed Jordi Sánchez, who has played several roles in the series: coordinator, scriptwriter and actor. He also plays the lead in the series, alongside actor and series fellow-coordinator, Joel Joan. Two of the series' scriptwriters took part in the exercise: Mercè Sàrrias, responsible for the episode "Tinc nació", and Sergi Pompermayer, responsible for "Tinc espelma".

The interviews were conducted separately and were only recorded on audio, later being transcribed for analysis. The discourse produced by the interviewees gave us a general idea of the creative and production work of situation comedy produced in a Catalan context.

Situation comedy as a television format resembles the theatrical experience of the *Plats bruts* creative team because, as a genre, it uses theatre-type dynamics: there is even one scene where the characters are presented acting before an audience.

The production style of American situation comedies was used as a model when planning the series design, for example *Cheers*, *Friends*, *Mad about You*, *Seinfeld*, etc. The basic elements of the format of these series were reproduced, including the settings, the relationships between the characters, the dynamics established on the set with the public present, and the narrative structure of the sequences.

The characterisation of the characters is based on the traits that the series creatives recognise as close to their personal contexts, mainly during the time when the coordinators studied at the Institut del Teatre (Theatre Institute) in Barcelona. The interviewees recognised that irresponsibility and infantile attitudes were essential characteristics of the characters which they felt intensified throughout the seasons.

As regards the stories developed in the episodes, one of the aims of the creative team was to deal with taboo or sensitive topics in both Catalan and Spanish contexts. Some of these topics caused a degree of tension in some social contexts, for instance in religious and monarchist circles. This situation comedy was considered a pioneer in creating humour about the royal family.

The scripts of *Plats bruts* are the result of group work: every scriptwriter was responsible for developing one episode, and the writers' version was then revised and corrected by the series coordinators.

For the interviewees the humour, the basic ingredient of the situation comedy genre, was universal. However they felt that there were different types of humour and that their characteristics depend on geographical and cultural locations; some of the types of humour touched on were Spanish, Andalusian,

Catalan, English, urban and non-urban. But they also considered that the series' humour was based more on developing situations than on gags. In their discourse, they explained that making fun of others is the basis of Spanish humour, while in Catalan humour you try to laugh at yourself. They therefore mark differences with some styles of humour but build bridges with others, like English humour. They even made the point that the humour of American cinematographer Woody Allen was close to themselves and their context.

According to the interviewees, the language of the series was colloquial and used swear words, which they said was authentic street language.

Finally, they were questioned on the two specific episodes and made comments about "Tinc nació". About this episode they explained that they were trying to create humour about a nationalist issue while at the same time making it clear that they were not in favour of Spanish nationalism. The story narrated in this episode is based on stereotypes about what is considered Catalan. As regards "Tinc espelma", the interviewees could not remember the plot and so they did not refer to it at all.

### Textual analysis

The relationship of the characters with the story is a way of bringing together "the whole" in the audiovisual text, that is, with an inner description of the series, and leads on to a description of the fictional text's connections with the external, non-fiction environment. To achieve this, the explicit and implicit evaluations verbalised by the characters in their dialogues were identified. We also recorded the verbal and visual references present in the episodes analysed.

We should indicate that the weight of the verbal text in the two episodes is absolute, and is characterised by the use of what we call "incorrect" or colloquial Catalan. In "Tinc nació", the characters expressed themselves in colloquial Spanish due to requirements of the script. Finally, the treatment of the discourse lay somewhere between irony, drama and complicity.

Identification of the evaluations and references used by the characters in the situation comedy is a basic issue in this research.

According to our observations, the evaluations expressed allow anchorage points to be established between two different spheres: one point created by the fiction and the other attached to a social sphere, to situations, characters or institutions that exist in the non-fiction world. In other words, in the construction of the episode's plot there is specific content created by the scriptwriters and established in the field of fiction. Over this "scaffolding" of fiction, another parallel discourse is built that makes evaluations of and references to the non-fiction world. With the identification of the evaluations made by the characters, one of the goals of this research is achieved: to locate the discourse of televised fiction within the social terrain.

The verbal, visual and sound references identified in the textual analysis of the episodes refer to spaces, characters, social

practices and audiovisual productions linked to different contexts.

In both episodes, the fields to which the references identified were linked were positioned according to proximity or distance. In other words, there are references linked to the local context, in this case Catalan, like the patriotic figures "banner of Santa Eulàlia" and "drummer of Bruc". But visual references were also recorded to tourist spots in Madrid, like the "Puerta de Alcalá" and "Torres Kio", both references linked to a context that we could call Spanish.

The episodes studied made use of references linked to contexts other than Catalan or Spanish, an environment that we call global. Examples of these are the names of internationally known characters like "the Queen of England", "Versace" and "Robespierre".

The story told in the episodes of a situation comedy constructs a context which is determined by the language in which the series' characters express themselves. The use of Catalan is an obvious trait of belonging in our subject of study. In spite of this, there are other determinant variables like the referential elements present in the episode, which establish a division between what is "ours" and what is "other". In the audiovisual text, criteria are established for recognising the proximity or distance of the referents and the value judgements expressed. These criteria are not formally defined, but are deduced from an analysis of the text. The devices that permit this construction of meaning are the evaluations and references recorded in the two episodes. That is, these devices form part of a fictional discourse but maintain links and relationships with other areas belonging to non-fiction and establish criteria of proximity or distance. These ideas voiced about what was observed during an analysis of the audiovisual text may be reinforced or refuted by the results of the other techniques applied, but they are useful for enriching the discussion offered by this research.

### Discussion groups

Four discussion groups were set up, organised into two blocks, with two groups in each block. The subjects who took part in group meetings were chosen with a view to the socio-demographic profile of the situation comedy's audience. One of the two blocks consisted of subjects born in Catalonia, and the other of subjects born abroad, specifically Latin Americans, because we were interested in a social group who were not far removed culturally from the Spanish context. In any case, Latin Americans are the largest immigrant group in Catalonia and also in the rest of Spain. According to Bulletin no. 11 of the Observatorio Permanente de la Inmigración (Permanent Observatory for Immigration) in January 2007, the Latin American community forms the second largest immigrant group in Spain after citizens of the European Community.

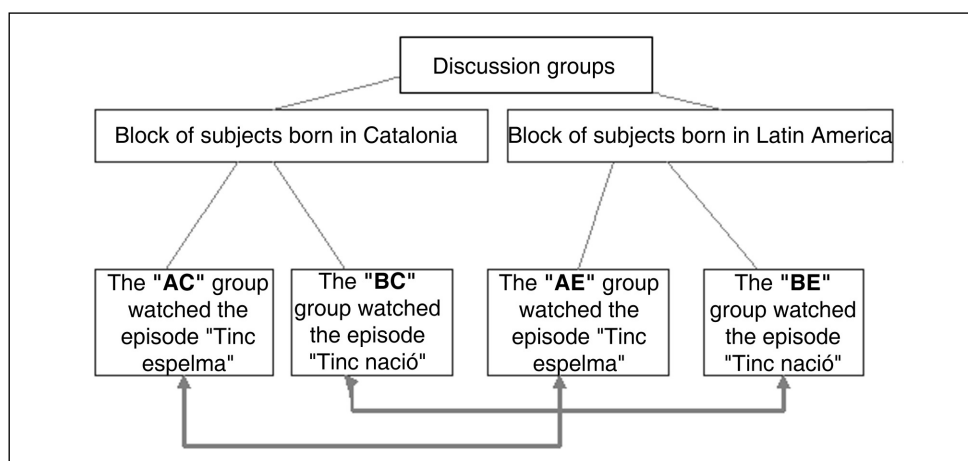
Each discussion group consisted of eight people. The groups' activity started with a survey, then one of the episodes of the series was viewed ("Tinc espelma" or "Tinc nació"). A diagram how the discussion groups were organised is given below to clarify how this qualitative tool was applied:

The objective of this research was to constitute an initial approach to the object of the study, televised fiction as a producer of cultural referents. We were interested in understanding how referential elements were presented in both groups, so the sample is not representative. General characteristics of the sample: men and women (equal numbers), aged between 20 and 45, middle-class, viewers of TVC and who had seen the series (for the foreign-born group this requirement was not important).

### Catalan block

In the discussion, the subjects in groups "AC" and "BC" recognised what they had observed in the fiction in their everyday context. The frontiers between the fictional discourse and their

**Graph 1. Discussion groups organisation**



Font: elaboració pròpia.

own everyday lives were blurred throughout the discussion. For both groups, the humour of the series was undoubtedly an identity trait in which they recognised themselves. In other words, asked to explain “what is Catalan” from the consumption of a situation comedy, the subjects saw the humour of the series as something close and familiar.

They credited this humour with some of the traits present in their own character: ironic and intelligent. They considered that the humour was based on situations and stereotypes that referred to the idea of what ‘Catalan’ is. For them, the use of stereotypes in everyday discourse was a quality of the Catalans.

One of the characteristics of the humour in the series that the subjects considered to be Catalan, and let them establish an analogy with other humour, was the ability of Catalans to laugh at themselves. This capacity, highlighted by the subjects, they also found expressed in British humour. In this regard, when members of this block tried to describe the finer points of the humour of the situation comedy, they constructed ties of proximity and recognition of the significations present in the narration. Conversely, this process of constituting “what we are” let them create empathies with other manifestations of complicity that went beyond their everyday borders, towards a British setting. The process of inclusion present in the previous point implies another process of rejection and lack of knowledge. In this case, the subjects rejected the humour of Spanish series because they considered that it lacked quality and based complicity on ridicule and the constant use of insults.

This block suggested that the language used in the series corresponded to a local area – Barcelona – where other dialects are not found.

For these groups, Televisió de Catalunya was a framework that conditioned the significations of its cultural products. The fact that *Plats bruts* was a TV3 series gave it an extra signification that suggested the defence of certain values.

### Foreign-born block

This block argued that the idea of “what is Catalan” was expressed in the verbal and gestural language of the series. They said that while they did not identify with the characters in the series, they did identify with some of situations in the narration and that were set in the context of everyday life.

However they did recognise that there were topics, observed in the narration of the episode, that were only of interest to Catalan social circles and for subjects who lived with this context. The characters involved in the story of this episode were identified as close to a Catalan imaginary.

They suggested that implicit in both episodes was the idea of “the defence of something” which they considered belonged to “what is Catalan”. One group identified this as ‘independence’ and the other as nationalism. Both agreed with the defence of a nation.

For the subjects in both these groups, both the gestural and

verbal languages of the characters were traits that referred to Catalan imaginary.

The situation comedy format was recognised as familiar by the subjects in both groups, and they listed some characteristics: exportable format, humour-based, few exterior shots and a mass target.

This block did not consider that humour was a trait belonging to *what is Catalan*, but stated that the series’ comic register belonged to a formula that formed part of the styling of the situation comedy format.

For both groups, the humour of the series *Plats bruts* resembled American humour and was very close to the series *Friends*. Finally, these groups considered TV3 to be a production context that determined the consumption of the significations of their products.

### Conclusions

The conclusions of our research attempt to generate empirical knowledge about the television sector from the study of a case in which the three primary elements of any communicative act are analysed: the sender (creation process), the message and the reception. We carried out a work of introspection on a medium and designed an *ad hoc* theoretical and methodological framework to explore the relationships established within the sector. It is evident that, in this research, we excluded the relationship of television and/or the macro-genre of fiction with other cultural industries and how they collaborate in the construction of social imaginaries (we will certainly use this material in future research).

It is undeniable that the content of cultural products is conditioned by diverse forces of power and that these do not only correspond to the productive circuit itself but to audience use and consumption. In this regard, cultural products do not escape the dynamics of global and local flows.

The analysis of the results obtained after applying the techniques of our methodological design demonstrates that the situation comedy *Plats bruts* contains representations close to the Catalan environment. The main elements that make this argumentation possible are its humour, the characterisation of the characters, their verbal and gestural behaviour, the topics dealt with and the context constructed in the episodes studied. These devices contain the symbolic charge that creates identity-based practices and at the same time establish elements of differentiation. The dynamics referred to are present in the three phases that were taken into account in our methodology. That is, in the in-depth interviews with the series scriptwriters and coordinator, in the textual analysis and in the qualitative analysis of the consumption. In this regard, the dynamics of exclusion and inclusion isolated within the conceptual framework were confirmed in this research as mechanisms for the creation of cultural identity.

In the analysis of the consumption, the Catalan subjects

noted the presence in the series of stereotypes that form part of the idea of being and existing within a Catalan imaginary and, although they may reject its use, they recognise it. This same idea is reinforced by the scriptwriters, who state that they use stereotypes to construct the stories told in the series and to generate identification. In this way, the representations on cultural identity present in the fiction studied are evaluated by the creators of the audiovisual product and by the consumers as stereotyped significations of a way of mentioning what is Catalan.

For foreign-born and Catalan subjects the topics of the episodes generated a context tied to interests that are valid in the Catalan landscape. Specifically, the groups mentioned three topics: the monarchy as raw material for everyday humour, Catalan 'independentism' and nationalism. These topics were close to their idea of "what is Catalan" and, in the case of the Catalan block, are reflected in their everyday life. In the in-depth interviews the scriptwriters, concerning this topic, they admit that they dealt with taboo issues like royalty during the series. Both in the discussion groups and in the interviews, the example was used of the late-night Andreu Buenafuente show to prove that Catalonia has been creating humour based on the Spanish monarchy for some time now, and they identified this as a characteristic trait of what they called "Catalan humour". These ideas are reinforced by the results of the textual analysis of the two episodes, in which we observe that the issue of the Spanish monarchy features in some gags where the humour is constructed with references to actions and/or declarations made by members of the royal family.

The humour of the series *Plats bruts* is another identification device, in this case only for the Catalan block and for the series' scriptwriters. The foreign-born block considered that the humour was typical of an archetypal television format nearer to the American context. They argued that the key to this format, which they recognised in the episodes viewed, was its easy humour.

Humour, as we have described it, is an element that causes divergences in our analysis. In the discussion groups, the Catalans said that the comic register of the series was a quality that they valued as their own and Catalan, while the foreign-born group defined it as part of the format. In this regard, the origin of the subjects was determinant in constructing the finer points of their evaluations. The Latin Americans probably had enough exposure to situation comedy of American origin to make them attribute an American identity to the humour. Their level of acceptance of the humour as a differentiated Catalan cultural trait was limited due to having only recently joined Catalan society. On the other hand, for Catalan communicative circles, situation comedy was a relatively recent phenomenon linked with an alien identity, so the recognition of their own forms of humour predominated.

The inclusion in the research of a group outside the Catalan setting is justified by the dynamics of an identity process. To construct the idea of "what is Catalan", a dynamic of difference

had to be established, so in this analysis the ideas expressed by the foreign-born subjects were useful to enrich and revitalise the identity discourse.

The everyday context constructed by the text of the fiction was the meeting point and place of convergence of identity for both Catalans and foreigners. That is, the cultural identity process was the margin of action that allowed the two groups to coincide. Cultural identity based on everyday life produced by fiction forms a space for conversation and negotiation of differences.

The cultural landscape in Catalonia creates a need for public television to act as an organ of cultural mediation that articulates communicative practices and dynamics in content production in constant syncretism with the notion of being an instrument for other cultures. In conclusion, public television must fulfil its mission of public service within the reach of the individuals who go to make up its society without distinction of nationality, religion or gender.

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# Analysis of information sources and respect for professional ethics in crisis situations: the media treatment of Barcelona's Carmel case

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## Abstract

*Controlling sources of information in crisis situations leads to great conflict between actors (the media and those in charge of communication for the administration). This phenomenon has been seen in the last few years in recent and familiar episodes, such as the sinking of the Prestige off Galicia (2002), the Madrid bombings Madrid (2004) and the case of Carmel accident in Barcelona (2005). This article<sup>1</sup> investigates the conflict between actors based on the coverage provided by five media of the Carmel accident, of which we have studied the sources used by the journalists, the control of information on the part of the political system and the deontological problems created by the media coverage.*

## Key words

*Journalism, journalistic professional ethics, information sources, crisis, case of Carmel accident, risk society.*

## Resum

*El control de les fonts d'informació en situacions de crisi genera un fort conflicte entre actors (mitjans de comunicació i responsables de comunicació de l'Administració). Aquest fenomen s'ha pogut comprovar en els darrers anys en episodis recents i propers, com el del vaixell Prestige a Galícia (2002), els atemptats de Madrid (2004) o el cas Carmel de Barcelona (2005). En aquest article<sup>1</sup> aprofundim en el conflicte entre actors a partir de la cobertura de vuit mitjans de comunicació de l'accident del Carmel, del qual hem estudiat les fonts utilitzades pels periodistes, el control informatiu per part del sistema polític i els problemes deontològics que va suscitar la cobertura dels mitjans.*

## Paraules clau

*Periodisme, deontologia periodística, fonts informatives, crisi, cas Carmel, societat del Risc.*

## 1. Introduction

Information from risk and crisis incidents poses a challenge of extraordinary complexity to the work of information actors (the media and public administration communication managers): the conflict for control of the information and respect for professional ethics. A good example of these two aspects can be found in the collapse of the service tunnel for the extension to Line 5 of the Metro in Barcelona's Carmel district, on 27 January 2005. The incident did not have any victims, but there was a considerable amount of damage: 84 buildings (500 homes) and 2 schools. A total of 1,057 people had to be evacuated from their homes and the school because of the risk of further collapses.

