

**Trends and Contradictions in the Broadcasting System: From
Interactive to Networked Television.**

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Abstract

Departing from the analysis of media fruition by the Portuguese population and its own media diet this article argues that the introduction of interactivity in television practices is evolving into what we designate as *networked television*.

Networked Television differs from interactive television in the sense that it doesn't evolve under a technological convergence framework and so it combines different communication technologies, analog and digital, interacting as a network in order to promote interactivity with television viewers.

In this sense *Networked Television* develops itself in a technological divergent environment. What the analysis of viewers show is a growing interaction with Television, be it in its digital incarnation through cable connection or analog broadcasting, by use of mobile phones, telephones, SMS and Internet. On the other hand we find a very residual level of interaction being developed by television users in what concerns interactive television (iTV).

1. Interactive Television: a historical gap between technology and use.

Colombo and Bellavita suggest that digital television, at present, can be considered an "unpopular medium" since it doesn't have social appeal because it doesn't get onto the audience's social agenda (Colombo-Bellavita 2002).

In order to analyse this gap between technology and use we must first look into what does it mean to have access to digital television today.

Digital television has clearly two defined attributes; first it follows a path of greater interaction with the television viewer and so it's interactive. Secondly it's associated to pay TV, given that the business model doesn't develop from advertisement but from a choice made by the viewer, being allocated to the choice a certain amount of money for the service.

Digital television experiments (be it cable, terrestrial or satellite) have had in the last 20 years more failures than successes. Up until the mid-nineties digital television had been mainly a synonymous to *Pay TV*, since it has been mainly used to give access to premium channels of movies and football. And under such dimension it has had success in countries like the UK, France, Spain (Kleisteuber 1998) and Portugal.

The second half of the nineties saw in Europe a state led process of dissemination of digital terrestrial television (DTT). Given that most European governments have decided gradually to switch off their analog transmissions by 2010, the development of digital television in Europe is mainly a political driven process allied to economic imperatives

(Papathanassopoulos 2002) rather than a demand of viewers or a major technological innovation that would serve a supervening social necessity (Winston 1999).

The introduction of digital television marks clearly a third phase in the development of European television. Being the first period one dominated by public service monopolies, followed by a second period shaped by a dual system of public and commercial broadcasters (Kleisteuber 1998). But what this third period might evolve to is still uncertain mainly because, up until now, it has just incremented already developing tendencies, like greater segmentation of viewing and more availability of channels. Digital TV hasn't until now change television formats be it in the diversity of available content or the way programs are conducted by entertainers, interviewers and journalists (Richieri 2000).

Given the similarity of results present in different countries our analysis of interactivity on TV would benefit from a short incursion into the realities of digital television across Europe. The journey we suggest starts in Scandinavia ending in Portugal, the country we will study more in-depth.

The analysis and explanation of Allan Brown on the reasons for the failure of the Swedish DTTV project could in many dimensions be applied to many other European countries:

A major defect in the design of the Swedish DTTV project is that viewers are required to pay a subscription fee, even to receive programs that are available free of charge on analog, including those of SVT for which they already pay an annual licence fee. The extremely poor take-up of only 2.5 per cent after four years indicates that Swedish viewers consider the costs of subscribing to DTTV outweigh the benefits. (Brown 2003).

The UK approach to digital television is another interesting example because it differs from other approaches in the sense that is seen as one of the dimensions of the commitment of the government into the construction of the information society. Following such directives the public television (BBC and Channel Four) has invested in the digital together with private television (namely Sky television digital satellite service). Although in the UK digital television had reached by late 2001 about 35 percent of British households many TV viewers were, and still are, resisting. About 30 to 40 percent of the population stated having no interest in moving to digital (Born 2003).

In Spain, Quiero Tv the digital terrestrial broadcaster stopped its service shortly two years after its beginning in 2002 and in May 2002 the two satellite platforms (Canal Satellite Digital e Via Digital) announced their fusion. Both decisions resulted on the low penetration of its subscribers - even if Quiero TV tried to complement its TV offer (already accessible on other TV platforms) with interactive services and Internet access (Fleishmer - Somalvico 2002).

Portugal offers its 10 million inhabitants four generalist television channels broadcasted through analog hertzial, cable or satellite distribution. Of those four channels, two are private companies, SIC and TVI, owned by media groups with interests in newspapers and radios and the remaining two are the public channels, RTP1 and 2.

In order to fully understand the Portuguese Television market another element must be highlighted. The cable platform has reached already a third of the Portuguese households (although not reaching the whole continental territory and islands) offering up to sixty channels and the possibility of Internet access and interactive TV (iTV).

