Prometheus, Vol. 22, No. 4, December 2004

Carfax Publishing
Taylor & Francis Group

Beyond Broadcasting: The Digital Future of Public Service Broadcasting

MÓNICA ARIÑO & CHRISTIAN AHLERT

ABSTRACT *This article looks at the impact of digitization on television. Early treatments of digital television (DTV) have become outdated by technical and market developments. This paper reviews these developments and reconsiders the public policy and regulatory issues surrounding DTV, particularly with respect to public service broadcasting in Europe. Convergence trends are examined and we find that it happens, but differently than expected. This raises serious doubts concerning whether current models and conceptualizations of public service broadcasting can address future challenges of pluralism and diversity if they remain constrained by traditional understandings of broadcasting.*

Keywords: pluralism; public service broadcasting; digital television; convergence; Internet TV; broadband; television market; switch over; policies; interactive TV; pay per view; personal video recorder; satellite TV; structural regulation; spectrum allocation; public sphere; media markets

> The personal computer. The television. Arguably, these two devices are the most important technologies in the last half-century. One revolutionized the way we work, the other revolutionized the way we relax. But more importantly, both revolutionized the way we stay informed (Martin Fransman, *Digital America 2003: The US Consumer Electronics Industry*, 2003).

Introduction

Throw away your TV sets! The arrival of the Internet was celebrated like a revolution during the early 1990s. Technology gurus and policy-makers anticipated that '*Being Digital*'[1] would make the inherently passive TV set obsolete, or transform it into an interactive, multimedia edutainment centre. This expectation has led European policy-makers and others to heavily promote the digitally enhanced TV set as leading us into the 'information society' (IS).[2] Yet, despite some changes in television consumption patterns, and notwithstanding a potential convergence with the Internet, the way the television set is used, consumed and perceived today has not changed much in recent years.

Prometheus ISSN 0810-9028 print/ISSN 1470-1030 online © 2004 Taylor & Francis Ltd
http://www.tandf.co.uk/journals
DOI: 10.1080/0810902042331311678

Digitalization does, nevertheless, challenge classical conceptualizations of broadcasting and, likewise, regulatory mechanisms designed to ensure a plurality of voices. This in turn questions the legitimacy of publicly funded television and radio. In this article we argue that current concepts underlying both the design of home entertainment devices and the broadcast policy model are lacking, not only in imagination, but also in understanding of the necessary (and unavoidable) changes in a digital environment. We find strong evidence that public service broadcasting (PSB) continues to play a crucial role, yet we have serious doubts as to whether PSB can really address the future challenges of pluralism and diversity if it remains constrained by traditional understandings of broadcasting.

First, we briefly consider the characteristics of an emerging digital information environment and review the never-ending debate about convergence. Despite the initial hype and subsequent delusion about the convergence revolution, the move from an analogue to a digital paradigm does go beyond a mere technological change, and affects many other realms of our lives. In particular, we explore at length the changes in viewership and television consumption under a digital paradigm. These relate principally to issues of choice and control. Finally, we review the challenges faced by PSB in a digital environment. A reconsideration of its role and function is under way in most EU countries. We argue that, just as a multiplatform approach is needed for switchover policies, PSB needs to be understood and placed in this wider context.

Bits, Bytes and Integrated Media

A Digital Information Environment

Why is there a need to reconsider digital TV when we started more than 10 years ago to discuss the digital future of television and to tinker with visionary conceptualizations of converging entertainment and information services? As is often the case with utopian or (depending on the perspective) dystopian predictions about the anticipated benefits of new media, changes took time. Despite the widespread adoption of the Internet and increasing availability of digital TV, we did not throw away our good old analogue television sets and still worked mainly with our personal computers (PCs). Yet, finally, the year 2003 marked the first time in the history of modern communication when more digital than analogue communication devices were sold, ranging from palm tops, digital cameras, DVD players, PCs, mobile phones to less, but increasingly so digital radio and digital TV sets. Not only are we using these devices more often, but every day brings more connectivity between them. What is remarkable is not digitalization itself[3] or the technological merits associated with increased capacity, better quality, eradication of redundancies and reduction of transmission costs; rather, the combination of these *digital characteristics* has triggered significant changes in the very foundations of our communication, entertainment and information environments.