The Carmel accident had a huge economic and social impact on all the inhabitants of the area, in addition to the all-familiar political crisis. However, the Carmel case created parallel crises, such as the one affecting the media and the relationship with the public administration. A whole series of controversies concerning news coverage led to a struggle between information actors (the media and public administration communication managers) working in the area. The problem posed, the relationship between information actors in the case

of the collapse of a block of flats in the Carmel district, was analysed in the PhD thesis of the author of this article on the basis of two methodological approaches. The first was more ethnographical in nature, with in-depth interviews and a systematic study of the documentation generated in the case study. The second consisted of an analysis of the information content of the principle media that covered the event.

To carry out the ethnographical study into the relationship between the information actors, four in-depth interviews were conducted with the protagonists involved in the information management of the Carmel case: 1) the General Secretary for Communication of the Regional Government of Catalonia; 2) the Head of Press at the Department of Regional Policy and Public Works of the Regional Government of Catalonia; 3) the Head of Press at Barcelona City Council, and 4) the representative of the Catalan Association of Journalists. However, in this article, and for reasons of space, we will be focusing on the synchronous study into the contents of eight different media: the four most-watched television channels in Catalonia (TV3, Antena 3 TV, Telecinco and TVE)<sup>2</sup> and the four general newspapers with the highest circulation in Catalonia (*La Vanguardia*, *El Periódico*, *El País* and *Avui*).<sup>3</sup> The data extracted for the corpus of analysis comes from the period between

the day of the accident in the Carmel district, 27 January 2005, and a fortnight later, 10 February 2005. The complete study (ethnographical part and content analysis) can be consulted in the PhD thesis.<sup>4</sup> An analysis of the information units that dealt specifically with the Carmel case has been carried out on the four newspapers in the sample. The parts studied are the front-page headlines, editorials and all the internal units (news) of the different sections of the newspaper that referred to the case.

With regard to the four television operators, a study was conducted into the information units for the midday and evening news bulletins of the four channels selected in this study. The units analysed are those relating to the Carmel case, both to the summary and the news in depth. The specific parts studied are the *Source* field, based on five large categories: official source (Administration), political source (parties), damages source, technical source and media source.

*Professional ethics criteria* have been created by taking as a reference the four general principles of professional ethics proposed by Alsius (1999: 48-52), in the thesaurus of professional ethics for television news: the principle of responsibility, principle of veracity or truth, principle of justice and principle of freedom. Alsius has collated the contributions of Thomas V. Cooper and Edmund Lambeth to help him delimit a series of "universal" ethics principles.<sup>5</sup>

## 2. A crisis explained by politicians and those affected

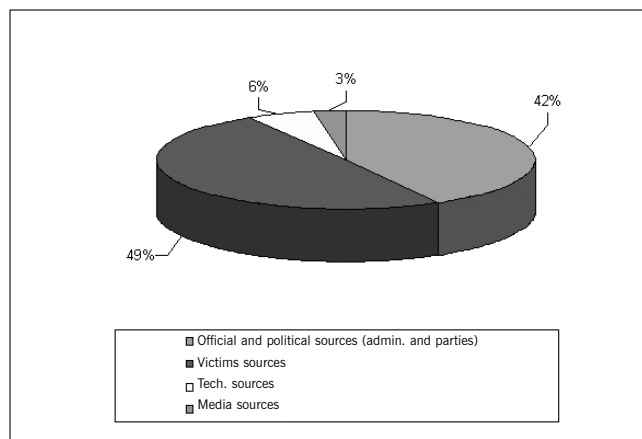
After the contents had been analysed, a total of 1,285 different sources were calculated by adding together the four television operators and four newspapers analysed. Of this, most of the eyewitness accounts referred to people who had been affected by the crisis, those who had suffered damages, with a total of 635 citations, followed by the official and political sources (public administration and political parties), with 538 impacts.

In terms of sources relating to technical actors that had to help resolve the situation, the total was 77 citations. Finally, media-type sources were the least numerous, with a direct citation of 35 impacts.

Source usage percentage reveals that almost half the actors cited by the media (49.4%) were people who had been directly affected by the accident (see Graph No. 1). This section shows people who were evacuated from their homes, residents, traders and shopkeepers, residents' associations and direct eyewitness accounts of the event. The second most important percentage relates to official and political sources, which account for 41.9% of the total citations. This category contains a total of political party and public administration sources.

Lagging a long way behind the first two main groups of actors, in third position, are the technical sources (6%). This grouping includes architects, geologists, geographers and emergency teams, such as fire crews, the police and health professionals.

**Graph 1. Types of sources used in %**



Source: own.

Finally, the smallest percentage (2.7% of citations) is for media sources.

Official and political sources are one of the principle sources of information cited by journalists from the eight media analysed. Of the 538 impacts in this subdivision, a total of 331 should be labelled public administration managers or spokespersons (Regional Government of Catalonia, Barcelona City Council and the State Administration). The remaining 207 are spokespeople or senior managers, primarily from Catalan parliamentary political parties.

Use of political sources among the different television operators coincides with decision-making moments by the Administration or incidents of political confrontations. It has been noted, therefore, that television channels' decisive moments in terms of the use of official and political sources coincide with three specific decisions. Between 28 and 31 January 2005, the order was given to demolish the block of flats most affected by the collapse; between 2 and 4 February, the Regional Government of Catalonia decided that a number of residents could return to their homes to sleep and the very next day in the morning corrected the decision; and between 8 and 10 February, coinciding with two new incidents: the polemic derived from news coverage with a press release issued by the Government's Communications Office and the appearance before the Catalan Parliament of the Regional Policy and Public Works Councillor. The use of political sources made by the newspapers is significantly different to that by the television channels. In the newspapers, citations of political actors are a permanent feature throughout the analysis and, it is relevant to note, that as the days passed, it was noted that all the newspapers increased this presence noticeably. Citation points are determined by the confrontation between the different political forces. It is of particular relevance that, from day one up until the final day of analysis, the number of actors in this category almost trebled.

Those affected by the Carmel accident were the actors most cited by the media (635 occasions). Of this figure, a total of

517 actors were affected directly by the collapse, i.e. residents evacuated from their homes or businesses for a more or less long period, depending on the neighbourhood in relation to where the subsidence occurred. A much smaller number of people, 37, were cited by the media, but who were affected indirectly by the accident. These were local residents who did not need evacuating, but who did suffer the consequences and were disturbed by the events in the area.

The third largest group of sources used by the media were the spokespersons or those in charge of residents' associations (35 occasions). Traders and shopkeepers' associations were required a total of 21 times by the media. Finally, a group of 25 actors were occasional eyewitnesses to the case. These were people who worked in the area, such as bank employees, estate agents or goods distributors.

Newspaper interest in those affected decreased as the days passed from when the first subsidence appeared. During the initial days, the newspapers reported the residents' discomfort and how they had been affected, but as the hours passed they focused on the political discussion and cited political and Administration actors. On 28 and 29 January, the newspapers used up to 29 of those affected as a source and reached 32 points (4 February). Meanwhile, during the later days analysed, citations dropped to 10 (8 February). According to the data, the days with more political arguments did not see a rise in news coverage, as they took it from one set of actors and gave it to others.

The television operators analysed gave broader treatment to those affected than the newspapers. The channels reported 336 who had suffered damages and the newspapers 308. More importantly than the number, however, a constant interest was noted in their use of those who had suffered damages as a direct source, with a greater number of actors who had been affected as the days passed. On the first day, 27 January, up to 18 people were cited, while the figure grew to 25 impacts on the final day of analysis, 10 February. The period with most actors who had suffered damages used as a source by the television were concentrated between 4 and 5 February, with 31 and 32 impacts, respectively.

### 3. The absence of experts

The use of technical sources by the media during the Carmel accident was scant. Between the eight media analysed during the 15 days, only 77 technical actors were cited, which represents 6% of the total sources used to cover the case. This category includes specialist technicians in the events, specialists in tunnels, structures and public works (geologists, engineers, architects, etc.) and also the crews in charge of the direct management of personal safety (fire service, police, healthcare, etc.). The most widely cited were geologists (21 impacts), followed by engineers (8), police (7), healthcare workers (5), fire service (2) and architects (1).

It is important to note that 33 of the impacts recorded among the technical sources were in the "others" subsection. Most of the spokespersons used by the media in the "others" subcategory were lawyers, bank managers and insurance agents. Lawyers were required by the media to find out the procedures that those affected had to follow to claim for damages from the event. The bank managers were interviewed to explain the renegotiation of mortgages and bank loans by those affected by the collapse, and finally the insurance agents explained the cover and the rights of those affected to claim from their companies.

The media used technical sources more after quite a few days had passed since the start of the events. As the days went by, the media cited more experts to explain their information. Between 4 and 8 February was when more technical sources were used. In all, 4 February saw 11 impacts, and 8 February saw 12.

Citations by the newspapers of technical sources in the news units were more than four times more than by the television channels. Between the newspapers, 62 technical sources were cited, whereas the four television operators only used 15. In the majority of their news programmes, the television channels did not cite any technical source to inform and based their news solely on the eyewitness accounts of those affected or the political actors or authorities.

This apart, media sources are direct references in which the journalist uses the media themselves as a source. This information in which the medium itself (previously or in another programme) or other types of media are cited have been recorded. It was deemed appropriate to establish this category to detect the news dependency relationship between television and newspapers, the use that could be made of the Internet in conventional media or even the relations that could be established between different media groups or conglomerates. It was noted that the number of impacts in this category was very low, at just 35, representing 2.7% of the total research sources.<sup>6</sup>

The majority of the media sources cited by the media came from the medium itself (26 impacts), while a total of 9 were citations in which the information came from other media. When the sources come from the same medium, the information is published in interpretative genres such as feature articles and some leader columns.

It is relevant to observe that it is the newspapers that most use the resource of other media as sources whereas the use of these citations in television is practically non-existent. The four television operators only used media sources on two occasions, whereas the newspapers account for 33 of the 35 impacts in this category.

### 4. Respect for criteria of professional ethics

The criteria of professional ethics have been divided according to three principles established by Alsius (1998), which centre

on the principles of truth, justice and responsibility. These three principles have been systematically analysed in terms of both the number of times they were infringed (quantitative part) and the content that was not in line with any of the items established (qualitative part). The principle least respected by the media studies was that of truth (61.2%), followed by that of responsibility (30.3%) and that of justice (8.5%).

The television channels failed to comply more than the newspapers with the criteria of professional ethics established in this research (64% compared with 36%). The private television channels have a very much higher index of incompliance with the criteria of professional ethics than the public channels. The media that most failed to comply with the criteria of professional ethics out of all the media analysed were Antena 3 TV, with 22%, and Telecinco, with 21%. TV3 obtained 11% of the total and TVE 9%. In the case of newspapers, largely insignificant differences were detected between the four titles analysed. *La Vanguardia* (15%) and *Avui* (9%) accumulated more omissions of the criteria of professional ethics than their competitors, *El Periódico de Catalunya* (7%) and *El País* (6%).

The detailed analysis of the different ethical criteria that the media have failed to apply in the Carmel case shows that the most outstanding was sensationalism and the contribution to the news circus (25.6%), followed by the lack of accuracy and exactness of the information (23.2%) and the invasion of personal privacy, especially of those affected (15.2%).

At a greater distance, in 12.3% of the cases, information was not adequately separated from opinion. In 9.5% of cases, the pain and suffering of those affected was shown and in 8.5% it was partial and did not respect the different points of view. Some 3.8% of the information affected the necessary protection of minors, and finally, 1.9% did not consider humanitarian aid and personal safety as a priority.

In terms of the principle of responsibility, aspects referring to personal privacy and the importance of life and public safety in an emergency situation have been analysed. The production of

texts or the reproduction of images, be they photographs (newspapers) or video recordings (television), with a clear intrusion of privacy has occurred up to 32 times in the eight media analysed.

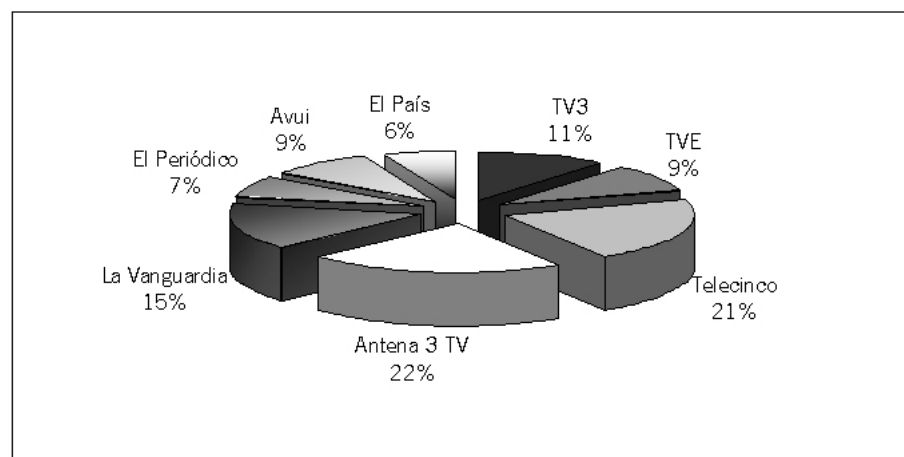
One of the aspects that refer to the respect for privacy is the protection of minors. The media took special care with this group. By contrast, as regards the showing of the pain and suffering of the people affected, a total of 20 cases were recorded that mainly referred to people crying or in a clear state of distress. The private television channels represent 60% of the breach of this rule, Telecinco and Antena 3 TV account for 12 of the 20 times that painful images of those affected in a clear state of pain or suffering were broadcast. They refer primarily to people crying or in a clear state of distress.<sup>7</sup>

Sensationalism and 'spectacularisation' were the most common breaches in the media studied, with a total of 54 times. The private television channels were the media that committed more transgressions of this rule. Some examples illustrate the spectacularisation of the case, and especially the abuse of sensationalism when reporting. In their captions (summary titles), the television channels used some ill-advised headlines: "This suburb is a disaster", "In ruins", "The nightmare goes on", etc. The newspapers also used such headlines as "Tears in the Carmel", "The Carmel sinks" and "The reunion was a sea of tears". The examples that have been seen are a compendium of some of the most outstanding that could be found in the headlines of the media analysed.<sup>8</sup>

The texts also abounded with expressions that contributed to the dramatisation and spectacularisation of the case. The following are some of the phrases and expressions: "The spectre of new collapses hangs over the Carmel", "Complete ruin" and "The truth is that the residents of the Carmel live with worrying seismographs in their homes".

As regards the principle of neutrality, we have studied the heading that Alsius (1999: 92) calls *valuing neutrality* and, within this, especially the necessary separation between opin-

**Graph 2. Percentage omission of the criteria of professional ethics established in this research (by medium)**



Source: own.

ion and information in news genres. In all, 26 cases were recorded where the media mixed news and opinion genres. We will outline some of the cases detected, which refer especially to the political confrontation. One newspaper published news (news genre) with these contents: "The *Convergència i Unió* party always ready to look for someone to blame in the government (...)" and "Yesterday, *Convergència i Unió* was the purest example of the faith in discussion (...). Casually, the then CiU Regional Policy Councillor and public works expert (...)."

With reference to the monetary resources that the Administration would devote to the affected zone: "Cheap and cheerful doesn't work" and "Will they be able to get together all these resources? Neither the central administration nor the regional government are exactly going through the best of times from the financial point of view."

A television commentator stated of the appearance in the Catalan parliament of the Regional Policy and Public Works Councillor Joaquim Nadal: "I don't think that the residents of the Carmel are entirely satisfied with this explanation." The period in which the media were less careful with this precept lies in the last days of the analysis, coinciding with the public debate about the case and the appearance in the Catalan parliament of Councillor Nadal to provide explanations about the case.

From the thesaurus created by Alsius (1999: 171), the principle of justice has been chosen to detect, primarily, those units in which different versions or points of view were not included. A total of 18 impacts were recorded, 8.5% of the total of the criteria of professional ethics applied in this research.