- TABLE 1 AROUND HERE -

Having won a licence for digital terrestrial television (DTT) the PT Group, through TV Cabo Portugal, and the Portuguese Digital Television Platform, the consortium that integrates the SGC (a private company), RTP (Public Tv Broadcaster) and SIC (Private Tv Broadcaster), were in early 2003 the major competitors to dispute the national market of interactive television.

At the time of this writing the launching of a DTT platform has been halted, since 2003, and the new bid for investors is still being analysed. Although it's suspension was justified through the incapacity of a definition of technological standards for digital terrestrial television at a European level, in reality the Portuguese Telecommunications Regulator (ANACOM) decided to cancel the licence for broadcasting due to the difficulties of launching a profitable business plan under a period of economic recession in Portugal and Europe. In the DTT business model the main benefits offered to the viewer were more TV channels (than the 4 ones offered through the analog transmission), interactive functions, pay per view channels (Cinema, Adult channels, Sport, etc) and Internet access. But, as we have seen above, all those services are already present through cable making the odds for the success of the DTT newcomer low.

Even in the interactive dimension where DTT could have an advantage TV CABO had already launched, on May 2001, a service of interactive television by cable network in a partnership between with Microsoft. Some of the services already available from interactive television on cable are: access channels programs, select programs of personal interest, create one's channel, e-commerce, access to Internet: navigate through the www, sending and receiving emails and telephone messages; look at the main news of the day (actualized every 30 minutes), access bank account data, stock exchange information, and play communicate with others.

Although having started in 2001 it's penetration in the households is still very low ranging less than one percent of the households.

Given the above analysis on the digital experiments in Europe and the history of unsuccessful projects of interactive television in the US with projects like the Qube at Columbus and others, Ohio (Rodotà 1997), we acknowledge that explanations to the degree of

success or failure associated to digital television are probably a mix of country specific choices, namely the countries historical development of the television system and the chosen business models. But, given the common features of low social appropriation of such a technology we must also look for other answers.

One of the more common approaches, during the last two decades, for explaining the problem surrounding low social acceptance, has come from the television industry focusing in the existing technological limitations that wouldn't yet offer the viewer the kind of interactivity he is still hoping for. But, at the same time that interactive experiments with digital television have been occurring, our relationship with Television has evolved. Namely, new digital technologies like the Internet and mobile phones have reached a growing proportion of the population, allowing people to interact with TV, and old technologies like TV teletext has had a second-life, this time combined with SMS.

Television Broadcasters also understood that SMS, mobile phones (and to a certain extent telephones), the Internet and TV teletext could become a good financial alternative to revenues obtained from advertisement or public subsidies, implementing business and content strategies that could incorporate all of them.

The analysis of the contents of the generalist TV, cable channels and the practises of media diets in Portugal (Cardoso 2004) show us that during the last years there has been an evolution on the social appropriation of television and that the interactivity with TV has evolved, even without a strong presence of digital interactive television.

So we argue that interactivity *in* and *with* television doesn't have to be directly associated to digital television and that we can envisage other dimensions of interactivity with TV under what we here name here *Networked Television*.

In order to understand better these phenomena we must first acknowledge that different approaches to interactivity exist and that different kinds of interactivity are technologically ascribed and socially appropriated by different media.

2. *Interactivity a multi-concept approach*

Any attempt to synthesise the evolutions and general trends of interactive television has to face the problem of defining and discussing the concept of interactivity itself.

We will analyse first the theoretical approaches to interactivity and then look at the it's application in two media technologies: iTV and the online presence of mass media in the Internet.

According to Kim and Sawney (2002) there are two approaches to understanding interactivity communication in the context of new media technologies: the *communication approach* and the *media environment approach*. The communication approach conceptualizes

interactivity in relation to communicators and message exchanges. In this sense, not only new electronic media but also letters to the editor, call in shows, and audience participation programs on TV are interactive. From this perspective interactive media are the ones that simulate an interpersonal exchange via communications channels. In contrast, we can find the *media environment approach* defining interactivity as “a media experience offered by technologies in which users can participate in modifying the form and content of the mediated environment in real time (Steuer cited in Kim - Shawney 2002)”. Under this last definition of interactivity characteristics such as latency, real-time interaction and the immediacy of response are seen as vital for creating a vivid interactive mediated environment.