Digital means that almost any form of *medium*, be it a movie, picture or a book, can be digitalized, transmitted over various distribution paths and received through different platforms such as a PC, a mobile phone or a TV set. Information content traditionally falling in the realm of print media is now suited to mobile and audiovisual Internet services, while broadcasters are increasingly making data services accessible through the TV set. Content has become *cross-media* or, as generally put, *multimedia*. In addition, digital allows indefinite reproduction without loss of quality

and at almost zero cost, rendering meaningless the distinction between original and copy. This has prompted different visions about the future of digital entertainment and information services: some see the computer at the centre of change, whereas others predict that the television will increasingly resemble a computer and offer access not only to digital television but to all sorts of digital services. Hence, the battle between previously separated markets and industries is on: Murdoch now sits in one boat with MCI and Microsoft. But where it will sail is far from clear.

European and national authorities have expressed an interest in a full transition to digital technologies in all areas. Public authorities face many policy challenges along the digital road. These can be properly addressed only if changes are based on a thorough understanding of the underlying technology and the reactions of users. If universal digital access to as wide as possible a range of information and communication services is desirable, we need to understand how and where digital makes convergence happen.

From TV to TV-PC or to PC-TV? The Convergence Hype under Scrutiny

The much-hyped notion of 'convergence' has been the Pandora's box of the digital television (DTV) debate. The term has become a buzzword that embraces many ideas and concepts. We next provide an overview of how convergence is happening today (as opposed to how it could have happened), and explore why convergence is indeed taking on rather unpredictable forms. This in turn is used to re-conceptualize public entertainment and information provision.

Much was said about the convergence process, and expectations were high. It was seen by many as the 'third industrial revolution' on account of the expected social, economic and political impact. In the most ambitious vision, all content and all services were distributed over all networks and accessible with all functionality through all platforms and devices. One day, the different industries would merge indistinguishably in one sector and there would be 'no differences between broadcasting and telecommunications'.[4] This might have been an inspiring vision, but it was clearly unrealistic; though convergence is taking unprecedented forms.[5]

A fundamental feature of digital information is its independence from a special transport medium; consequently, it can be conveyed, in principle, over all available networks, including satellite, coaxial and fibre-optic cable, high-frequency wireless, digital terrestrial television (DTTV), analogue and digital telecommunications networks such as digital subscriber lines (DSL), and even power lines. This means that *in theory* the dissemination of media content is free from the constraints associated with a particular form of transportation. Services are no longer prisoner of one particular network, nor are companies limited to the provision of one particular service. With the aim of improving and diversifying their media portfolio, telecommunications, broadcasting, publishing, software and computer electronics companies frantically merged in search of synergies, economies of scope and market presence.[6]

However, technical limitations persist and some forms of media transportation are better suited to achieving some objectives than others. Whereas DSL is, for example, a promising technology in densely populated areas, the costs of upgrading existing telephone services in rural areas are prohibitively high. Hence, convergence is *in practice* limited by a number of factors: costs, market structure, technological progress and corporate philosophies. It follows that the promise that

all networks will be able to deliver any content to any platform is, at least for the moment, unrealistic. Moreover, the implied equality of transmission modes is misleading: networks are not equal but rather organized to achieve certain objectives. Networks are operated, structured and controlled in different ways.[7] Thus, whereas one can access any audio–visual content via DSL from whatever Internet provider one chooses, digital cable networks might allow access only to preselected, copyrighted content. Decisions by network owners and access providers can directly affect freedom of expression and pluralism. If this is so, regulation cannot be as 'technologically neutral' as it aspires to be.

However, although convergence is not happening as fast as predicted some years ago, important changes have already taken place and the convergence trend will continue. A good example is the BBC's expansion into online services, increasingly offering audio–visual and radio content. The BBC views the Web, not as a separate outlet to promote its television channels or as a mere supplement, but rather as an integral part of its public service remit. Live coverage of major public events over the Internet—such as the Olympics—is nowadays a normal part of the BBC's online services. During the 2004 Olympics in Athens, Internet users had access to more than 1,200 hours of live coverage from the Games, with five broadband streams broadcasting exclusive events as well as normal TV programming.[8] As people spend more time using Broadband and mobile media devices as sources of entertainment and information, it seems only logical that, alongside technological change, impartial and high-quality information should be supplied in a variety of formats and via a variety of media outlets. Under the twenty-first century digital paradigm traditional regulatory strategies, such as spectrum regulation or content obligations, will become less effective and, therefore, less relevant.