The private television channels, Antena 3 TV (33.3%) and Telecinco (22.2%), were the media that have least followed this precept. By contrast, the *El País* (0%), *Avui* and *El Periódico* (5.6%) newspapers are the ones that have sought to include information with different points of view and actors

representing the Carmel crisis. A large part of the media analysed (*La Vanguardia*, TV3 and TVE-1) obtained 11.1% of the total impacts.

Some information about the debates or institutional appearances shows a lack of news plurality. For example, one television operator explained in a news unit the whole monographic plenary devoted to the Carmel held at Barcelona City Council on 4 February 2005 with the sole reaction of the *Partit Popular* (PP). On 8 February, the same channel gave new information solely with an insertion of the PP; the other opposition groups (CiU) and the Government of the Regional Government of Catalonia did not appear.

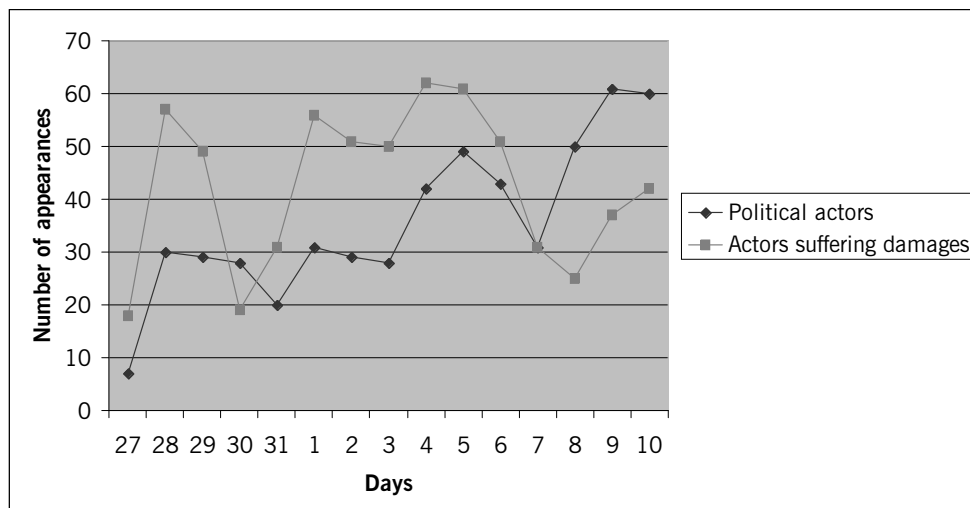
Another television channel broadcast a news video where it said that "the only group that has its hands freer is the PP", referring to the Barcelona City Council plenary. In this news, only the PP appears, and no voice is given to either the Catalan Government or to the mayor. One operator broadcast information about the municipal groups which only spoke of part of the opposition, in this case CiU and not the PP.

## 5. Conclusions

The study carried out enables us to conclude that as the days passed following the accident, 27 January 2005, the media gave priority to the political confrontation: the number of appearances of political actors grew and the number of actors who had suffered damages by the crisis dropped (see Graph No. 3). Similarly, as coverage of the accident became more politicised, less attention was paid to them by television operators and more by the newspapers analysed.

In addition to this, the analysis revealed a clear differentiation in the use of sources (political or those who had suffered damages) depending on ownership (public or private) of the television channels. Consequently, we see that Televisió de

**Graph 3. Comparison of the total number between political actors and those who have suffered damages**



Source: own.

Catalunya (TV3) and Televisión Española (La 1) were more interested in hearing the opinions of the political actors than Telecinco and Antena 3 TV. Between them, the two channels have a total of 89 citations from public actors, for only 24 of the two private operators.

In terms of the use of technical sources (5.9%), we can conclude that they were used the least by the media. Journalists barely required experts (geologists, architects and engineers) and these actors avoided giving their opinion. The media provided technical information through the political actors, without consulting the experts. However, there is also evidence that technical sources refused to talk to the media. Some areas of the media explained: "The few engineers who did come to the phone to talk about the Carmel accident would not say anything for or against the use of one or another method." The construction companies who carried out the Carmel work never gave their opinion and when they did, they asked that the source not be cited. One of the most popular journalistic terms used was "sources in the sector". This lack meant that many units (news) were under compared, which cannot always be attributed to journalists, but to the fact that there were no technicians on hand with a desire to explain the causes and possible solutions that the accident would require.

The most cited political actors included the Regional Policy and Public Works Councillor, Joaquim Nadal, with 144 impacts. A long way behind Councillor Nadal, the second most cited actor was the mayor of Barcelona, Joan Clos (57). The president of the Regional Government of Catalonia, Pasqual Maragall, obtained 36 impacts. It is remarkable that, during the period analysed, the president of the Spanish government, José Luis Rodríguez Zapatero, was only cited on three occasions, and on very few other occasions, six in total, the different ministers from the Spanish executive. Other spokespersons from the State Administration, including the vice president of the Government, María Teresa Fernández de la Vega, and general secretaries or directors of the Spanish government obtained a total of eight more impacts.

In another order, the political parties of the Catalan political system (204 citations) capitalised on the leading role in this event compared with the political parties of the Spanish political system (three impacts). The most cited parties as sources were those of the opposition in Catalonia, Convergència i Unió (CiU) and Partit Popular de Catalunya (PPC).

As regards the professional ethics aspects, we can conclude that the television channels breached the principles of professional ethics established in this research more than the newspapers did (see Point 4). Spectacularisation and sensationalism are the established ethical precepts that were least respected by the eight media analysed. However, the reporters took special care with the dissemination of images and texts that affected minors.

Outstanding among the ethical criteria least respected by the media in the Carmel case are the sensationalism and the contribution to the news circus (25.6%), the lack of accuracy and

exactness in the information (23.2%) and, in third position, the invasion of personal privacy, especially that of the victims (15.2%).

The separation between information and opinion accounts for 12.3% of the total in compliance of the criteria set out in this research. It is detected that as the days pass and the case becomes politicised, the information in which no clear distinction is made between facts and opinions is repeated.

The media were rather careless with the respect for personal privacy. The two private television operators analysed account for 60% of the total transgressions of the eight media studied in terms of showing the pain and suffering of the people affected by the accident. The showing of images of personal objects of residents in the block of flats demolished in the area most affected by the subsidence in the Carmel suburb was constant. As the Audiovisual Council of Catalonia recommended,<sup>9</sup> electronic contrivances, such as camera zooms or others, that magnify misfortune should be avoided, especially in this case, because they intruded into the privacy of the residents of the flats that were being demolished without consent.

Besides this, scenes were also shown of the Nou Barris waste tip set up by Barcelona City Council with the residents trying to find lost personal objects among the debris.<sup>10</sup> The images clearly breached the privacy of people who had lost their belongings and who were trying to recover part of them from amid piles of debris and all kinds of objects. They were shown severely distressed or directly crying in front of the reporters. The television channels were less exact and accurate in disseminating the information than the newspapers were.

Finally, once again, it has been seen how the media attention that is aroused by times of crisis contributes to the creation of new themes and subthemes (*thematization*)<sup>11</sup> of aspects relating to the event that are placed at the centre of the media agenda. For example, it has been seen that since the Carmel accident, the theme of the construction of infrastructures in Catalonia has increased in the media.<sup>12</sup> The collapse of the tunnel in the Barcelona suburb of the Carmel has generated new themes and subthemes that contribute to setting the political agenda in Catalonia with reference to the debate on infrastructures, their use and, especially, the perception of the risk as regards their construction.

## Notes

- 1 This article is one of the chapters, revised and extended, from the doctoral thesis defended by the author in May 2008 at the Department of Communication of Universitat Pompeu Fabra, tutored by Dr. Josep Gifreu i Pinsach.
- 2 According to data from the General Media Study (EGM). Ranging from October 2004 to May 2005.
- 3 According to data from the Office for Justification of Dissemination (OJD) for printed media in the general information newspapers category.

- 4 See: PONT, Carles. "Protocolos, actors i comunicació institucional en episodis d'emergència. Estudi de la gestió informativa de l'esfondrament d'un túnel del metro al Carmel de Barcelona". PhD Thesis, Barcelona: 2008.
- 5 Alsius' research (1996) was defended as a PhD thesis. The thesis is accompanied by an in-depth study into the new professional ethics codes of television corporations around the world.
- 6 It should be stressed that news from news agencies has not been taken into account, except for cases where the information explicitly quoted that the origin was this type of medium.
- 7 Telecinco, midday (27-1-2005/1-2-2005) / Antena 3 TV, midday (1-2-2005), among other examples.
- 8 All of the examples have been taken from the qualitative study. The television channel or the newspaper, and the day and the place in which each example appears can be consulted in: PONT, Carles. "Protocolos, actors i comunicació institucional en episodis d'emergència. Estudi de la gestió informativa de l'esfondrament d'un túnel del metro al Carmel de Barcelona". PhD thesis, Barcelona: 2008.
- 9 "El tractament informatiu de les tragèdies personals". *Quaderns del CAC*, no. 9. Barcelona: Consell de l'Audiovisual de Catalunya, 2001.
- 10 Antena 3 TV, midday (5-2-2005) / Telecinco, evening (5-2-2005), among other examples.
- 11 The theory of thematisation gives the ability to the media to select a theme, placing it at the centre of public attention. The notion of "theme" (thematization) is a theoretical proposal of Luhmann (1978) and was developed by, among others, such authors as Carlo Marletti (1985). See: MARLETTI, Carlo. *Prima e dopo: tematizzazione e comunicazione politica*. Turin: ERI, 1985.
- 12 During the years following the Carmel case (2005), a debate has arisen on the construction of infrastructures and tunnels that cross the city of Barcelona (e.g. the construction of a high-speed train tunnel connecting the Sants and Sagrera stations and that touches the Sagrada Família).

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# The effectiveness of product placement on children: an experiment

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**Abstract**

*In recent years, a noticeable increase in the use of non-conventional TV advertising has taken place. However, hardly any studies have been carried out to understand how these formats influence young viewers. This article presents the findings from an experimental study on the influence of product placement on children (aged 8, 10 and 12 years). The conclusions suggest that product placement has a very limited impact on children's memories and behaviour. On the other hand, they show high levels of recognition and awareness of product placement.*

**Key words**

Advertising, children, product placement.

**Resum**

*Durant els darrers anys, s'ha experimentat un creixement notable en l'ús de formats no convencionals de publicitat televisiva. Tanmateix, no s'han portat a terme gaires estudis per entendre la influència d'aquests formats entre els infants telespectadors. Aquest article presenta els resultats d'un estudi experimental sobre la influència de l'emplaçament de producte (product placement) entre els nens (de 8, 10 i 12 anys). Les conclusions suggereixen que el product placement té un impacte molt limitat en la memòria i el comportament dels infants. Per contra, mostren alts nivells de reconeixement i consciència de l'emplaçament de producte.*

**Paraules clau**

Publicitat, infants, emplaçament de producte.

**Introduction**

Product placement is a non-conventional form of television advertising, which has become increasingly relevant in recent years, above all because of the success of drama series produced and broadcast by Spanish and Catalan television channels since the middle of the 1990s.

The term 'product placement' refers to a commercial communication technique which offers "different presentation strategies, in audiovisual production, of commercial products and corresponding brands" (Farré and Fernández Cavia 2005). This technique is defined as a format of brief duration, which establishes with the televised programme an 'insertion' relationship (in the sense that there is no clear separation between the two, meaning that it is impossible to distinguish one from the other), and which makes it difficult for the viewer to identify it as a commercial communication (Farré and Fernández Cavia 2005).

As explained earlier (Farré 2005), the term 'product placement' is not entirely satisfactory, because it is important not to

'place' the product into the programme but to place the brand, be it via the product or not. In this sense, we propose the use of a new term: 'brand placement', which, in fact, has been used in recent publications about this issue (Pino and Olivares 2006).

This, therefore, deals with a large number of concrete possibilities, from positioning a logo on the cinema or television screen (as, for example, when you see a sign in the background of a bar, or an advertisement that appears in the street where the action is happening) to the simple placement of a product in the props to the main character mentioning or using a brand or product, or, perhaps in a more interesting and complex case, the use of the product/brand as a key piece in an argument.

Product placement is probably the most studied non-conventional form of television advertising, but analysis of its efficacy is still lacking (Urbano 2005) and, above all, its effects on a particularly sensitive public, such as children. However, it has already been the object of some investigative research, above all in North-American academic papers. Recent articles

(Balasubramanian *et al.* 2006) and monographs (Pino and Olivares 2006) dedicate a good part of their attention to collecting a summary of the most noticeable up-to-date contributions, even though our understanding of consumer response to that kind of message is still very limited and superficial.

It is also worth pointing out that, concerning the increased use of product placement in programmes aimed at a young audience, many voices have joined the debate over the necessity of research focused on the effects of product placement on child consumers (Hudson and Hudson, 2006; Morton and Friedman, 2002; Tiwsakul *et al.*, 2005).

Additionally, it is necessary to point out other opposing voices to this technique, such as Hackley's (2008), who asserts that product placement brings ethical problems because of the difficulty of categorising it as a marketing practice. According to the author, the problem arises from the mixture of different techniques such as 'branding', promotions, the use of celebrities, sponsorship, public relations and publicity. However, this conflict in ethics is basically down to the fact that product placement is based on a type of communication that never reveals its source.

## Objectives and methodology

This research's objective is to determine to what extent product placement passes unobserved as a commercial technique amongst children and to what extent it is capable, in spite of its lack of explicit identification and recognition, to influence the memory, the attitudes and the conduct of minors.

We can specify, therefore, that there are four effects of product placements that are worth analysing:

- a) First, whether placement is recognised by children as a vehicle for commercial communication or if, on the other hand, it tends to go unnoticed.
- b) Second, whether product placement succeeds in fixing the brand name and/or some of the product's characteristics in children's minds.
- c) Third, if placement generates a change of attitude towards the brands concerned.
- d) Fourth and finally, if placement has the capacity of changing children's behaviour in the buying or consumption of products.

In methodological terms, the usual techniques adopted by Spanish researchers in product placement studies have been, to date, solely based on the analysis of content and in-depth interviews with those involved in production processes (Méndiz Noguero 2001; Baños and Rodríguez 2003; Pino and Olivares 2006).

These techniques only provide a descriptive and external approach to this phenomenon, ignoring the most crucial aspect of this matter: how the viewer processes and interprets product placement and which influences this commercial technique exercises on their understanding, attitudes and behaviour.

The only way of approaching the placement study from this perspective is by designing an experiment that facilitates, under the most similar conditions possible to the real experience, the observation of perception mechanisms, interpretation and the assimilation of messages.

Experiments are more frequently found in Anglo-Saxon (and, above all, North American) research traditions than in Spanish or European ones, whether related to advertising in general or to product placement in particular (Astous and Séguin 1999; Russell 2002).

The specific test that has been carried out is based on the following parameters: in the first place, it is concerned with pre/post design. That is to say, there is a preliminary analysis according to a series of parameters of the individuals in the test group (knowledge of the brand, relevance of the brand or service, their consumer habits, and television consumption). Afterwards, an individual is exposed to the stimuli (a television programme where a placement clearly appears and which is addressed to a child or teenage audience). And, finally, a later analysis takes place to see if identification of the placement has occurred, as a commercial communication, memorisation of the brand and a change of opinion about the brand.

This research design included the selection, by the trial's participants and before exposure to audiovisual stimuli, of a series of tea-time products. After seeing the programme that included the product placements, the participants were asked to choose again to see if their choices had changed. If changes were noted, the participants were asked to explain why.

The trial was made up of nine groups of boys and girls. Each group comprised six individuals, mixing three boys with three girls but not mixing ages. Three groups were formed with 8-year-old children, three groups of children aged 10 years, and three groups of pre-adolescents, aged 12 years. One group from each of these acted as a control group, and was subjected to seeing a stimulus in which no product placement appeared.

The group's work was carried out in two primary schools. The first was the school Gran Capità, a subsidised private school that belongs to the Sant Joan Despí municipality (Baix Llobregat, Barcelona) and was founded in 1966. It now offers education to infants, primary school children and secondary school children. Six groups came from this centre, a group of 2nd, 4<sup>th</sup> and 6<sup>th</sup> year children, who had a fruit juice product placement, and a group of 2nd, 4<sup>th</sup> and 6<sup>th</sup> years who saw no product placement, acting as control groups.

The other centre was the Santa Teresa de Jesús college, a subsidised private school located in the Rambla Nova de Tarragona (Tarragonès) and which offers infant, primary and secondary education. Three groups came from this centre, one of 2nd, one of 4<sup>th</sup> and one of 6<sup>th</sup> year children, all three having a yoghurt product placement in their viewing.