Another interesting approach to interactivity is Van Dijk typology of four cumulative dimensions of interactivity (Rafaeli, 1988; Van Dijk, 1999; Williams *et al*, 1988): the first, is the *spatial dimension of interactivity*, which refers to a point-to-point communication; the second, refers to synchronic communication: interactivity is affected by non-synchronic communication because of the excessive time between action, reaction and reaction to the reaction; third, is the *temporal dimension of interactivity*; which refers to the possibility of exchange between transmitter and receiver in any moment and place, with equal control and contribution to the content of communication; and fourth, the *dimension of action and control*: the possibility of contextualization and shared understanding - a level that hasn't been reached yet by the media, only to be found in face-to-face interaction.

But if we focus instead our attention at the power relationships within the communication structure of different technologies, we must acknowledge that interactivity stands for different things - i.e. different appropriations.

Looking at iTV we can find a cultural contradiction between interactivity as communication form and television as a organizational model (Kim - Sawhney 2002). iTV still is television in its organisational structure, in its program formats, in the role of the journalist and entertainer acting as mediators and organizers of the interaction with the audience at home or wherever the fruition of TV takes place. iTV is much more reactive than active. The degree of liberty of action that interactivity can offer through new media is much more evident when we look at the Internet rather than the - past, present and announced - models of interactive television to be implemented commercially. Communicability from one to many to many to one, the flexible use of the medium for voice-data-video communication by an individual or group, the use of the medium as an information processing and production platform and the potential to create one's own message, are more evident when using a computer than when using iTV.

What we have been experiencing for the last two decades in iTV has been mainly new television platforms incorporating interactivity proprietary technologies in order to allow users, through the payment of fixed fees or in a pay per use basis, to choose different angles in

viewing football matches, to vote in a talk show or in programs or choose films to download (Richieri 2000). Little innovation in content has been offered due mainly to the high financial investment that iTV needs in order to produce new contents adapted to interactivity. Like Richieri (2000) suggests, this is a trend that difficultly will face any changes in the near future given the relation between the investment to be made and the revenue that it might allocate to the broadcaster. Simply put the high investments in original content (mainly on the entertainment dimension) for iTV can only be thought of in a long term that is when the number of users grows to a significant proportion of the target population of the broadcasting channel. Up until then very limited investment can be made due to the long time mediating investment and profit revenue.

Looking at the use of Interactivity in the mass media online presence the degree to which can and is used is evidently higher than on iTV experiments. Even if empirical studies have shown that a considerable part of the possible use of interactivity is not used or useful online (Bayè: p.29; Seibel: p.28).

As an example of interactivity appropriation in an online environment Deuze considers that *interactivity of content* on the Internet includes three main aspects: *navigational*, which refers to the tools available to choose from and experience the page itself; *functional*, the tools used to dialogue with contents and authors of the site; and *adaptive*, tools available for site contents personalization (Deuze: p.4-5). This last aspect, is sometimes noted as one of most particular nuances of online pages, since it allows an adaptation of contents to the user: either through the individual direct action in selecting his route, either through use of mechanisms of control that make possible knowing the users behaviour and navigation history, and thus responding strategically.

Thus, interactivity online means all the availability of options that may allow the interaction of the user with the contents and, through them, with other users (Boczkowski: p.277).

The interactivity that TV can offer, due to its own organisational structure, its program formats, and its ascribed role to journalists and entertainers can be characterized as mainly simulation of interpersonal exchange and limited choice from previous definitions enacted by a mediator, be it the producer of the show or the cinema critics of the channel. On the other hand, interactivity on the Internet stands mainly as participation in modifying the form and content of the environment in real time, being much closer to the definitions of interactivity on a *media environment* approach of interactivity (Kim - Shawney 2002).

3. *Media landscape in Portugal: elements for a model of networked television.*

In the basis of a recent research conducted by CIES¹, it's possible to have an in-depth understanding of Portuguese communicative practices and representations, in particular regarding the role of television and Internet in our mediated world.

As suggested by Manuel Castells, in the network society we do live with and by the media (Castells 2003). In Portugal the daily use of media shows an average exposition to the media of 6h39m per day for Internet users (to which we should add between 30 to 45 minutes of daily connection to the web) and 7h and 9 minutes for non Internet Users.

- TABLE 2 AROUND HERE -

Television is considered the most frequent activity to take place daily at home (98.9 percent of internet users and 99.4 percent of non Internet Users) followed by meeting family members and friends (98.7 percent and 91.8 percent respectively).

When questioned about levels of reliability on information delivered through media, Internet users refer television and radio (78.7% each) as the most reliable. In comparison to non-users, their levels of reliability are always higher, regardless the type of media. The Internet is considered the less reliable among all media for delivering information.