It remains unclear whether the PC will be the primary delivery platform for TV-like content or whether the TV set will become more like a PC. Both are possible, bringing together previously separated markets. Convergence will nonetheless continue to be characterized by fragmentary and evolutionary developments. Rather than 'anything, anytime, anywhere' with full substitutability, convergence will probably come to mean complementarity between platforms, networks and services, with ubiquitous and simultaneous rather than overlapping usages. This has been confirmed by Ofcom, the newly formed converged media regulator in the UK. Its media market report 2004 shows that 'after many years of hype, communications convergence is becoming a reality, but is profoundly different from the original concept of convergence envisaged in the 1990s'. Then, the talk was of homes in which the computer, telephone, television and radio would morph into a single device. Now, the convergence experience is notable for its diversity. Consumers are listening to radio stations on their television sets, music tracks on mobile phones, and watching films and sport events via the Internet, while also making telephone calls over the Internet.[9]

Broadcasting in Digital: Beyond a Technological Change

Today, the technical background of television is more complicated than it was in the 'analogue age'. Both 'analogue' and 'digital' refer to the way in which signals are treated for *transmission* purposes. In the analogue broadcasting environment two major factors determined, among other things, the broadcasting market structure, audience behaviour, and the fundamental rationales behind broadcasting regulation. First, analogue television was by design a *one-way* mass communication,

from broadcaster to individual viewers. Second, as a result of the scarcity of broadcasting spectrum frequencies, entry was restricted to a few and the number of channels was limited.

Under the digital paradigm things are substantially different. In terms of capacity, digitalization of signals improves efficiency in spectrum usage, which substantially increases the number of channels that can be transmitted. In terms of quality, there is superior resolution of image and audio (digital systems can detect and eliminate interference signals and contain sophisticated mechanisms of error corrections) as well as consistent reception over varying distances. In terms of service, digitalization has allowed for data transmission in combination with video and sound and has opened the door to interactivity wherever there is an adequate return path (which can take various forms, from a traditional telephone line to a Broadband Internet connection).

Digitalization of television has also brought new business scenarios, players and market strategies; and, most importantly, it is having a significant impact on the way we approach our consumption of audio–visual products. Thus, digitalization changes not only the way television is made but also the way it is used. TV viewing habits have changed enormously over the years.[10] Media used to be a 'top-down' business, where a few decided which stories were worthy enough to make the headlines of a few channels. Douglas Rushkoff, a professor of communications at New York University and an adviser to the United Nations Commission on World Culture, cynically states:

> television programmers are not programming television sets or evening schedules; they are programming the viewers. Whether they are convincing us to buy a product, vote for a candidate, adopt an ideology or simply confirm a moral platitude, the underlying reason for making television is to hold onto our attention and then sell us a bill of goods.[11]

As technology changed (for instance, the mass introduction of the remote control in the 1970s), viewers' behaviour changed too (more channel surfing) and broadcasters adapted (through changes in programming as well as in the design and placement of commercials).[12] Today, traditional models of content consumption are challenged by digitalization, which supposedly frees the viewer from the tyranny of the television schedule. Audiences can, and will probably want to, organize and re-order content as they please. Trends show that viewers are taking much more control of what they view and how they view it; they consume more media simultaneously and share content with each other.[13] Already in the early 1990s there were predictions about how the 'telecomputer' would enhance individualism rather than exalting mass culture, and promote creativity rather than cultivating passivity.[14] It is yet to be seen whether digital TV will change television habits to the point where TV becomes a more active social experience, or whether interactivity will instead turn television viewing into a more solitary computer-like experience. In any case, it is certain that the traditional 'monologue broadcaster–grateful viewer' relationship is breaking down.[15]

The Viewers: In Control or Controlled?

In this context, a great deal of attention has been given to interactivity, as a way to revolutionize traditionally passive communications on a point-to-multipoint basis.

Basic interactive capabilities permit the exercise of some control over the programme by the viewer, for instance by altering the content or changing camera angles. A more sophisticated level of interactivity allows the viewer to request additional information and to 'pull' services that are not necessarily related to any specific video programming.