A questionnaire was given to all the trial's participants, in which they were told that they would have to answer some questions about their consumer and television-viewing habits,

but without saying that they were taking part in research about product placement. They were also asked to choose breakfast products (in the morning groups) or tea-time products (in the afternoon groups) before the viewing took place.

Once the clip was shown, which either contained the product placement or not (as was the case with the control groups), the children were asked to complete a very similar questionnaire to the first one, to which a final question was added: "Have you made any changes with respect to your first selection? Why?"

As stimuli for the trial, the video clips were:

- An episode of the Spanish series *Los Serrano*, broadcast by Telecinco, where one of the main actors of the series, a teenage girl, appears drinking some fruit juice, in her bedroom, in the company of her siblings while they are doing their homework.
- An episode of the Spanish series *Ana y los siete*, where two adolescents appear – the girl was the protagonist of the series – in the kitchen of the house where the main action was happening, at night, where they opened the fridge and ate a natural yoghurt.
- The control group's trial contained another clip of an episode of *Los Serrano* where no product placement appeared.

The motive behind choosing these two series is that neither of them is a children's programme but they are instead aimed at a wider audience, counting amongst their target audience a large proportion of viewers in the same age brackets as those participating in the tests.

Moreover, in both cases, the programmes have a range of characters, amongst whom are children of similar ages to those in the trial, even though the two chosen scenes included older children, with the aim of profiting from the *aspirational* effect of imitating older children, which often happens amongst infants.

Two food product placements were chosen, with the aim of testing the children when selecting products for breakfast/tea and observing their behaviour.

The statistical analysis was carried out with the SPSS program.

The analyses, apart from the statistical frequencies, were based on McNemar's Test, which was especially suitable for measuring characteristics on more than one occasion for each of the trial's individuals. The usefulness of this test in our research is to compare whether the measurements taken in two different moments, before and after the intervention of or exposure to the stimulus (in this case product placement), are the same or whether a significant change has taken place.

In our research this measurement was applied to two variables. On the one hand, the participants' knowledge of yoghurt and juice brand names was measured before and after seeing the programme with the product placement; and, on the other, the change in selection of the food items was also measured before and after the viewing. The objective of these measure-

ments was to see if, after exposing participants to the stimuli, the individuals recognised more brands or if they made any changes based on the effect of product placement.

The analysis of the two groups on product placement, and of the juices and yoghurt, was made independently because the measurement was incomparable. It was a matter of different products and viewings and, therefore, its analysis had to be carried out separately.

## Results

The first question analysed from the experiment centred on the respondents' recognition of the brands of juices and yoghurts before and after seeing the product placement, to compare and demonstrate its effect.

The results show changes in brand recognition or recall before and after seeing the clip, but not always in clear favour of the brand placed. For example, on one occasion a change was observed in the recollection of the Sunny brand after seeing the product's placement, which previously hadn't been mentioned. However, on the other hand, on three occasions the respondents remembered the Sunny brand only previously, and after viewing they mentioned other brands of juices, without remembering the placed product.

It was also observed that on 38 occasions prior to the product placement, respondents mentioned other juice brands and, after the viewing, there was only one change that mentioned the Sunny brand. Moreover, on three occasions there were no mentions of any juice brands, although Sunny was remembered after the product placement. But the most numerous changes were in the prior recall of other juice brands, recall of these changing after seeing the product placement.

As can be seen, there are changes in the recall of juice brands before and after product placement, not only concerning the effect of product placement but also among all the brands.

As Table 1 shows, the change in recognition or recall of the brands is significant. But as this is significant for all the brands,

**Table 1. Statistical analysis (McNemar test)**

|                           | Sunny_pre<br>Sunny_post | Other_pre<br>Other_post | Sunny_pre<br>Other_post | Other_pre<br>Sunny_post |
|---------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| N                         | 48                      | 48                      | 48                      | 48                      |
| Sig.exact<br>(bilateral)  | 0.125 <sup>(a)</sup>    | 0.125 <sup>(a)</sup>    | 0.000                   | 0.000                   |
| Sig.exact<br>(unilateral) | 0.063                   | 0.063                   | 0.000                   | 0.000                   |

<sup>(a)</sup> Binomial distribution has been used

Source: own.

**Table 2. Statistical analysis (McNemar Test)**

|                            | Nestle_pre<br>Nestle_post | Other_pre<br>Other_post | Nestle_pre<br>Other_post | Nestle_post<br>Other_pre |
|----------------------------|---------------------------|-------------------------|--------------------------|--------------------------|
| N                          | 33                        | 33                      | 33                       | 33                       |
| Sig. exact<br>(bilateral)  | 0.109 <sup>(a)</sup>      | 0.109 <sup>(a)</sup>    | 0.000 <sup>(a)</sup>     | 0.000 <sup>(a)</sup>     |
| Sig. exact<br>(unilateral) | 0.055                     | 0.055                   | 0.000                    | 0.000                    |

<sup>(a)</sup> Binomial distribution has been used

Source: own.

in all the comparisons, we cannot affirm that the significance is due to product placement.

Similar results are also seen in the placement of yoghurts. On eight occasions the respondents did not remember the Nestlé brand before the episode was shown and mentioned it just after seeing it. But, on the other hand, changes were also noted. On two occasions, Nestlé was remembered previously but it was not mentioned after the product placement.

As we have previously confirmed, there are changes in the recall of yoghurt brands before and after product placement occurred, but not only showing the effect of the product placed but also among all brands of yoghurts.

As Table 2 shows, the change in the recognition or recall of the yoghurt brands is significant. But as there is also significance in the changes in all of the brands, we cannot appreciate whether the significance is due to the placement of the Nestlé yoghurt.

Thus, with the placement of both juices and yoghurts, a significant or directional effect is not shown in the recall, recognition or mention of the placed products.

We now look at the results concerning the respondents' selection of placed products for their consumption during the test or experiment. Changes were also observed in the selection, even though this is not only along the lines of the product placement.

In the juice experiment, thirteen choices were made for Sunny before the product placement was shown which, after the viewing, varied and ended with no juice being chosen as a drink. In fifteen selections, no juice was selected before and Sunny was chosen afterwards. But also on three occasions juice was chosen before the viewing and afterwards Sunny was not. Finally, on three occasions, water was chosen before, while, afterwards, Sunny was chosen.

Table 3 shows that there are significant changes in the selection of products for consumption at the time of the test, and before and after seeing the product placement.

In the yoghurt experiment, the changes in choice were less significant. This is clearly shown in the results. On no occasion was Nestlé not chosen before viewing but chosen afterwards.

**Table 3. Statistical analysis (McNemar Test)**

|                             | Sunny 1<br>Juice 2   | Juice 1<br>Sunny 2   | Water 1<br>Sunny 2   | Sunny 1<br>Water 2   |
|-----------------------------|----------------------|----------------------|----------------------|----------------------|
| N                           | 24                   | 24                   | 24                   | 24                   |
| Sig. exacta<br>(bilateral)  | 0.007 <sup>(a)</sup> | 0.008 <sup>(a)</sup> | 0.000 <sup>(a)</sup> | 0.001 <sup>(a)</sup> |
| Sig. exacta<br>(unilateral) | 0.004                | 0.004                | 0.000                | 0.000                |

<sup>(a)</sup> Binomial distribution has been used.

Note: Moment 1 pre, moment 2 post

Source: own.

On the other hand, in one case Nestlé was chosen earlier and in the second selection it was rejected. On eight occasions, Danone yoghurt was chosen beforehand and, later, none of the respondents changed their mind and chose Nestlé.

In this experiment the only significant matter to note in the respondents' selection changes is between the Danone and Nestlé brands, but not among the rest of the other products (see Table 4).

The changes have therefore generally been observed in the selection of products before and after the viewing the episodes in which the different product placements appeared. But it cannot be confirmed that these changes have taken place as the result of this placement, since changes occurred in all of the products shown and not just towards the products placed.

Results to date show that the placed products in the experiment are not an effect either in the mentioning or choice to consume the brands and products placed. However, when respondents were asked if they had seen advertising or some sign of the products in the episode, the majority replied he affirmative and were able to remember the name of the placed brands. In the following tables, the frequencies and percentages of the respondents who remembered the placed products are shown.

As can be seen, the Nestlé yoghurt placement's recollection percentage is significantly higher than Sunny juice's. Yet the recall of the two products placed is equally in the majority. This shows that this communicative tool does not go unnoticed even by children, who recognised the placed brands.

## Conclusions

The results of the experiment reflect that the effectiveness of product placement among young girls and boys aged 8, 10 and 12 years is very limited. Significant changes were not observed either in the recall of the brands in the segment or in the selection of products for breakfast or tea time. That is to say, the children of our trial did not remember the juice or yoghurt brands more after seeing them placed in the programme.

Neither did the choice of these breakfast or tea-time products increase significantly.

These facts appear to reinforce the idea, which exists among some advertising professionals, that product placement only serves as a way of reinforcing a pre-existing product image; it is in fact very difficult to build a new brand image or to directly influence purchasing behaviour or consumption.

But it is important to remember that the two clips used as stimuli for this experiment only show moments when a product/brand was being consumed, with no verbal mention in either case of their qualities.

On the other hand, the majority of children in the trial are very much capable of recognising the presence of commercial brands in the midst of the programme.

It appears, therefore, that the children in our trial respond to an archetype that does not fit with the typical image attributed to them of being defenceless and unaware, easily influenced by conventional and non-conventional advertising. On the other hand, the variations observed in their consumer behaviour are minimal, insignificant, while the number of minors capable of recognising the presentation of commercial brands is significant in audiovisual programmes.

These results appear to demand certain reflection about the supposed defencelessness of children, at least of those individuals selected for the study. On the other hand, it would be interesting to replicate the research with boys and girls of different socio-economic and educational levels, with the aim of evaluating whether the results obtained could be extended to the entire child population.

## Note

- 1 The analysis counted the number of choices, recalls or mentions, but not the number of subjects, since an individual can make more than one selection or can remember or recognise more than one brand.

**Table 3. Statistical analysis (McNemar Test)**

|                         |                           |
|-------------------------|---------------------------|
|                         | Danone_pre<br>Nestlé_post |
| N                       | 18                        |
| Sig. exact (bilateral)  | 0.008 <sup>(a)</sup>      |
| Sig. exact (unilateral) | 0.004                     |

<sup>(a)</sup> Binomial distribution has been used.

Source: own.

**Table 5. Statistics. Frequencies and percentages of the juice group (G1)**

| Response | Frequency | Percentage | Accumulated percentage |
|----------|-----------|------------|------------------------|
| No       | 7         | 29.2       | 29.2                   |
| Yes      | 15        | 62.5       | 91.7                   |
| N/C      | 2         | 8.3        | 100.0                  |
| Total    | 24        | 100.0      |                        |

Source: own.

**Table 6. Statistics. Frequencies and percentages of the yoghurt group (G2)**

| Response | Frequency | Percentage | Accumulated percentage |
|----------|-----------|------------|------------------------|
| No       | 1         | 5.6        | 5.6                    |
| Yes      | 17        | 94.4       | 100.0                  |
| Total    | 18        | 100.0      |                        |

Source: own.

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# Analysis of comprehension by deaf pupils of captioned television documents and criteria for improvement

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**Abstract**

*This article analyses how deaf students understand captioned cartoon programmes on Catalan television. Results indicate that students with deafness have problems in understanding cartoons, not only because the captions are too fast, but because literal captioning does not allow them to look at the image and extract meaning from its content. It is deduced that new captioning criteria should be introduced to facilitate reading of captions and the "reading" of images to improve understanding of television programmes.*

**Key words**

*Deafness, subtitling, television, cartoons.*

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**Resum**

*Aquest article analitza com l'alumnat sord entén els dibuixos animats subtitulats de la televisió de Catalunya. Els resultats indiquen que l'alumnat amb sordesa té dificultats per comprendre els dibuixos animats no sols perquè la velocitat dels subtítols és excessiva, sinó també perquè la subtitulació literal no els permet mirar la imatge i extreure'n una significació del seu contingut. Se'n dedueix que és necessari introduir nous criteris de subtitulació que facilitin la lectura dels subtítols i la "lectura" de les imatges per millorar la comprensió dels programes de la televisió.*

**Paraules clau**

*Sordesa, subtitulació, televisió, dibuixos animats.*

**Introduction**

The main problem with the social integration of people with deafness arises from the communicative barriers they come up against in the hearing world. Today, technological advances are helping to break down these barriers, one good example being accessibility to audiovisual content provided by captioning.

Since the captioning service began in the 1990s, almost total captioning of television programming has been achieved. For deaf people, this has created new expectations of access to communication, information and knowledge on equal terms with other citizens. Furthermore, with digital terrestrial television (DTT) and its multiple captioning options, caption quality itself has improved, beating the traditional teletext, and new services are offered.

Although it may seem obvious that the technological improvement in captioning will guarantee that television pro-

gramming can be understood by people with hearing impairment, no studies have been made in Spain to demonstrate that this is so. Furthermore, there has been no real reflection on how people with deafness combine reception of information from oral language, captions and images when watching television. That is, a great effort has been made to improve captioning in technological terms, but no consideration has been made of how this information is received by the main users of the service: deaf people themselves.

Are television captions really useful in helping deaf people to understand programmes better? Do people with hearing impairment have time to read the captions? Do they have time to look at and interpret the images? To respond to these questions, we must examine how people with deafness come to understand captioned television programmes, evaluating the functions of oral language, captions and interpretation of the image in the process.

## Studies on the captioning of television programmes

As noted above, many technology-based studies have been carried out, mostly outside Spain, on the formal and aesthetic characteristics required of captions, and on their users' preferences.

One of the issues on which most studies have been carried out is the speed with which captions are emitted. A range of studies coincide in indicating that the average speed of captions is estimated at 141 words per minute (Jensema 1998, Kirkland 1999 and Jensema, Danturthi and Burch 2000). Programmes with the fastest-moving captions are debates, news and television series, while the slowest are sports and children's programmes. Maxon and Welch (1992) point out that one of the variables which predicts the degree of comprehension of televised messages is the linguistic competence of the deaf person concerned. The authors consider that this medium uses more complex language than that spoken by people with hearing impairment, and requires them to have high enough levels of language and reading competence to understand the message. In Catalonia, the research group directed by Anna Torrent of the Department of Catalan Philology at the Universitat Autònoma de Barcelona, has analysed the linguistic style used in captions to obtain linguistic and discursive guidelines that when applied to captioning will allow it to reflect the variety of language use (Cros, Segarra and Torrent 2000).

According to Jensema, Danturthi and Burch (2000), the percentage of time spent reading captions is 84%, while only 14% is devoted to watching images and in 2% the screen is not watched.

This data shows the importance of learning and expertise in reading for deaf people to be able to access information from the television. The study by Jensema, Sharkawy, Danturthi, Burch and Hsu (2000) confirms that reading captions is a priority activity that dominates eye movement, while watching action in the images tends to be secondary. By using a technological system to analyse eye movement (Eyegaze Development System) it can be proved that television viewers start by looking at the centre of the screen, then they look at the captions, and after reading them, return to observing the action on the screen until new captions appear. The authors point out that the speed of the captions influences their reading time: the more quickly they are run, the more time is spent reading them, and the less time looking at the images.

Another aspect studied is the preferences of television viewers with deafness as regards the typeface, letter colour, location on the screen and way of presenting captions. Kirkland (1999) compares preferences in the presentation of captions in two groups of deaf people, one of school children and another of adults. The results indicate that there are differences between the two groups. The children prefer captions in the Helvetica typeface in white presented on a semi-transparent or totally transparent background and located depending on the speaker;

conversely, adults prefer captions presented in Times New Roman on a dark background and located in the centre of the screen.

Apart from any preferences that television viewers with hearing impairment may have as regards the characteristics of captions, it is interesting to review the reading difficulties of deaf people thrown up by the studies.

## The reading comprehension of deaf people

Comprehension of captions and the action taking place in a programme does not just depend on prior knowledge, it also varies with the viewer's linguistic competence. In the case of a person with deafness, this might be poor, in spite of technological improvements in the form of digital hearing aids and cochlear implants (Valero and Villalba 2004).

Jelinek and Jackson (2001) compare a group of deaf boys and girls with a group of hearing children with the same reading level. They conclude that the deaf children have more problems in generalising information and using their prior knowledge because they have less experience with oral language, and this affects their recognition of important information.

Readers use prior knowledge so they can make inferences and complete information that is not explained. Some skill with oral language and past exposure to diverse linguistic experiences are also required. Ramspott's study (1991) on the comprehension of stories by a sample of deaf children in Catalonia shows that compared with hearing children they are not as used to making inferences. This negatively affects the process of interpreting a text, although difficulty varies depending on how familiar they are with its content.