- TABLE 3 AROUND HERE -

Asked about individual preferences linked to a chosen technology, Internet users still refer first watching TV (33.6%) and in second surfing the internet (27.7%) (see Table 3). By contrast the non-users opt in the first place for watching television (74.6%), followed by listening to radio (40.7%), both activities which imply receiving rather than interacting.

- TABLE 4 AROUND HERE -

A very significant result emerging from the research and central to our debate is that, when asked about the privileged ways of contacting television or radio, users privilege telephone and text messaging (SMS), over electronic mail and letters (see Table 5). The main way users contact TV programs is by sending SMS (6%), followed by telephone (3.9%). Generally, internet users contact television and radio more than non-users, regardless of the

¹ This study is based on a cooperation between ISCTE and the IN3 survey on Catalunya directed by Manuel Castells (Castells 2002). More information available at <http://www.uoc.edu/in3/pic/esp/pic1.html>

used technology. So, the results suggest us that Internet users participate more actively, especially when technological use or technological equipment is implicated.

- TABLE 5 AROUND HERE -

What we find in our analysis is clearly a media landscape appropriation dominated by Television and Internet. Such a conclusion has direct implication for our analysis of interactivity.

Not only, as we have seen above, there are different concepts of interactivity technologically ascribed to each technology but also the users of Internet tend to chose also more interactive technologies than non users as their “preferred” technologies.

At the same time our multimedia environment, ranging from the Internet, telephone and into Television is still dominated by choosing information content over entertainment content. The analysis of the choices regarding the use of Internet and Television in Portugal show that the success of the Internet is linked mainly to informational and educational issues and that in the television viewing information reaches almost fifty percent of the answers regarding the programs usually watched and up to thirty percent of the choices related to the program “you enjoyed the most in your lifetime”.

- TABLE 6 AROUND HERE -

In what can these data help us in analysing the failure of the social appropriation of digital interactive television? First, we would suggest that, in accordance to Richieri (2000) and Castells (2003), people are not willing to allocate an increasing share of its budget income to new dimensions of interactivity especially when they have in common mainly an entertainment offer.

Second, people with low technological literacy – which in the majority of cases tends to equal also low level literacy - tend to interact less with the media.

At the same time, the ones that interact, don’t invest a fixed amount of money in new technology for digital interactive television, because they already have access to interactivity - offered by the Internet- or they have been using other technologies to interact with television.

Choosing the networking of technologies with television allows a greater individual control on deciding when to spend and gives more control over budget spending, which is why probably they prefer using the phone, SMS or Internet to interact.

Another interesting result from our analysis is that, when interacting with TV they do so mainly to state a opinion (be it on a subject or vote for a singer or a person in a contest), communicate with others (like emails sent to programs or messages to be read by someone else,

be it boyfriend or a lost relative, or simple to chat with others through SMS on television or other TV internet related interfaces).

So the probable answer to Els de Bens (1998) questioning of knowing whether the viewer would in the future watch, his or her programmes, on a television set or on a computer would be that: based on the observation of social practices towards the media, both universes are separated. In TV you will watch television and interact in a networked environment that might combine the sending of emails, SMS, phoning stating your opinion - be it through argumentation or a simple vote.

With a computer you will communicate to other computer users dialoguing, you will search specific information and also just do window shopping of webpage's not following any previous defined path. But both will offer you information and entertainment. And if apart from a viewer of TV you're a Internet user you will probably spend less 30 to 40 minutes per day watching TV, at least for now.

4. Television in a digital networked environment

The nineties and early 2000's were a time of convergence: convergence of businesses, technologies and markets. But in the end what measures the success of convergence is up to what point it has become a success or not in its social acceptance. Undoubtedly, we find success in the convergence in the business dimension, namely the acquisition or merger of broadcasters or content producers have been successful (even if for instance Vivendi-Universal had its problems and Time Warner-AOL ended up in a not so good investment for Time Warner).

But we would argue that the analysis of convergence at the technological level has to be more thoroughly analysed. Up to now multimedia mobile phones have been a success (joining in the technological field cameras and telephone), computers and the Internet have joined the listening of music (and its exchange even if sometimes not in such a so legal way) a success. Newspapers are read online and radio listened online, but when it comes to analyse convergence in the field of moving images, and more concretely, television we have to be more cautious in our perceptions. Television due to the lack of investment in creativity in a truly interactive content industry, the still low availability of technological high bandwidth development (and as analysed before due mainly to cultural and social aspects) hasn't been a digital success - and that not only in the failed experiences or low acceptance of Digital Television. In its Internet presence, only when television follows a model of online newspaper it seems to have success, like in the case of BBC news online (Kueng, 2002).