Reading captions is a special situation. First, because it demands great precision and speed in reading, and second, because television viewers cannot look back for example to find the referents of the text. As Nugent indicates (1983), this is why images seen on the screen are an essential support to facilitate comprehension of the message. In this regard, Braverman and Hertzog (1980) consider that the language level of captions is not an important factor in programmes with a high visual content.

## Comprehension of captioned cartoons

In view of the results of the studies on the reading competence of students with deafness mentioned above, we must ask what happens when a deaf child, only just learning to read, has to cope with the captions of a children's programme with high visual content like cartoons.

This was investigated in a pilot study (Cabra, Silvestre and Leal 2006) with a group of seven children with deafness aged 6-7 (1<sup>st</sup> and 2<sup>nd</sup> year primary pupils) studying in normal schools in oral mode. All had worn cochlear implants for at

least two years and had achieved good hearing gain. The participants were asked to say what was happening in a fragment of a *Shin-Chan* cartoon in which a short story was told after seeing it in two versions: one with sound but without captions, and the other with both sound and captions.

The first interesting element was the speed of the captions. Subtitles in a *Shin-Chan* cartoon have to be read at an average speed of 96 words per minute, while the average speed demanded of 1<sup>st</sup> and 2<sup>nd</sup> year primary school pupils is 40 and 62 words per minute, respectively. Taking into account that, as has been proved, comprehension levels and reading speeds of deaf students at these educational stages are lower than expected for their age, it can be deduced that, *a priori*, they will not be able to read or understand the captions. Added to which, the captions would also be too fast for their hearing companions to read. This lack of synchronisation between the speed of captions and the reading speed of deaf children means that they get tired of reading and most opt to watch television without captions.

It is therefore understandable that differences between comprehension of cartoons viewed with and without captions are not significant. Basically, the captions are used to complete information and obtain shades of meaning on what has been seen, but this does not always mean a better comprehension of the story's overall content. In fact, the conduct most frequently observed in deaf children is trying to remember as accurately as possible what the characters say instead of selecting relevant information and summarising it, so they do not retain the story's narrative structure.

This means that: a) captioning cannot be limited to the literal transcription of all the oral language. New criteria must be introduced to let viewers read and understand the captions but also look at the images to extract information, and b) it is important to prioritise captioning of narrative sequences that are difficult to infer, like intentions of characters that are not spelled out in visual or verbal form, over sequences including facial and corporal expressions of feelings and emotions, where the image already brings enough information to the receiver.

These results have been the starting point for ongoing work concerning improving the captioning of children's programmes as regards both captioning criteria and the preparation of didactic material. This material would be useful not only for improving deaf children's comprehension of televised information, but also as a learning resource and tool for improving the reading levels of all children, for use in the classroom and with television.

### Contributions to improving the captioning of cartoons

The need to define new criteria for captioning children's programming is the main implication of the study outlined above.

The design and application of new criteria for captioning car-

toons has been the object of a second study, to verify the criteria's suitability and effectiveness (Cambra, Silvestre and Leal 2008). The general criteria used for the adaptation of captions are as follows:

- Average words per minute required of primary readers: when captioning, the total number of words to be read per minute was lower than in the original version, adjusting to a reading speed that corresponded to the early years of primary education.
- Linguistic complexity of captions: the linguistic complexity of captions was not reduced. There were two reasons: there had to be synchrony between what was heard and what was read in the captions, and captions should stimulate language development. The morpho-syntactic structure was therefore respected, but sentences were shortened whenever possible.
- Length of time of captions on the screen: to allow longer reading time, captions were kept on the screen for longer, but making sure that they did not interfere with other oral emissions.
- Relevance of information: as regards the structure of narrations, captions were designed to highlight essential information in sequences where the plot had to be understood and the images were not explicit, such as characters' intentions, the conflict of the story, and the final result.
- Elimination of captioning of emotional states reflected in the images: external emotional states are normally clearly seen in the images and so were not captioned. Deaf children were left to infer their meaning. In fact, the interpretation of emotional states from cartoon images is a very useful activity to help deaf children improve their social interaction.

The study involved a sample of 16 pupils (eight girls and eight boys) in the 2<sup>nd</sup> to 4<sup>th</sup> year of primary school (aged 7-10) with prelingual deafness (deafness appearing before language acquisition) and with severe or profound hearing loss. All except one child belonged to a hearing family and went to normal oral schools. They used the oral language to communicate and in the classroom.

This study proved that captioning designed using the criteria indicated above to facilitate the reading of captions and leave time for "reading" the images considerably improved comprehension of cartoons, whatever the speed levels or reading comprehension of the pupils with deafness in the sample. So, for example, the characters' intentionality and the conflict, sequences that had previously caused greatest difficulty in comprehension but are key to understanding the story, were correctly identified by most participants. It was interesting to note that the expression of emotions, ignored by almost all the children with deafness in the earlier study (Cambra, Silvestre and Leal 2006), was referred to by all except two of the participants in this study, possibly because they had more time to look at the images.

To sum up, the results obtained contribute criteria for reflection of great interest for proposing modifications to the caption-

ing of cartoons, taking into account the specific characteristics of the child population with deafness and their need for time both to read captions and to observe and allocate meaning to images.

Taking these considerations into account may help pupils to learn to read, whether they are deaf students or students who although not hearing-impaired for a variety of reasons (like not having Catalan as a first language), require to complement their understanding of oral language with written input.

Finally, we believe that it is very useful to transmit to families and educators the reflection brought by this line of research on the complementary function of interpreting the image and linguistic information in the overall understanding of the audiovisual message. In fact, educators may help the children themselves to reflect on the sources of information, and the need to read captions or interpret images, depending on the context, to obtain specific information.

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## Critical book review

SÁDABA, T. *Framing: el encuadre de las noticias. El binomio terrorismo-medios*. (1st ed.). Buenos Aires: La Crujía, 2008, 251 pages.  
ISBN: 978-987-601-028-3.

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### Framing reality to communicate it

Teresa Sádaba has a doctorate in communication from the Universidad de Navarra, where she is also a lecturer. The exact objective of her thesis, entitled “La teoría del encuadre desde una perspectiva simbólica” (*The theory of framing from a symbolic perspective*) and defended in 2001, is the analysis of framing theory. *Framing: el encuadre de las noticias. El binomio terrorismo-medios* is what has come from this work, which was published in 2006 by Ulzama Ediciones in its first edition (*Framing: una teoría de los medios de comunicación*).

A few years ago, Bryant and Miron (2004) included framing theory among the “26 most distinguished theories” of those related to mass media. In March 2007, the *Journal of Communication* published a special edition on *agenda setting*, *priming* and *framing* with the aim of maximising knowledge on theorisation and research in this area. Just two signs that indicate how up-to-date and opportune is Sádaba’s book in the field of communication.

Throughout the book, Sádaba seeks to answer a series of questions, such as “What is framing?, Why is it so relevant? What can we learn from it? What can it do for us? What is its relationship with the media?” (page 13). This is no simple task since, on the one hand, there are different definitions for the term *framing*, each with significant nuances and, on the other, the real challenge lies in making the concept operational and in studying framing processes. The author does this well and the result is a theoretical book, full of references to authors and trends but also making her own proposals and exemplifying her own statements with case studies on the relationships between the media and terrorism. Despite this dual approach, it is important to remember that the book is much more theoretical than an empirical analysis (the case studies occupy 27 out of the book’s 251 pages).

In the first chapter, entitled *The origin of the framing theory* (“El origen de la teoría del *framing*”), the author locates this concept within the context of interpretive sociology, giving a brief introduction to symbolic interactionism, phenomenology

and ethnomethodology, and takes from this her first definition: “Goffman’s frames are forms that are transmitted and shared by society, through which reality can be seen” (page 35). After analysing the research into social movements, Sádaba suggests that, although frames of media discourses are like maps – and that frames used by the media arise from journalistic work – this is inherent in the dynamic of the media itself and is not due to an ideological intention or an explicit desire for power. For the author, therefore, frames form part of the significant news process, making it possible for the audience to identify with the medium, even though authors such as Gitlin believe that frames organise social reality from a dominant position.

The second chapter places framing within the context of the theory of communication. If the previous chapter ended on the idea that media frames are providers of significant meanings, in this chapter Sádaba provokes debate about objectivity: “The answer provided by framing theory to objectivism is to negate its postulators, as it argues that, when recounting what happens, the journalist frames reality and introduces *his* point of view” (page 68). The author then introduces ‘agenda setting’ theory and a new debate: the ‘framing-agenda’ relationship. While McCombs and Ghanem consider framing to be a second level of agenda setting (the attributes level, since the media tell us what to think about certain things), other authors (Sádaba among them) believe that this is not true because framing is about interpretation not accessibility, and frames are situated above all within the sphere of news creation, not so much in the sphere of effects (which is another debate altogether). That said, the chapter focuses on the use of framing within the theory of communication, making reference to input from seminal authors and texts, to confront the definition of ‘frame’ as a selection of reality or as a key organiser of the news.

The next two chapters deal, respectively, with the cultural dimension and the representative dimension of framing, allowing the author to introduce her own proposals and look at frames from a symbolic perspective. “The symbolic perspective of framing highlights, above all, the relationship between

frames and concrete cultural contexts, extending culture as the shared arena for actions and meanings" (page 113). Thanks to media discourse, people construct their own meanings and now journalists develop these meanings according to a particular public opinion. Consequently, what ends up as relevant to the explanation is, especially, the communicative transaction produced between journalists and audiences, since the former, as well as taking their personal and professional values into account, also consider the culture and society to which they belong. Still, the cultural dimension must complement the representative dimension by overcoming a habitual lack in theoretical developments about *framing*, that have focused more on knowledge itself than what is not known and, as a consequence, haven't fully explained the transformation that occurs between what happens and what appears in the media. Sádaba retains Geertz's affirmation that symbols have the ability to be representative of and for reality. Symbols, therefore, express the world and at the same time give it shape. Communicative transaction and the double representative capacity of symbols are the two most relevant principles of the symbolic perspective of *framing*.

The author concludes by saying that we must think of framing beyond selective cognition and the transposition of knowledge, without interpreting frames, referring only to specific aspects or concrete characteristics such as selection, the same textual content or ideological focus, and overcoming such reductionist visions as Lakoff's, which only concentrate on language and give pride of place to political parties in the creation of frames. Rather, one must talk of shared symbolic production and consider that "a journalist's knowledge is linked to his communicative task and this is the key area that framing theory must highlight when dealing with the media" (page 212).

Regardless of whether one shares Teresa Sádaba's theory on the symbolic perspective of framing, her book gives us an accurate picture of the authors who have developed the concept and the debates that have emerged around it. This is a valuable book for those studying media theory because it connects the concept of framing and its current developments with the theoretical basis on which it is founded, and presents the debates surrounding the concept, allowing us to arrive at our own conclusions. It is a work that scholars in this area can also complement with the published articles from Number 1, Volume 57 of the *Journal of Communication* (where one can read debates that have taken place after the publication of the book, while pointing to the same direction) and a key work in this field such as *Frame Analysis*, by Erving Goffman, translated into Spanish by CIS in 2006.

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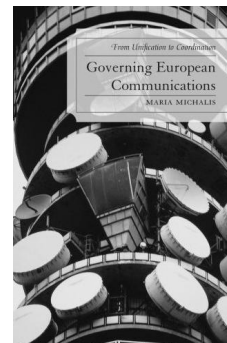
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MICHALIS, M. *Governing European Communications. From unification to coordination*. 1st ed. Plymouth: Lexington Books (Critical Media Studies), 2007, 353 pages. ISBN: 978-0-7391-1735-4.

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### **Governing European communications. A political economy approach**

Dr. Maria Michalis is a lecturer at the University of Westminster. Her career in communication policy research is extensive and she has dealt with issues related to policies for competition, public service, digital television and universal service. She has actively contributed to various international scientific journals and has published several chapters in books. Moreover, she is vice-chair of the Communication Policy and Technology Section of the International Association for Media and Communication Research (IAMCR).

In this book, Dr. Michalis exhaustively documents and thoroughly analyses the emergence and development of the European governing of communications. This concept, of polyhedral nature, has been studied and defined from several theoretical perspectives of the Political Studies, it's approached with regard to the organizational and leadership capacity of the political system (Gamble 2000:110). The text is the result of a far-reaching empirical study based on primary sources of information, observation of the consultation processes concerning community public policies and 25 semi-structured interviews. Moreover, the author considers and interconnects the contributions of prior research that has tackled the object of study that is the focus of the book (Collins 1994; Humphreys 1996; Levy 1999; Krebber 2001; Ward 2002 & Harcourt 2005, among others). Starting from this basis, Michalis carries out an innovative analysis based on three pillars.

Firstly, Michalis goes over the theoretical perspective offered by the political economy of communication to overcome the dichotomy that has characterised previous studies. Her analysis of governance therefore goes beyond the study of different styles of public policies, of the different administrative cultures or different interests in the European Union and its member states. Her research focuses on the critical observation of the influence played on governance by factors such as the evolution of capitalism, the redefinition of the role of state, of the internationalisation and globalisation process and various fac-

tors from the economic, industrial and technological spheres.

Secondly, Michalis makes an effort to jointly deal with telecommunications and the media. Frequently the study of the two sectors is carried out separately, tackling very specific issues. This text aims for a broader view of both sectors to fully explore the relations between these two and how public policies affect these relations.

The third innovation that characterises this book is that it tackles the issue of governance without anchoring itself in an excessively regulatory or traditional view centred exclusively on studying public and regulatory institutions. Michalis goes beyond this and analyses to what extent and how the participation of a larger number of actors – not only new public institutions but also interest groups, private firms and civil associations – contribute towards the evolution of EU governance over telecommunications and the media.

The introductory chapter defines governance based on concepts from different theoretical perspectives, paying particular attention to prior work in the area of political science and European studies. It also details and interrelates the elements from the political economy that will be the key instruments for analysis in the subsequent chapters.

The book is then ordered chronologically. Each of the five chapters covers approximately one decade, from the end of the 1940s to today, 2007. However, this time-based segmentation is approximate and what takes priority is the identification of key issues that distinguish each period.

In chapters two and three, which cover 1940 to 1960, the book explores the roots of cooperation between European states in the area of telecommunications and postal services. It also provides an extensive review of the historical and political events leading to and affecting the emergence of the first supra-national public institutions and professional organisations to influence communications (International Telecommunication Union, European Broadcasting Union, European Conference of Postal and Telecommunications Administrations, European Economic Community, Council of Europe, among others). Michalis analyses the birth of community industrial

policy aimed at this sector and identifies as the main cause the fear of being technologically dependent on the United States. The text also highlights the difficulties of European governance in this period. Community institutions were incapacitated both by their lack of legitimacy and also by the particular and uncoordinated actions of national administrations. However, the lack of results from intergovernmental cooperation would lead to the creation of a common European market and to a more important role being played by community governance.

The fourth chapter (1980s) analyses the process that Michalis has called “defensive Europeanization”, caused by the realisation that the international situation required a joint European response. This is the time when community institutions focused on planning policies for infrastructures and technological standardisation and implemented protectionist measures regarding the trade of products and services. Moreover, the research and development plans attempted to favour the emergence of “European champions”. In the area of the media, particular attention is paid to the negotiation process of the Television Without Frontiers Directive, especially to its evolution, from an initial argument focusing on democratic values to its specific form in a text centring on industrial issues.

The fifth chapter (1990s) tackles the liberalisation and internationalisation of telecommunications and the media. Michalis thoroughly examines the causes behind the evolution of European institutions and their style of intervention. The failure of certain initiatives to control industrial policy and the consolidation of neoliberalism meant that governance focused on issues such as competition and competitiveness. European institutions and national administrations went from being managers or regulators to mere enablers of the market. For their part, market actors acquired more influence over the political agenda and their support became vital for the implementation of public policies. The result was, on the one hand, the emergence of more complex decision-making networks and, on the other, a more frequent use of less interventionist instruments of action.

The project of the information society is the nexus between the 1990s and the period 2000-2007, analysed in the sixth chapter. In her analysis, Michalis states that convergence and globalisation have reinforced telecommunications’ own logic, influencing the style and objectives of public policies. Although public discourse has not disappeared, the cultural or social issues of the media have taken second place to the achievement of industrial and economic goals. In this chapter, particular attention is paid to the processes to revise policies, both media and telecommunications, and to the effort to coordinate them, revealing the supremacy of the concept of competitiveness as a current leitmotiv in governing European communications.

The final conclusions review those given in each chapter. A view across the board is therefore missing, concerning the elements that condition European governance, which should reinforce the research perspective focused on the political economy of communication.