Let's take the example of the online presence of Portuguese generalist broadcasters that still can be thought of as in an embryonic stage. In Portugal the television broadcaster's online

presence has followed three distinctive paths. The homepage of the public service RTP is devoted in exclusive to the promotion of the programs and news. In the web page, the user may access a set of services like news, traffic information, children's space and SMS, which is the only paid service.

The two private broadcasters have different strategies concerning their Website. In their pages, were found regular commercial advertising, as well as several e-commerce links, SMS and some other services exclusive for subscribers. 'TVI online' strikes the user by its deliberate market-oriented approach, presenting all contents (news, entertainment, and advertising) explicitly as commodities. In the period ranging from 8 p.m. to 8 a.m. access to contents is restricted to IOL clients².

SIC online is the Internet project of the other Portuguese private broadcaster, SIC. The site presents a balanced set of news and commercial activities and benefits from the synergies with *Expresso*, a weekly newspaper of wide audience from the same media group. SIC online aims to set up a more personal relation with its users.

On the Internet the main connection between the broadcaster and its websites doesn't seem to be the cross-reference web-TV on the broadcasted news and vice-versa – only the SIC prime time news direct its viewer to the updates online.

The main trend emerging from the online presence of TV broadcasters during 2003 was the useful linkage between Internet and TV entertainment shows. SIC online was visited by a daily mean of 10 thousand visitors, TVI online had a daily mean of 8 thousand and the public television RTP 9 thousand daily visitors. But going beyond the average numbers into the specific variations we observe that the week following the premier of «Operação Triunfo» - a school of arts operating as a reality show and a contest – signed the moment of more affluence of visitors of RTP online, with 54 thousand users. Following a similar trend, the week after the premier of «Big Brother», TVI online was visited by 92 thousand Internet users, which was at the same time the highest number of visits to TV web sites.

On the generalist television, be it in its analog broadcasting format or on the non-interactive cable access, we can usually interact with talk show programs by SMS or by sending emails to programs like the RTP1 «Praça da Alegria», or just SMS like the SIC «Sic 10 horas» or the TVI «Olá Portugal».

Interestingly enough, it has been on the non interactive cable broadcasting that we find the more innovative dimensions of content and interaction on TV. Like the «Sol» music channel where you can join together your SMS with a chosen video clip; other innovative approaches to interactivity can be found on the SMS TV channel where you can chat using SMS in different *fora*; or the cable channel SIC RADICAL, focused on youth, which as a daily program «Curto

² IOL is the name of the portal run by media group Media Capital, the major shareholder of TVI.

Circuito», that each day launches a different theme for discussion and has been very successful in creating a flow between SMS, internet chat and telephone participation of young people. In this case, the arriving messages modulate and build the program in real time, using important elements like risk, improvisation and openness to critic. In this sense, «Curto Circuito» is a program where we rather ought to speak of a *process of divergence and not convergence*, since all those technologies are linked together but work each one with the given interconnected logic the user ascribes them with. But, the interaction model found there shows that interactivity in TV is still characterized by the centralized organizational model which is the matrix of television. That is, even when you interact you are not allowed to choose what question can be made, you play by the rules already defined.

Given the exposed relationship between the digital and television content and the social appropriation of interactivity explored above we can argue that, although agreeing with the idea that the television that we have today is a evolution from *Neotelevision*³ (Eco, 1985, Casati 1990) with an introduction of greater openness to the public (Vitadini - Marturano - Villa 1998) we are no longer just experiencing the kind of openness necessary in order to legitimate television in a new media environment.

This *Networked Television* is open to the public in the sense that television has been able to maintain itself as the media that reaches more people and so it's no longer looking for a new legitimacy (Vitadini, Marturano, Villa 1998). Instead of a search for legitimacy, television is assuming the notion of being part of a wider technological network of media technologies and of a social network of different media usages. Television hasn't been substituted by Internet and, like Umberto Eco (2004) keeps reminding us, won't probably be in the medium/long run. Precisely because they serve different social needs.

Television through its opening to other technologies has regain the ability to hold the centre in one of the social dimension of media, the one characterized by a low interactivity in the choosing of news and entertainment. A social function that usually occurs upon our arrival at home after a working day, accompanying us in our daily meals and competing with other technologies for our free time when we are not talking to friends or family.

Television and Internet are today the two main technologies disputing each one the centre of different interactivity networks, although interconnected between them through links offered by personal use technologies.

³ The transformations that *neotelevision brought with it can be summarized* through: the increasing in the number of broadcasters, expansion of the daily time of broadcasting, the nature of broadcasting itself but mainly by the change of models of content of programs and types of fruition.

5. *From Interactive to the Networked Television*

Departing from the analysis of media fruition by the Portuguese population and its own media diet this article argues that the introduction of interactivity in television practices is evolving into what we designate as *networked television*.

Networked Television differs from interactive television in the sense that it doesn't evolve under a technological convergence framework and so it combines different communication technologies, analog and digital, interacting as a network in order to promote interactivity with television viewers.

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The implications of this analysis are of importance since the business strategies developed during the last years by television broadcasters have been built around the combined notion that interactivity should evolve under a convergent digital television system and that television audiences were keen on investing time and family budget into a more high level of participation through television.

If the social appropriation of the media is evolving to a networked television, and not a digital iTV, it might well be that broadcasters, in their content policy, and software and hardware technology developers will have to question themselves if the path followed until now should or not be rethought.

This is not to say that Digital Terrestrial Television and Digital Cable Television have no future. On the contrary, what we argue is that the evolution to a practise of *networked television* by users and broadcasters shows that television is adapting itself to the new media matrix (Meyroviz cited in Ortoleva 2002) determined by the social use of media and by doing so is reshaping its position in the media system.

What we suggest is that the strategic view, designed uses and contents of iTV have failed to understand user's logics and practices towards the media and interactivity. That failed understanding, as had a huge responsibility on the experiences of the last years in Europe and the US.

As the history of media as demonstrated they must now evolve in order to keep up to the pace of the evolution of users practises.

Bibliography

BAYÉ, B. (2000), «Responding to e-mail is an unrealistic expectation», in *Nieman Reports*, volume 54, number 4.

BOCZKOWSKI, P. (2002), «The Development and Use of Online Newspapers: What Research Tells Us and What We Might Want To Know», in L. Lievrouw – S. Livingstone (Eds.), *The Handbook of New Media*, London: SAGE, pp.270-286.

BORN, Georgina, Strategy, Positioning and Projection in Digital Television, *Media, Culture & Society* vol.25 (2003): 773-799.

BROWN, Allan, "Sweden Case Study", in Allan Brown and Robert G. Picard (eds.), *Digital Television in Europe*, NJ, Lawrence Erlbaum.

CARDOSO, Gustavo, FIRMINO DA COSTA, António (2004), *A Sociedade em Rede em Portugal – Relatório Preliminar*, Lisboa, CIES/ISCTE.

CASETI, Francesco, ODIN, Roger, "De la paléo à la néo-télévision", *Communications*, n° 51, Paris, 1990, Seuil.

CASTELLS, Manuel

2000 *The Rise of the Network Society*, Blackwell, London (tr. pt: *A Sociedade em Rede, A Era da Informação.; Economia, Sociedade e Cultura*, Volume I, Fundação Calouste Gulbenkian, Lisboa 2003).

2002 *La Sociedad Red en Catalunya*, IN3-UOC.

COLOMBO, Fausto, BELLAVITA, Andrea, The Digital Satellite Broadcasting System in Italy: Between Mix and Hybridism, *The Public* Vol.9 (2002), 4, 75-82.

DE BENS, Els, MAZZOLENI, Gianpietro (1998), "The Media in the Age of Digital Communication", in SIUNE, Karen, McQuail Denis, *Media Policy*, London, Sage.

DEUZE, Mark, (2001), «Online Journalism: Modelling the First Generation of News Media on the World Wide Web», in *First Monday*, volume 6, number 10, at www.firstmonday.dk/issues/issue6_10/deuze/, accessed 8 December 2003.

ECO, Umberto (1985) *La guerre du faux*, Paris, Grasset.

ECO, Umberto (2003), *Vegetal and Mineral Memory: the Future of Books*, Al-Ahram Weekly, Issue n°665, 20-26 Novembro 2003.

FLEISCHNER, Edoardo, SOMALVICO, Bruno (2002), *La TV Diventa Digitale. Scenari per una Difficile Transizione*, Milano, FrancoAngeli.

KIM, Pyungho, SAWHNEY, Harmeet, A Machine-Like New Medium – Theoretical Examination of Interactive TV, *Media, Culture & Society* vol.24 (2002): 217-233.