Maria Michalis’s book is a must for researchers and experts in the field of European communication policy, although it also brings elements for a better comprehension of the world trends. The historical review and exhaustive analysis of the evolution of public intervention and its actors make it an essential instrument in understanding the wide range of factors that condition European telecommunication and media policy, as well as the links between the two sectors. This book does not necessarily need to be read from page one onwards and the text is well organised so that it can be “dipped into” and consulted on specific points.

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### The State's new public television

Right now, we find ourselves in the midst of television's transformation by the digital migration of broadcasting systems - terrestrial, satellite and cable - and the entry of internet, ADSL and mobile telephony platforms. These changes are being examined in an increasingly global fashion, yet attention is still being paid to broadcasting by Hertz waves because of the reduction in the frequency spectrum and because of its traditional use as the basis for universal public television service, i.e., providing all citizens with television free of charge. Governments are attempting to respond to the need to provide public services through new generalist, thematic models in the democratic, social and cultural realms. After the abuses of state monopolies, when governments manipulated television to suit their partisan goals, the trend is to seek models in which public television continues to be directed and managed by an authentically independent public entity in a mixed system of loyal competition with the private sector.

Reform Law 17/2006 of 5 June on public radio and television approved by Parliament laid the foundations for forging ahead with reforms in Spain. The object of the book under review is to analyse this law from the legal and financial perspectives in a broad, comparative context that allows us to probe the issue thoroughly, appreciate its originality and supply arguments for discussion.

The book is divided into two clearly differentiated parts: the first, entitled "European audiovisual regulation: public television reform in a digital transition environment", is a very appropriate approach that focuses on this dynamic line of change in order to be useful in the future, rather than serve as an historical contribution. The second part offers an analysis entitled "The application of European audiovisual regulations in Spain" through two key dimensions: the concept of State aid applied to public television and the overhaul of Corporación RTVE, Spain's public television network. Each part, in turn, is made up of two chapters.

Chapter one, by Mercedes Muñoz Saldaña, lecturer in

Information Law at the University of Navarre, addresses the basic demands in EU policy as regards the configuration of public television in Europe in its definition of public service and financing. The author highlights the legal imprecision of the conception of public service and contrasts it with "services of general economic interest" as a category that also applies to broadcasting, which has arisen from regulations on competition and is based on liberalising approaches to television markets. The jurisprudence created by the European Court of Justice in the case of Denmark's TV2 is used to clarify this approach.

Chapter two, by Julián Rodríguez Pardo, lecturer in Audiovisual Communication at the University of Extremadura, delves into the study of digital terrestrial television as a major technological development that makes it necessary to revisit and overhaul all the legislation on the distributions of frequencies in force, as well as redesign public service and finance innovation in the new businesses it originates. In this case, the law enacted to promote DTT in the European Union is reviewed, as is the comparative law regarding legislation in Germany, Spain, France, Italy and the United Kingdom. The conclusion drawn is that the situation is still wide open and in transition while awaiting Europe's definitive digital switchover in 2012 to have a clearer appreciation of digital migration's repercussions.

Chapter three, written by Arancha Pérez Moriones, lecturer at the University School of Business Law at the University of the Basque Country, tackles the issue of financing the new Corporación RTVE within the principle of free competition. She examines RTVE's evolution from its inception and focuses closely on the pillars of the two major changes in the entity: the Radio-Television Statute of 1980 and the proposals in the so-called "Sages' Report" on reforming public media and its transposition into the Law of 2006, currently in force. The work again insists on the financing angle, in this case in light of the principle of free competition. Through an extremely thorough analysis of European jurisprudence, special emphasis is laid throughout an exposition of the public debate over the

accounting principles underlying State aid for public television under EU regulatory demands. The conclusion reached is that the RTVE Reform Law complies with these demands and that imprecision still lingers when specific measures are laid down. The author believes these measures should be conducted within framework mandates and programme contracts between Corporación RTVE and the government.

After these frameworks, chapter four, by Ana Azurmendi, Associate Professor of Information Law at the University of Navarre, examines RTVE's overhaul in 2006. The author looks at reforms in other countries and analyses the contribution of the "Sages' Report" as the Law's immediate context, as well as the basic documents that served as the foundation for the BBC's reform, which was launched in January 2007. The results from the two models are compared and a preference is voiced for the orientation of the BBC's reports; the Spanish report's proposal is criticised for having based its approach on the concept on public duty. The analysis of the reports is overly protracted, especially since the laws are already in place and in fact are partly sustained, albeit with major differences. What's more important is the model established by the law, something that calls for a more thorough and critical analysis, instead of the brief, although very precise, summary offered here.

In conclusion, this work is of great interest to academics and professionals as well as the public and private companies involved in the legal and economic debates over how public television should be organised. A highly valuable work in documentary terms, thanks to the wide-ranging bibliography, legislation and website addresses to which it refers, which will be helpful in tracking the changes to come in the future. However, the reason why public radio has been shunted to the sidelines is not clarified, since all the reforms tackle the two public media at the same time - albeit with their corresponding specific nuances - because of their inseparable links to each other and their, at times, different solutions for similar situations. More thorough references to content and services are also missing. The reform is global and its analysis also requires a global view. The legal and financial approach serves for very little if it is not involved with content and services, the only *raison d'être* for the communication media in their connection to citizens.

GARCÍA LEIVA, M. T. *Políticas públicas y televisión digital. El caso de la TDT en España y el Reino Unido*. Madrid: Consejo Superior de Investigaciones Científicas, 2008. ISBN: 978-84-00-08652-7.

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### Examining public DTT policies in Europe

The implementation of digital terrestrial television (DTT) in Europe is an open process that continues to pose enigmas. The role DTT will play in the audiovisual market is still uncertain, as is this new technology's contribution to the democratisation of communications. María Trinidad García Leiva tackles these issues in her work *Políticas públicas y televisión digital. El caso de la DTT en España y el Reino Unido* through a detailed analysis of the factors and stakeholders playing a part in introducing DTT in Europe.

This work's contribution to the scientific community is relevant since, from a critical perspective and taking European measures as a benchmark for digital television, the author probes DTT policies in the United Kingdom and Spain and compares them in an unprecedented approach. The added value of this study with respect to others published recently in Spain (Bustamante 2008, Marzal and Casero 2007 and Caballero 2007) lies in its methodological proposal for analysing public digital television policies and evaluating the Spanish and British experiences within the European context. Furthermore, this book is a must-read for scholars in this area of research, given its documental rigor and vast amount of information, as well as the organisation of its contents.

The work, fruit of exhaustive research, is divided into six chapters. In the introduction, the author explains the study's objectives: on the one hand, to interpret the public DTT policies applied in the United Kingdom and Spain in the European arena and, on the other, to analyse the television models stemming from them. However, the ultimate goal of this lecturer at the Complutense University is "to understand the challenges posed by the so-called digital age" (p. 23). García Leiva comfortably surpasses her goal by properly identifying the challenges posed by the digitalisation process of Hertz-based television and the ominous risks and goes so far as to proffer suggestions for tackling these obstacles.

The decision to study the United Kingdom and Spain is due to the existence of major points of coincidence (these two

countries were the first to attempt to implement DTT in a payment platform model and failed in the strategy), yet also because of the interesting divergences between them that emerged during the DTT relaunch.

The study and subsequent comparison of policies in both countries is based on the application of a complex and interesting methodological tool: a table of analysis devised from a critical point of view, which is explained in chapter two in a detailed lesson on the conditions and stakeholders who may play a role in configuring digital television policies. These elements, which are described in full and illustrated with examples from Europe, are focal points of an analysis that encompasses different categories, each of which represents a divergent political option. The researcher, who claims that "a communicative policy that can truly be described as such must always have citizens at the centre of its concerns" (p. 59), formulates her proposal by evaluating policies in terms of democratisation and, in doing so, achieves her main goal: to determine the degree of social participation in the different areas of public policy, such as message production, decision-making and devising the policies themselves.

Chapter three contains a detailed description of the gestation process of DTT policies in the European Union to introduce readers to the European context. Next, the author studies the British and Spanish experiences meticulously by following the proposed methodology, which allows her to diagnose the degree of democratisation in each country's policies and offer the results of the comparison.

In the author's view, the United Kingdom and Spain share a DTT model that is far removed from constituting a plural, democratic service, since the existing order in Hertz-based analogue television architecture is being preserved - something that prevents the entry of new stakeholders - and as a result, the integration of factors from the audiovisual market is also being promoted. The analysis also sheds light on the ambiguous role of British and Spanish public television in implementing digital terrestrial television. Furthermore, it verifies that these countries' discourse tends more towards the economic-

industrial or political potential than towards the new technology's social and cultural benefits. Moreover, service receivers are being treated by operators as mere customers and not as citizens and the participation of social stakeholders in developing DTT is almost imperceptible.

As for the main divergences in these countries' performance, García Leiva highlights those stemming from the regulator's characteristics (there is one sole, independent and convergent regulator in the United Kingdom, whereas there are multiple public figures in regional and national arenas in Spain, each with its own political criteria). Another difference can be traced to the forms of regulation: while regulation in the United Kingdom is based on the "dictating of norms and the incessant search for consensus" (p. 298), in Spain, it is based on "governmental and regulatory-type" mechanisms (p. 299). Two different approaches are also noted with respect to DTT coverage, which is more local in Spain and more national in the United Kingdom. Although the author does not seem to consider this question very important, it needs pointing out that the extension of Hertz-based TV digitalisation in Spain is taking place from the start at three levels: national, regional and local. This undoubtedly hinders the process of implementing DTT, while it enriches it in terms of pluralism and democracy. The results of its application notwithstanding, this obvious strength in Spanish public policies contrasts markedly with the lack of interest in local television observed in British policies, which will only take this possibility into account after the digital switchover and always as a possibility, since no bandwidth has been reserved for it and it will have to enter into financial competition with other operators and uses when the spare bandwidth is auctioned off by Ofcom to the highest bidder.

In any case, aside from these divergences, the common indubitable fact in both countries, as demonstrated by García Leiva, is that the opportunity to democratise the service is being wasted. In view of this, the author proposes to reorient European DTT policies towards major public intervention and regulation through a comprehensive legal framework that encompasses the entire audiovisual sector. She also believes that guaranteeing the transparency of the entire process is indispensable and advocates subjecting all decisions to public consultation to this end. In the name of pluralism, the author believes that frequencies and licenses should be distributed by balancing "new/existing, local/regional/national, public/private, for profit/not-for-profit stakeholders" (p. 317). This diversification of stakeholders will lead to an expansion of the offer of content, which will be accompanied by greater innovation, quality and the guarantee of open access. García Leiva believes it is fundamental for public service to recover its leadership in the process, not only to promote itself but also to correct possible discrimination, yet she also believes it crucial to find a viable business model that provides continuity to the service without risking new failures.

In short, García Leiva's book vindicates a policy that establishes a democratic DTT model to guarantee universal access

to the service, understood as a way of incorporating citizens into the Information Society and as an alternative for achieving "a fairer and more social model" (p. 319).

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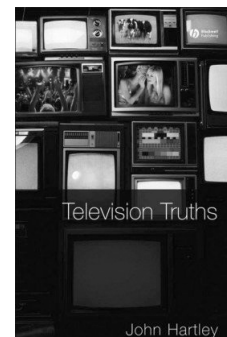
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## Television Truths

In *Television Truths*, John Hartley rigorously analyses television culture and suggests that academic studies be overhauled to boost their prestige and address the changes the media is undergoing. According to the author, “television truths” are “persuasive, powerful and penetrating” (p. 7) and fulfil several functions in public and private life, which range from legitimating actions of war, businesses and the public administration to influencing private behaviour.

Hartley is a lecturer at the Queensland University of Technology and the Australian National University and, in 2001, was appointed to the Australian Academy of the Arts. Hartley previously taught and conducted research at a number of British universities. He is considered one of the greatest scholars in the epistemology of television, popular culture and cultural studies and has written distinguished works such as *Creative Industries* (2005), on the political, social and economic function of cities, companies and creative economies, *A Short History of Cultural Studies* (2003) and the now classic *Uses of Television* (1999).

The author argues that we have all become experts as well as critics, and not just of programmes, genres and the stars that fill the small screen but of the production system as well. However, the author claims that academic studies on television are undergoing an epistemological crisis and finding themselves sidelined from the prevailing discourse. Hartley points out that scholars who voice their views on television in the media often come from areas as diverse as psychology, marketing, political economics, paediatrics and criminology and devote themselves exclusively to denigrating content in most cases. However, Hartley believes that academic studies on television should shun an essentially negative approach, since the field generates media knowledge with profound cultural and political implications. In this sense, television studies understood as a “philosophy of popular reality” (p. 8) have a great deal to say not only about the medium, but also about education, politics (the relationship with the consumer-citi-

zen), creativity and the conception of society.

The book is divided into four parts. The first (*Is TV True?*) addresses the bases of knowledge and interpretation of the medium and shows how new paradigms associated with modernity are affecting contemporary thought, while it analyses television's historical evolution in a global environment. Part two (*Is TV a Polity?*) considers the relationship between the audiovisual medium and the audience within the context of notions of mediated citizenship and the consumer-citizen. Part three (*Is TV Beautiful?*) examines television content through examples of live TV, reality shows and sporting events coverage. Part four (*Metaphysics of TV*) offers a metaphysical point of view. Hartley contends that academic literature has neglected audiovisual historiography and he reformulates a method that allows us to investigate the broadcasting industry's evolution, in this case, focusing on Australia. Lastly, the author puts forward a proposal for television studies in university education in the midst of the age of democratised media and “distributed truth”, in which user-generated content reconnects creative, critical and communicative aspects.

The burden of meaning in the chain of value in television production has now shifted from the creator/producer to the audience, who is the one that certifies a programme's success through ratings, surveys, polls and messages in a kind of “democrataintment” that satisfies consumers and voters (pp. 30-32). Hartley conceptualises the global dimensions of several phenomena that had previously only been experienced in the local or national arena. In this sense, he describes in detail how the coverage of floods in Asia during the December 2004 tsunami was an example of the globalisation of disaster, in which the global system of capturing and exchanging of images, broadcasting networks and the audience's response was mobilised for the public good (pp. 70-73).

The book devotes two chapters to reality shows as a continuously mutating format capable of interpreting anything that may come up and pays special attention to programmes such as *Supermodel*, *The Eurovision Festival*, *American Idol* and *Celebrity Big Brother*, in which the audience's plebiscite

becomes a response to the challenge of consumer activism and a way to reform democracy in the creative industry. Hartley contends that *Celebrity Big Brother* is a worthy successor to Shakespeare's dramas, although the interpretation of what goes on in the house ranges beyond the meaning of the events and obeys the viewers', bloggers' and voters' judgements, whereby privacy becomes public property in which anybody can traffic.

Most of the arguments in the book's final chapter advocate overhauling communication studies. With the internet's appearance, all users have become potential producers of multimedia contents. Thanks to the computer screen interface, television spaces are integrated into online services and the offer is becoming synergic and compulsive. Thus, television, which is increasingly personalised and interactive, appeals to one's own experience. The author emphasises four areas of research: a) technical: convergence, integration and interactivity; b) policy: the new economy, the Information Society and creative industries; c) employment: the massive change in kinds of jobs in small companies and service providers and d) consumers: the creation of content and innovation promoted by users and social communities. Although corporate stakeholders are still powerful players, the time is ripe for innovative companies supported by values such as research, interdisciplinarity, internationality and integration (ppp. 256-260).

In short, Hartley's work commendably provides enough examples and proposals to accompany and clarify his theses in a sprightly, rigorous manner, making this book a must-read for those interested in studying the medium of television.

CASTELLÓ, E. *Identidades mediáticas. Introducción a las teorías, métodos y casos*. Barcelona: Editorial UOC, 2008, 295 pàg. ISBN: 978-84-9788-738-0.

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### For research into the media and identities

Castelló, E. *Identidades mediáticas. Introducción a las teorías, métodos y casos*. Barcelona: Editorial UOC, 2008, 295 pp. ISBN: 978-84-9788-738-0.

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All text is *text within context*, hence if an analysis dispenses with this evidence, it runs the risk of missing the points whence flows a good part of what the text contains: style, strategies, intentions, etc., in short, a good part of what gives it meaning. This idea runs through Enric Castelló's work, modulated in forms on different objects: when he supports symbolic representation as a result of socially anchored discursive practices, when he defends culturalist theses on meaning as a textual proposal that has just been updated or constructed in the diverse circumstances of its reading and interpretation, and even when he warns us against every essentialist consideration of the social, changing, movable and constantly transforming identities in the multiple situations in which they are created, expressed and circulated. All text is text within context and so is Castelló's.