KLEINSTEUBER, Hans J. (1998), “The Digital Future” in SIUNE, Karen, McQuail Denis, *Media Policy*, London, Sage.

KUNG, Lucy (2002), *Redefining public service broadcasting for the Internet Age*, Paper Presented at the “Cost A20 Network Conference”, Norway, Tromso, June 2002.

ORTOLEVA, Peppino (2002), “Un Mondo di suoni. La Radio e il Resto”, in Menduni, Enrico (2002), *La Radio. Percorsi e Territori di un medium mobile e interattivo*, Bologna, Baskerville.

PAPATHANASSOPOULOS, Stylanos (2002), *European Television in the Digital Age*, Cambridge, Polity Press.

RAFAELI, S. (1988), «Interactivity: From New Media to Communication», in Robert P. Hawkins et al (Eds.), *Advancing Communication Science: Merging Mass and Interpersonal Processes*, Newbury, Calif.: SAGE, pp.110-134.

RICHERI, Giuseppe, As Plataformas Digitais e a Evolução da Indústria Audiovisual, *Observatório*, nº2 (Novembro 2002), Lisboa, OBERCOM.

RODOTÀ, Stefano (1997), *Tecnopolitica*, Roma, Sagittari Laterza.

SEIBEL, M. (2000), «Is Including E-mail Addresses in Reporters by lines a Good Idea?», in *Nieman Reports*, volume 54, number 4.

VAN DIJK, Ian (1999), *The Network Society. Social Aspects of New Media*, London: SAGE.

VITTADINI, Nicoleta, VILLA, Marina, MARTURANO, Marco (1998), *Cittadini, Giudici e Giocatori. Le Forme di Partecipazione del Pubblico nella Neotelevisione*, Roma, VQPT-RAI-ERI.

WILLIAMS, F. et al (1988), *Research Methods and the New Media*, New York: Free Press.

WINSTON, Brian (1999), *Media Technology and Society*, London, Routledge.

Table 1. House equipments and subscribed services in Portugal

House equipments and subscribed services		Internet Users		Non-users		Aggregate Total
		n	%	n	%	%
Telephone	Yes	500	70,3	1011	58,1	61,7
	No	211	29,7	728	41,9	31,3
Mobile Phone for Personal Use	Yes	686	96,5	1076	61,9	71,9
	No	25	3,5	663	38,1	21,8
Television	Yes	710	99,8	1727	99,4	99,5
	No	1	0,2	11	0,6	0,5
Cable Television	Yes	393	55,4	501	29,1	36,5
	No	316	44,6	1220	70,9	62,7
Free Access Satellite Television	Yes	83	11,7	68	4,0	6,2
	No	625	88,3	1656	96,0	96,4
Subscribed Satellite Television	Yes	31	4,3	39	2,3	2,9
	No	678	95,7	1685	97,7	96,4
Interactive Television through Cable Network	Yes	8	1,2	4	0,2	0,5
	No	700	98,8	1717	99,8	99,1
Computer	Yes	534	75,1	330	19,0	35,3
	No	177	24,9	1406	81,0	64,6
Internet connection	Yes	411	57,8	108	6,2	21,2
	No	300	42,2	1626	93,8	78,6
PS2, Dreamcast, Xbox, Sega	Yes	166	23,4	92	5,3	10,5
	No	542	76,6	1632	94,7	88,7

Source: CIES 2003

Table2. Average time spend daily with media (minutes)

Internet Users	N	Average	Non Users of internet	N	Average
In average, how much of your time do you spend daily watching TV (minutes - total)	706	135,3	In average, how much of your time do you spend daily watching TV (minutes - total)	1720	175,7
In average, how much of your time do you spend listening daily to radio (minutes - total)	683	147,5	In average, how much of your time do you spend listening daily to radio (minutes - total)	1443	155,4
In average, how much of your time do you spend daily reading newspapers (minutes - total)	623	34,5	In average, how much of your time do you spend daily reading newspapers (minutes - total)	1162	33,1
In average, how much of your time do you spend daily speaking on the mobile phone (minutes - total)	689	36,3	In average, how much of your time do you spend daily speaking on the mobile phone (minutes - total)	1055	19,7
In average, how much of your time do you spend speaking on the telephone (minutes - total)	496	29,9	In average, how much of your time do you spend speaking on the telephone (minutes - total)	984	17,6

Source: CIES 2003

Table 3. Confidence level in information media

		Internet Users					Non-users of Internet				
		High to medium level of trust	Medium to low level of trust	N.A.	No opinion	Total	High to medium level of trust	Medium to low level of trust	N.A.	No opinion	Total
To what extent do you trust information obtained from television	n	559	143	2	7	711	1297	404	9	29	1739
	%	78,7	20,1	0,3	0,9	100,0	74,6	23,2	0,5	1,7	100,0
To what extent do you trust information obtained from radio	n	560	127	15	9	711	1187	350	162	40	1739
	%	78,7	17,9	2,1	1,3	100,0	68,2	20,1	9,3	2,3	100,0
To what extent do you trust information obtained from newspapers	n	540	144	17	10	711	1049	377	266	47	1739
	%	75,9	20,2	2,4	1,4	100,0	60,3	21,7	15,3	2,7	100,0
To what extent do you trust information obtained from the Internet	n	522	113	45	31	711	51	29	1563	96	1739
	%	73,5	15,9	6,4	4,3	100,0	2,9	1,7	89,9	5,5	100,0

Source: CIES 2003

Table 4. Most interesting activities (1st option)

What activity you consider the most appealing one?	Internet users		Non-users of Internet		Total	
	n	%	n	%	n	%
Playing video games	30	4,2	15	0,9	45	1,8
Talking on cellular phone	31	4,4	48	2,8	79	3,2
Listening to music on CD	97	13,6	80	4,6	177	7,2
Listening to radio	49	6,9	162	9,3	211	8,6
Watching TV	239	33,6	1297	74,6	1536	62,7
Reading newspapers	66	9,4	128	7,3	194	7,9
Surfing the Internet	197	27,7	2	0,1	199	8,1
No opinion	2	0,2	7	0,4	8	0,3
Total	711	100,0	1739	100,0	2450	100,0

Source: CIES 2003

Table 5. Strategies of interactivity with the media.

		Internet users					Non-users of Internet				
		Yes	No	N.A.	No opinion	Total	Yes	No	N.A.	No opinion	Total
Have you ever contacted a television or radio program by letter?	n	8	696		7	711	9	1687	18	24	1739
	%	1,1	97,9		1,0	100,0	0,5	97,0	1,1	1,4	100,0
Have you ever contacted a television or radio program by telephone?	n	28	624	55	4	711	21	1441	255	22	1739
	%	3,9	87,8	7,7	0,6	100,0	1,2	82,9	14,7	1,2	100,0
Have you ever contacted a television or radio program by text messaging (SMS)?	n	43	652	12	4	711	23	1405	286	25	1739
	%	6,0	91,7	1,7	0,6	100,0	1,3	80,8	16,5	1,4	100,0
Have you ever contacted a television or radio program by cellular phone?	n	16	685	5	5	711	14	1426	273	26	1739
	%	2,3	96,4	0,7	0,7	100,0	0,8	82,0	15,7	1,5	100,0
Have you ever contacted a television or radio program by electronic mail (email)?	n	19	615	70	6	711		646	1077	17	1739
	%	2,7	86,5	9,9	0,9	100,0		37,1	61,9	1,0	100,0
Have you ever written to a Newspaper?	n	48	662	1		711	29	1709	1		1739
	%	6,7	93,2	0,1		100,0	1,7	98,3	0,1		100,0
The writing to the newspapers was it done by electronic mail (email)?	n	19	29			48					
	%	39,5	60,5			100,0					

Source: CIES 2003

Table 6. Television Programs by Tv genre.

Television Programs by Tv genre	Usually seen during the week		Enjoyed the most in your lifetime	
	n	%	n	%
News	1189	48,5	530	21,6
Telenovelas/Soap Operas	354	14,5	350	14,3
Contests	160	6,5	265	10,8
Other information programs	146	6	134	5,5
Morning Hours Talk show	84	3,4	80	3,3
Celebrities Talk show	63	2,6	68	2,8
Real Life Talk show	64	2,6	101	4,1
Documentaries	58	2,4	113	4,6
Humour	57	2,3	86	3,5
Music Shows	54	2,2	89	3,6
Movies	55	2,2	76	3,1
Sport	28	1,1	26	1,1
Serials and Cult Series	28	1,4	68	2,7
Entertainment Shows	18	0,8	61	2,5
Theatre, Opera and Dance	16	0,3	15	0,6
Reality Show (Private Life and Musical)	7	0,2	62	2,5
Cartoons	3	0,1	15	0,6
Other	19	0,8	17	0,7
Doesn't watch TV	14	0,8	35	1,4
Doesn't answer	41	1,7	258	10,5
Total	2450	100	2450	100

Source: CIES 2003