*Identidades mediáticas* is based on work the author conducted to prepare his doctoral thesis on national identity in TV fiction series, in which he studied Catalonia's case. An undoubtedly forceful choice, since it compelled him to consider a concept – identity – which is complex in its theoretical formulation (What is identity?), methodological management (Where and how we can understand it in its empirical form?) and practical consequences (Why should identities be studied?). As Miquel Rodrigo points out in the book's introduction, identity is a key concept in social sciences at the turn of this century, revitalised now by the advent of a second modernity

whose progress is driven by seemingly contradictory forces and ideas (globalisation and localism, cosmopolitanism and communitarianism, connectivity and fragmentation), in which every effort at comprehension comes up against the controversial issue of identities, no matter what.

Orienting oneself in this prolix stage is not a simple task and even less so for those who are about to take their first steps in social research. When Castelló was starting out on his thesis, he lamented the lack of a roadmap to guide him, to point out milestones and reference points, known territories and zones to be explored. Since no such roadmap existed, he proposed to draw one himself and the result is this work, the book "I wish I'd encountered during the research process" (p. 21). Hence, *Identidades mediáticas* is postulated as a roadmap, a tour guide for those venturing forth to get to know the media and social identities; this is the context in which we should appraise the interest in and benefits of what Castelló proposes.

Although the subtitle delimits something like three fields of play (theories, methods and cases), the text is more like a two-part structure: first, the current status of the issues involved in the different theoretical proposals on social identities is defined and afterwards the themes of media and identities are addressed in order to identify theories, propose methods and exemplify via cases. The first part ("Entendre les identitats socials") is resolved plainly and thoroughly. Here, the author uses excellent criteria to delineate what he considers to be the four major theoretical perspectives for tackling the study of identities (historicism, constructionism, technologism – inevitably – and postmodernism) and is careful, with even better criteria, not to present them as opposing schools but rather as complementary viewpoints of a multifaceted object to the effects of these viewpoints: identities are created during historical processes, constructed in social interaction, transformed by communication technologies and are now acquiring a fragmentary character. All of these theses are compatible with one another and the researcher, guided by this roadmap's author, would do well to follow the recommendation of integrating diverse ideas to grasp such a complex phenomenon.

In part two, Castelló's mapping goes from sketching the terrain of theories and methods to analysing the relationship between the media and social identities and refers to several available studies on specific objects in this theme (migrations and information; national identity and television fiction; gender and advertising and young people and mobile phones). To make order out of the current status of scientific knowledge on the media and identities, the author proposes a tour of the different schools of thought or paradigms of communicative research - structural-functionalism, critical theory, symbolic interactionism and cultural studies - in order to demonstrate the progressive advent of an "identity-based shift" (p. 167) in communication studies. In fact, this involves a kind of reinterpretation or revision of those paradigms from an identity standpoint, a suggestive thesis yet one teeming with risks, because history explained with a teleological vocation (things happen in a certain way until there is a shift in their evolution) must necessarily mark a point of rupture that can only be at the expense of having skilfully removed any affiliation with what preceded it.

According to Castelló, this point of rupture in the issue of media and identities comes about with the maturity of the interpretivist and constructionist perspectives (symbolic interactionism, cultural studies), graphically illustrated as one step from the idea of a society of masses to one of communities, precisely to reinforce the thesis that the issue of identity is taking centre stage. This approach deserves at least two comments. In the first place, it is not necessary to wait for constructionism in this conceptual transition, since the best contribution of mass communication research (structural-functionalism, to summarise), with Lazarsfeld in the lead, would probably be the rediscovery of this community (and therefore identity-based, if you will) factor in mass communication processes. Secondly, if the debate is made to revolve around this conceptual transition of mass to community, the realm of reflection on and study of the media and identity would apparently be reduced to the specific area of audiences and their relationships (use, interpretation, appropriation...) with media discourses.

Aside from these considerations, I believe that the roadmap Castelló sketches on the theoretical perspectives that converge in the study of the media and identity would have been richer if the criteria applied in the first part of the work had also been applied here to put the diversity of the theoretical proposals he tackles in order. The first part is a very effective explanatory strategy in pedagogical terms: Castelló identifies a series of particular issues related to the general theme of social identities and then proceeds to gloss the different theories and conceptual corpora related to each issue (the historical conformation of identity, the impact of technology, today's fragmentation, national identity, etc.). Applying these issue-based criteria would have allowed particular fields or realms of research within this diverse theme of the media and social identity to be identified; then the current status of the question could have been based on each of these areas, e.g. the depiction of iden-

tity in different media discourses (information, fiction, advertising, etc); the reception, interpretation and use of media representation as an ordinary cognitive resource; the social effects of these discourses; their production mechanisms or, finally, the influence exercised by media ownership or the circulation of cultural products, thoroughly addressed by the political communication economy.

All this is present in Castelló's work, but with a certain dispersion that reduces the pedagogical efficiency of the second part of the book, in my opinion. And pedagogical efficiency, its usefulness "to new researchers in the field of identity" (p. 233) and as a guide to this "labyrinthine debate" (p. 270) is what justifies this work. From now on, anyone who ventures forth into this prolix, controversial question of the media and identities will not be able to lament, as the author did, the lack of an extremely valuable guide with which to strike out down the road.

## Books review

ALMIRÓN, N; JARQUE, J.M. *El mito digital: discursos hegemónicos sobre Internet y periodismo*. Barcelona: Anthropos, 2008, 176 pages. ISBN: 978-84-7658-866-6



This book could be described as an attempt to swim against the tide in the flood of books that address technological digitalisation in general. The authors claim that a fallacious myth exists around the virtues normally claimed in relation to ICTs and specifically their application in the world of journalism. The *digital fundamentalist narrative* is considered to be religiously mystic in its psychosocial aspect, an advocate of

technological determinism and neo-liberal regarding the economy and conservative regarding policies. By analysing the related discourse as a methodological resource, the authors reach a synthesis of propositions behind the digital myth: the conception of history as progress, the consideration of the current scenario as the advent of a “new age”, the notion of scientific-technical progress as a driver of social change, the hegemony of instrumental reason, the proposal of technologisation as an improvement in the quality of life, the belief in a rational society and support for a knowledge-based meritocracy. In this sense, the authors conclude that all these proposals were shared by the pre-digital techno-utopias of the nineteenth and twentieth centuries, i.e. the digital myth is not as new as it may seem.

DE MORAES, D. (coord.). *Sociedad mediatizada*. Barcelona: Editorial Gedisa, 2007, 197 pages. ISBN: 978-84-9784-160-3

Dênis de Moraes has coordinated this volume, which reflects on the changes and new dilemmas posed by a society saturated with audiovisual impacts and uneven access to technologies and knowledge. Concepts such as diversity, exclusion, identity and democratisation are analysed by the seven intellectuals De Moraes has brought together in order to analyse the media's



socio-cultural influence on an unequal society. The book is divided into two sections: the first, “Technological culture and mediatisation”, includes articles by De Moraes himself on cultural commercialism and media saturation, by Jesus Martín Barbero on the revitalisation of identities and the revolution of technicities that are transforming our societies’ culture, and by Guillermo Orozco on education’s role in the new communication ecosystem. The book’s second section, “Society in networks and communicational mutations”, features articles by Manuel Castells on the need to reform copyright to ensure that the disadvantaged have access to power and by Armand Mattelart questioning the liberal project of the New World Order of Information, which is being imposed in the name of consumer freedom and freedom of trade.

COBO ROMANÍ, C.; PARDO KUKLINSKI, H. *Planeta Web 2.0. Inteligencia colectiva o medios fast food*. Mexico: Flacso, 2007, 162 pages. ISBN: 978-84-934995-8-7



This book, which can be found on the internet free of charge under Creative Commons' license, outlines a theoretical framework for the internet's digital Darwinism and a roadmap of interpretations for those interested in an in-depth knowledge and understanding of Web 2.0, "a concept at a stage of planned terminological obsolescence",

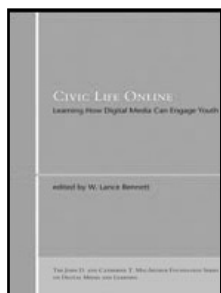
in the authors' words. The book's seven chapters encompass an introduction to Web 2.0, or the social web, its principles and essential elements, an analysis of Berners-Lee's concept of intercreativity, which launched the internet, and a description of the basic notions related to Web 2.0, such as collective intelligence, intelligent masses and their knowledge or architecture of participation. A detailed map of Web 2.0 applications is also laid out, as well as providing an analysis of the critical thought that has emerged in academic circles in view of this application's triumphalism. In the final chapters, the authors analyse the convergence of Web 2.0 applications and third-generation mobile devices and examine this convergence and interoperability. The book concludes with a reflection on the internet's evolution towards a semantic web, a "more intelligent, intuitive, open, effective and even commonsensical" web.

JENKINS, H. *Convergence Culture: Where Old and New Media Collide*. New York and London: New York University Press, 2006, 308 pages. ISBN: 978-0-8147-4281-5

Already considered a reference book, this 2008 edition translated by the Paidós publishing house approaches so-called media convergence from a viewpoint that seeks to go beyond the technological perspective. In this sense, Jenkins defines convergence as a concept that describes social, technological, industrial and cultural changes in connection to the way they are developed by the media in our culture. Included here are aspects such as content flow among different types of media platforms, cooperation among several media industries, the search for new media financing structures that operate in the intersection of old and new media and the migratory behaviour of audiences that move all around searching for the entertainment experiences they crave. Jenkins synthesises a definition of convergence as a scenario in which several media systems coexist and content flows extensively among them. Hence, convergence is viewed as a process in progress and not as a fixed relationship. To reach this conclusion, Jenkins reviews several cases in which these interconnections are present and addresses subjects such as media literacy, new forms of television, the application of ICTs in political communication and new forms of creativity in the culture industry, among others.



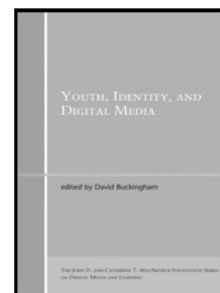
BENNET, W.L. (ed.). *Civic Life Online. Learning How Digital Media Can Engage Youth*. Cambridge, Massachusetts: The MIT Press, 2008, 206 pages. ISBN: 978-0-262-52482-7



This volume regards digital media as a part of convergence among interactive media (mostly focused on games), online networks and existing forms of media. Related to this media ecology, Lance Bennet analyses digital media's adaptation to conventional politics and paints a scenario that uses the potential of technological convergence and

politics, a scenario that requires ultra-creative research paradigms combining the qualities of today's (apathetic) citizens with the model of the dutiful citizen. Among this volume's most outstanding contributions are a description of the relationships between young people and digital democracy and between political candidates' and leaders' use of the internet and the expectations of young people who seek political information on the internet, a critique of the lack of communication skills among young people who relate to each other online and an article on the use of participative media and the voice of the public to foster civic commitment. Finally, the book describes the concept of "autonomous citizenship", a model of democracy in which citizenship becomes creative through experience.

BUCKINGHAM, D. (ed.) *Youth, Identity, and Digital Media*. Cambridge, Massachusetts: The MIT Press, 2008, 206 pages. ISBN: 978-0-262-02635-2



Based on the concept of identity, this volume analyses the relationships between young people and the digital media and pays special attention to the diverse ways in which the media and technologies are used in everyday life, as well as their consequences on both individuals and social groups. By viewing young people as significant social stakeholders in terms of "being" rather than "becoming", the University of London lecturer, David Buckingham, in the words of the book's publisher, endeavours to understand the digital media's role in forming young people's identities. The different authors analyse the emergence of new formats - from SMS to websites, blogs and online social networks - and show several ways in which young people use digital media to reflect their new loyalties to particular subcultures. Also analysed are the spaces that escape adult control and how young people can use media production to address social issues. The need for digital literacy entailed by the digital media can be found in the book's final section, which analyses mobile telephone use and the subsequent development of new social and communicative tools and new social norms. The construction of online identities and the way in which young people construct identities so that they align with the consumption culture (*compulsory individuality*) lead the authors to suggest that these new forms of identity entail the need for new cultural skills that schools must confront.

**Other books...**

SCOLARI, C. A. *Hipermediaciones: elementos para una teoría de la comunicación digital interactiva*. Barcelona: Gedisa, 2008, 320 pages, ISBN: 978-84-9784-273-0

KATZ, J. E. (ed.) *Handbook of Mobile Communication Studies*. Cambridge, Massachusetts: The MIT Press, 2008, 472 pages, ISBN: 978-0-262-11312-0

MOSSBERGER, K.; TOLBERT, C. J.; McNEAL, R. S. *Digital Citizenship. The Internet, Society, and Participation*. Cambridge, Massachusetts: The MIT Press, 2007, 272 pages ISBN: 978-0-262-13485-9

SOLOVE, D.I J. *The future of reputation: gossip, rumor and privacy on the Internet*. New Haven: Yale University Press, 2007 256 pages, ISBN: 978-0-300-12498-9

## Journals review

### ***Trípodos. Més finestres per a la informació***

Barcelona: Universitat Ramon Llull.

No. 23, 2008.

ISSN: 1138-3305



Given the multiplication and diversification of the ways to disseminate information, the latest issue of the journal *Trípodos* is dedicated entirely to the new windows of information. Among the articles that go to make up this issue, we can find an article by Carles Mundó describing the action plan for the DTT switchover in Catalonia, passed in 2007. On the other hand, Ramón Salaverría and José Alberto

García Alvéz analyse the impact of technological convergence on journalistic practice and the challenges it represents. The article by Saül Gordillo and Anna Nogué describes how the Catalan News Agency works as a model of multimedia journalism. The ethical issue is analysed by Jane Singer in her article on the ethical challenges of the new media panorama online. The director of News Channels of the Corporació Catalana de Mitjans Audiovisuals, Jaume Masdeu, describes the plan to apply a strategy of confluence in the corporation. Other articles in the journal analyse the new applications for interactive television and the adaptation of professional routines to interactive information, as well as covering the incorporation of multimedia discourse in the digital media, the effects of using mobile devices on news activity and transformations in use, consumption and production of information in the online society.

Online version available at: <<http://www.tripodos.com>>

### ***Telos. Cuadernos de Comunicación e Innovación***

Madrid: Fundación Telefónica.

No. 77, October-December 2008

ISSN: 0213-084X



In its latest edition, the digital journal *Telos* offers us an interesting miscellany full of renowned

names, of particular note being an initial article by Néstor García Canclini providing a kind of corollary of the current challenges of cultural TV within the context of digital convergence. The journal also contains the *Dossier Telos*, reproducing content from a debate session with the participation of sociologist Manuel Castells, Larry Lessig, creator of the Creative Commons initiative and former Brazilian minister of culture, Gilberto Gil, among other figure essentially from academia. The different contributions reflect on Web 2.0 and its implications for issues of copyright, within the context of creativity and innovation in digital culture in general. At the same time we can also find articles by José Cea Jiménez and Julián Bravo, one on the relationship between ICTs and education and the other on new forms of advertising expression in "guerrilla" terms, as well as the publication of a study on radio advertising by Perona Páez and Barbeito Veloso and a theoretical reflection on identity patterns as mediators in digital interaction in virtual environments by Carlos Arcila, among other content.

Available online at: <<http://www.campusred.net/TELOS>>

### ***New Media & Society***

London: Sage.

Vol. 10, no. 5, 2008.

ISSN: 1461-4448



The latest issue of this varied bimonthly review (December 2008) starts with an article by Marc McLlelland about the construction of discourse on "races" on the Japanese internet. In the second article, Hampton and Gupta from the University of Pennsylvania and Microsoft, respectively, present us with

an ethnographic study on the practices and new social relations associated with the use of Wi-Fi technology in cafeterias in Boston and Seattle. Biddix and Park describe a case study on how new technologies strengthen and reconfigure patterns of collective action in the student movement. For their part, Lacayo, McClung and Sapolsky provide an interesting study on young people's habits when downloading music from the internet and reveal that it is an activity based both on saving money as well as entertainment per se. The article by Campbell and Kelley analyses mobile phone use among groups of people with an alcohol addiction. The last academic contribution in this journal is by Einar Thorsen with a work on wiki website dedicated to news with journalistic quality, produced by users themselves without prior registration.

### ***Convergence***

Luton: University of Bedfordshire.

Vol. 15, no. 4, November 2008.

ISSN: 1354-8565

Since it was founded, the journal *Convergence*, created in 1995, has been aimed at analysing the creative, social, political and pedagogical effects of new technologies. Its latest issue, with an editorial by Julia Knight and Alexis Weedon, contains work from various relevant studies. Within the journal per se are some outstanding articles,



such as the one by John Banks and Sal Humphreys, reviewing cases of interaction between industry, programmers and users in the videogame market, and observe the labour relations in transformation that have led to the community of players itself often contributing to new versions of the games without any remuneration. Ian Goodwin presents a case study based on observing relations in terms of conflict within a computing community in Birmingham. For their part, Thurman and Lupton present a study on the experiences of news website editors in the United Kingdom and their use of audiovisual content. Following the journal's eclectic line, Ananda Mitra presents a study on the use of blogs as tools to establish virtual networks and as generators of identity within the context of India.

**Fibreculture Journal**

Austràlia: Fibreculture Publications / Open Humanities Press.  
Núm. 13, 2008  
ISSN: 1449-1443



*Fibreculture* has been designed as a debate platform for articles and ideas related to policies for ICTs, both

in Australia, where the project originates, as well as in the rest of the world. IN this issue, dedicated to technological convergence, the journal starts with an article by Adrian Mackenzie on the practical implications of wireless networks and continues with a work by David M. Berry focusing on the concept and use of codes, considered as the necessary conditions of articulation for the functioning of computational technology. Jonathan Sterne and other co-authors then present a study debating the differences between *broadcasting* and *podcasting*. Caroline Bassett explores the concept 2.0, comparing it with convergence models from more technical and industrial approaches and revealing a range of different forms of participation on the internet. Next Teodor Mitew reflects on the spatial conceptions of convergence from a constructivist perspective and Aylish Wood uses systems theory to examine the influence exercised by the convergence concept on various expressive practices, such as digital games. The work by Helen Thornham is also along these lines, being the last text in the journal, but in this case focusing on gambling games in everyday life.

Available online at: <<http://journal.fibreculture.org>>

**Canadian Journal of Communication**

Canadà: Simon Fraser University.  
Vol. 33, núm. 3, 2008  
ISSN: 0705-3657



This issue of the Canadian communication journal, which can be found both in English and in

French, is dedicated to one of the sectors considered to be of prime importance when talking about media convergence: wireless technology in general. In the section of key articles, we first find a work by Thibault and Bardini on the mythification of the 2.0 phenomenon, specifically analysing some historical moments of exaltation of wireless technology. Among other articles, of note is the one by Catherine Middleton and Barbara Crow tackling a study of three cases of local Wi-Fi network implementation, emphasising the fact that, for this implementation to be successful, it is important to accompany the processes with mechanisms of active involvement of the target community. Afterwards we find an article by Oscar Westlund on the extent and adoption of mobile multimedia devices following various quantitative data obtained in studies in Sweden, showing a changing trend and differentiation between users in consumption habits for news content. There is also a project by Sam Ladner with an article that observes the blurring of the boundary between private and work life of different advertising agency workers due to the new uses of mobile telephony. Finally we find a case study on new social practices associated with the introduction and use of iPhone and iPod products in Canada, by researcher Isabel Pedersen.

Available online at: <<http://www.cjc-online.ca/index.php/journal/issue/current>>

## Websites review

### **Fundació Observatori per a la Societat de la Informació de Catalunya (FOBSIC)**

**<<http://www.fobsic.cat>>**

The Fundació Observatori per a la Societat de la Informació (FOBSIC) is a private company created to offer rigorous, scientific information to social players in Catalan society to enable their decision-making regarding the development of the information and knowledge society in Catalonia. It also fosters research into the Information Society in Catalonia in conjunction with Catalan universities and specialised research centres. Its website contains data and statistics on the ICT in Catalonia, studies and reports (sector, occupational, territorial and linguistic), documents on the current situation plus a database with information compiled from other local and international observatories.

### **Observatorio Nacional de las Telecomunicaciones y de la Sociedad de la Información**

**<<http://observatorio.red.es>>**

Via Red.es we can access the Observatorio Nacional de las Telecomunicaciones y de la Sociedad de la Información. This observatory is attached to Red.es and is responsible for studying and analysing the Information Society in Spain by conducting studies and creating indicators. Its portal offers information on the Information Society, studies and reports by national and international bodies on various aspects relating to the Information Society from an economic, legal and technological perspective. We can also find information on the various indicators used to analyse the Information Society

### **Localret – Consorci Local per al Desenvolupament de les Xarxes de Telecomunicacions i de les Noves Tecnologies**

**<<http://www.localret.es>>**

Localret – Consorci Local per al Desenvolupament de les Xarxes de Telecomunicacions i de les Noves Tecnologies currently comprises 800 Catalan town councils, the Catalan Association of Municipalities and the Federation of Municipalities of Catalonia. Its purpose is to represent municipalities in the political and economic areas of decision-making which affect the legislation and regulation of telecommunications, municipalities before the EU administrations, the State and the Catalan government in the approval processes of telecommunication standards which affect municipal competencies and to act as a liaison with telecommunication operators as regards the implementation of new networks. Its website provides access to digital publications (Informatiu Localret and guides for the development of the Knowledge Society) and details regarding events and seminars related to the Information Society.

### **Agència de Qualitat d'Internet (IQUA)**

**<<http://www.iqua.es>>**

Formed in 2008 with the merger of IQUA and Confianza Online, one of the aims of the Agència de Qualitat d'Internet is to promote and boost users' confidence in websites via a self-regulating system and seal of confidence. It acts in fields connected with self-regulation in advertising, eCommerce, child protection, and the accessibility, usability, reliability and privacy of data. In addition to news, it offers information on its seal of quality, the ethical code of eCommerce and information on the ".cat" domain.

### **International Engineering Consortium (IEC)**

**<<http://www.iec.org>>**

The International Engineering Consortium was founded in 1944 with the aim of bridging the latest technological progress with academic research. This team of specialists is sponsored by various companies spanning the world, centred on industrial broadband technology, telephony, satellite and terrestrial digital services and the internet in general. Its website features announcements for exhibitions and international events concerning digital technology innovation, a catalogue of publications on wireless technology, IP, broadband, electronic design networking, optic fibre and content, applications and similar services. The leading US technology institutes are involved, together with Mexican universities and a smaller representation of European centres. Chief among its features is the online education service, with downloadable podcasts and videocasts which offer details on the contents of the organisation's activities.

### **Information Society and Media Directorate General**

**<[http://ec.europa.eu/information\\_society/index\\_es.htm](http://ec.europa.eu/information_society/index_es.htm)>**

The Information Society and Media Directorate General information of the European Commission lends support to the development and use of information and communication technologies (ICTs) for the benefit of all citizens. To this end, it supports innovation and competitiveness in Europe, defines and implements a regulatory framework for the swift development of services based on information, communication and audiovisual technology, encourages access and the availability of ICT-based services and promotes the growth of content industries which reflect European cultural diversity. Its website (in English, French and German) presents information on regulation, research programmes and on the activities of the Directorate General, together with an assessment of the policies put forward by the European Commission.

### **Red.es**

**<<http://www.red.es>>**

Red.es is a public corporate entity attached to the Ministry of Industry, Tourism and Commerce responsible for promoting the development of the Information Society in Spain and implementing projects in line with the strategic priorities of the Secretary of State for Telecommunications and the Information Society (SETSI), interacting with the autonomous communities, district councils and in the private sector in the field of Information and Communication technologies (ICTs). Its website offers information on various projects, current news, publications, documents and links to promotion plans, regulatory bodies and those fostering and promoting the Information Society, amongst others.

### **Observatori per a la Cibersocietat (OCS)**

**<<http://www.cibersociedad.net>>**

The Observatori per a la Cibersocietat is a non-profit Catalan association created in 2001. It seeks to provide a collaborative centre for the study and promotion of research into the relation between ICTs and society from a socio-centric viewpoint. On its website there is a section containing articles on the Information Society, critiques of books and articles published on the relation between ICTs and society/culture, links to websites with similar content and a bibliography of cyber society.

### **Observatorio Galego da Sociedade da Información (OGSI)**

**<<http://ogsi.sociedadedainformacion.eu>>**

The Observatorio Galego da Sociedade da Información (OGSI) is the entity responsible for drafting reports on ICT equipment and use in Galicia based on an analysis of the extent of and trends in the development of the Information Society in Galicia. Its chief objectives are to: compile a series of indicators to evaluate the evolution of the Information Society, conduct studies on the monitoring and innovation of related policies, disseminate and furnish information on the development of the Information Society, provide specific reports, encourage cooperation with other observatories, etc. Its website offers its reports, an updated selection of documents on the information society in Galicia and its environment and current news.

### **UNESCO Observatory on the Information Society**

**<<http://www.unesco-ci.org/cgi-bin/portals/information-society/page.cgi?d=1>>**

The UNESCO Observatory on the Information Society was set up in 1998 and has since undergone several structural modifications. It currently focuses on the impact of globalisation on Information Societies by gathering relevant data and monitoring the chief trends. Its portal boasts a range of resources: Information on e-Governance, freedom of information, intellectual property rights, e-literacy, the use of ICTs in education, information on cultural diversity and multilingualism, Information Society metrics, privacy and national policies, laws and institutions.

### **European Regulators Group (ERG)**

**<<http://www.erg.eu.int>>**

The European Regulators Group for networks and electronic communication services is an independent body set up by the EC to put in place a system to foster cooperation and coordination between the national regulatory authorities and the EC, to promote development of the internal networks market and electronic communication service and achieve full application to all member states of the provisions agreed on in directives in relation to the new regulatory framework. Its portal offers access to its documentation, public queries and annual reports. We can also access a list of the members and observers of the ERG.

### **International Telecommunication Union (ITU)**

**<<http://www.itu.int>>**

This is the website of the UN body whose remit is worldwide coordination of the public sector and private initiative in three areas: *radio communications*, engaged in worldwide coordination in managing the radio electric spectrums and satellite orbits; *standardisation*, seeking out convergence and compatibility between different technologies with similar functions, and *development*, focused on *cyber security*, the role of telecommunications in catastrophe management, the struggle against the digital divide and the creation of collaboration networks. The website's features therefore focus on every type of resource associated with these three areas: regulations, conventions, announcements of congresses and international meetings, support for research and an overview of current issues.

### **ENTER – Centro para el Análisis de la Sociedad de la Información y las Telecomunicaciones**

**<<http://www.enter.es>>**

The Centro para el Análisis de la Sociedad de la Información y las Telecomunicaciones brings together companies and public and private institutions from various sectors and is responsible for generating information on the Information Society and analysing and forecasting from the viewpoint of digital convergence, taking into account not only current implications but also future scenarios. Its portal offers access to reports on major considerations for the development of the Information Society, international news on regulation and public policies, digital convergence Web 2.0, society and citizenry, economy, companies and technologies, to name but a few.

### **Infomedios Digital**

**<<http://www.infomediosdigital.com>>**

Infomedios Digital is a site which seeks to provide a platform for sharing information on digital media. It offers resources, news and links to new communication technologies classified into various sections: education, graphic design, media and culture, mobile technology and Web 2.0. There are also sections on books, magazines and the foremost portals on digital media.

# Manuscript submissions guidelines

## Presentation of the articles

The article must be presented in electronic support (preferred PC and in Word format), accompanied by a hard copy. Every page must be 30 lines approx. and body size 12. The limit on length is about 5.000 words, notes and references not included. The cover sheet should be provided giving the title, the name of the author(s) and position, postal and e-mail addresses, an abstract of 90-100 words and five keywords.

Articles will be accepted in Catalan, Spanish, English, and French. Eventually, will also be accepted texts in other EU official languages. In any case, the languages of diffusion will be Catalan, Spanish and English.

## Bibliography and reference notes

Bibliography should be placed at the end of every article. Reference notes should appear into brackets with the name of the author, the year of edition and the pages). For example: (Buckingham 2007, 35-43).

### Examples:

#### • Books

DE MORAGAS, M.; PRADO, E. *La televisió pública a l'era digital*. 1st ed. Barcelona: Pòrtic, 2000. (Centre d'Investigació de la Comunicació; 4) ISBN 84-7306-617-0

*El régimen jurídico del audiovisual*. Madrid - Barcelona: Marcial Pons - Institut d'Estudis Autònoms, Generalitat de Catalunya, 2000.

#### • Articles in journals

HOFFNER, C. [et al.] "The Third-Person Effect in Perceptions of the Influence of Television Violence". In: *Journal of Communication*. Cary [United Kingdom]: Oxford University Press, June 2001, vol. 51, no 2, p. 283-299.  
ISSN 0021-9916

#### • Contributions to books

CAMAUËR L. "Women's Movements, Public Spheres and the Media: A Research Strategy for Studying Women's Movements". In: SREVERNY, A; VAN ZONEN, L., eds. *Gender Politics and Communication*. 1st ed. Cresskill [New Jersey, USA]: Hampton Press, 2000, p. 161-182.  
ISBN 1-57273-241-5

#### • Online documents

CONSELL DE L'AUDIOVISUAL DE CATALUNYA. *Informe sobre l'observança del pluralisme a la televisió i a la ràdio. Febrer de 2007*. [En línia]. Barcelona: CAC, 2007.  
<[http://www.cac.cat/pfw\\_files/cma/actuacions/Continguts/Informe\\_mensual\\_Febrer\\_2007.pdf](http://www.cac.cat/pfw_files/cma/actuacions/Continguts/Informe_mensual_Febrer_2007.pdf)> [Consulta el 22 de març de 2007]

## Tables and figures

Tables and figures should have short, descriptive titles and also be numbered in arabic numbers. All footnotes to tables and their source(s) should be placed under the tables.

Figures and tables should be placed in the text not as an image but in an editable format (e.g. in Excel) and in greyscale.

## Copyright clearance

Please attach to every submission a letter confirming that all authors have agreed to the submission, so that the CAC can publish the text in its journals and in its website <<http://www.cac.cat>> and that the article is original and has not been published before by any other journal, being the author responsible of any reclaim due to the nonfulfilment of this warranty.

Articles should be addressed at:

Sylvia Montilla

General coordinator of *Quaderns del CAC*

C/ Entença, 321

08029 Barcelona

E-mail: [smontilla.cac@gencat.cat](mailto:smontilla.cac@gencat.cat)

## Book reviews guidelines

**1.** The aim of the section 'Critical books review' is to review the most important new publications in the world of communication and particularly in the field of broadcasting.

**2.** Reviews must be original and previously unpublished.

**3.** Reviews must be adequate for readers to get a general idea of the content of the book under review, as well as providing a personal assessment of its interest. The review must therefore contain a description and analysis of the book, as well as some conclusions indicating its value and importance to readers.

**4.** The recommended length for reviews is around 1,000 words, not exceeding 1,300 words in any case.

**5.** Reviewed books must be contemporary, i.e. they must have been published during the last two full calendar years, although an earlier book may be included if duly justified.

**6.** The review must be given a title that summarises its content, with the bibliographical details and the author of the review below, including his or her position and the institution to which he or she belongs.

**7.** The model used for citing the bibliography must follow the criteria given by TERMCAT, which may be consulted at:  
<<http://www.termcat.cat/productes/documents/citaciobiblio.pdf>>

Exemple:

DE MORAGAS, M.; PRADO, E. *La televisió pública a l'era digital*. 1a ed. Barcelona: Pòrtic, 2000. (Col·lecció Centre d'Investigació de la Comunicació; 4). 350 p. ISBN 84-7306-617-0

**8.** The author should be introduced briefly by commenting on his or her background or most recent work.

**9.** The most important part of the review is the summary and analysis of the content. Here it is necessary to explain the field in which the book is placed, the perspective adopted by the author, the goals the author sets him or herself and the fundamental thesis of the book and how it is developed.

**10.** The critical evaluation should be generally positive but negative comments can also be included, in both cases suitable arguments being required. Readers must be informed regarding the value, interest and usefulness of the book under review. If relevant, other details can also be included, such as the use of sources, documentation, the bibliography used by the author, the book's formal presentation, etc.

**11.** Any possible references to text from the book under review must be written in inverted commas, with the page number afterwards, in brackets.

Exemple: "Xxxx xxx xxxx xxx" (p. 45).

**12.** Bibliographical references to third parties cited in the text of the book under review must use the following model: (Surname year, p. for page number)

Exemple: (Hunt 1997, p. 251).

**13.** Bibliographical references from other works quoted in the review must be contained in full at the end, using the same format as the initial bibliographical reference but excluding the ISBN.

**14.** The review must be sent digitally, in Word or Word RTF, to the following email address: [critica.cac@gencat.cat](mailto:critica.cac@gencat.cat)

**15.** The book review editor will evaluate every submitted review, in order to approve its publication or ask for some modification for its definitive publication

**16.** Reviews may be written in Catalan, Spanish, English or French. However, they will be published on paper in Catalan and, in PDF format, in English and Spanish on the CAC website.

**17.** After a review has been accepted, the author must authorise the CAC to publish his or her review in any of its written publications and on its website, by means of a signed letter sent by post.

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