Often portrayed as one of the most promising features of digitalization, interactivity is repeatedly cited in policy debates as a major benefit of digital television. Several broadcasting companies, including the BBC, have been experimenting with programmes that incorporate some degree of interactivity. Interactive TV allows the viewer to tailor the content to some extent and might change viewing habits significantly, from a 'lean backward' to a 'lean forward' paradigm. They can watch a golf championship or Formula One races from several cameras on different channels, following one particular player or car, staying in one particular spot of the field, and so forth. And they can choose what to watch. Video on demand (VOD), for instance, is a service that allows the viewer to choose from a menu or library of programming (typically comprising from 250 to 3,500 titles). Cable telecommunications operators can store the programmes in a central server that is linked to the home and delivers the programme when requested. Satellite operators, because they lack a return channel, store all programmes locally in a device inside the set-top box. In both cases the viewer decides what to watch and when.[16]

Another example of enhanced control is pay per view (PPV) systems that enable the consumer to purchase a single viewing item such as live or exclusive one-off events (like football matches, concerts, boxing competitions or movie premieres). The latest and perhaps more revolutionary development is the personal video recorder (PVR), which allows viewers to watch previously selected programmes at a time of their choice. Companies such as *Tivo* or *Replay-TV* allow control over the programme equivalent to the control previously offered by VCRs: rewind, fast-forward, time-shifting in order to watch another programme (news, for instance) at any point later than the time when it is broadcast, and so on.

Interactivity and the personalization of content arguably seem to reduce the need to protect the citizen from media manipulation, challenging classical conceptualizations of broadcasters as gatekeepers. The major policy question is whether there is still a need for regulation designed to ensure plurality and objectivity of content. In other words, the higher the level of active viewer choice is, the lower is the level of regulation needed. Certainly, it would seem disproportionate to apply full-force rules conceived on the assumption of involuntary exposure to the new interactive environment.

However, it remains unclear to what extent multichannel and interactivity genuinely emancipate viewers. Interactivity and personalization have not yet abolished the 'mass media' character of television and hence its impact on public opinion. To be sure, television is digital but most consumers can still be described as 'analogue'. Likewise, our thinking about regulation[17] and, as we argue, about public service broadcasting models is analogue.

The potential of interactivity is just that: a potential. It is based on a number of hypotheses about viewers' behaviour. Consumption patterns have not actually changed much in recent years. Today, interactive television is not very far from conventional television in the way it is organized and used. Television is used to connect to life but also to disconnect from it, and it is still not clear in what kind of interactivity consumers will engage.[18] Numerous studies show that TV viewers do not want to take decisions. They want to be entertained. They do not interact with

their television set the way they do with their PC. In fact, in the television realm it seems more accurate to talk about 'interpassivity'.[19] Policy-makers need to understand this.

Furthermore, even in those cases where the viewer initiates active participation, interaction or choice, one should be wary about the real degree of control. The problem is who controls what is on offer, and a recurrent problem will be whether there is enough choice for viewers or whether companies are limiting product choice (which they effectively do in all markets) to a point where democracy is in peril.

Devices like the set-top box or PVRs that appear to transfer a great deal of control to the viewers are largely black boxes, seemingly beyond the control of regulators and certainly beyond the ability of most consumers to understand. In effect, much of potential consumer control is ceded to network operators who, literally, can transform or use the set-top box intelligence to their benefit, to closely monitor behaviour and transactions. The PVR capabilities are not limited to allowing users to set preferences in order for the set-top box to automatically record their favourite shows and movies. The box also 'suggests' shows and movies. Consumer choice itself might end up being nothing more than an illusion. For the broadcaster it becomes possible to observe customers' behaviour and to learn about their habits and preferences, which will make it easier for companies to provide information and advertisements accordingly. The question of 'who will control whom' is, for the moment, unanswered.

Voice and Choice

Critics of broadcasting repeatedly say that television provides excessive mass appeal programming while simultaneously failing to offer programming for minority tastes. A first concern over programme diversity arose in traditional broadcasting from the fact that in the dominant frequencies only a limited number of channels could be allocated if interference was to be avoided. Because the industry was driven primarily by advertising, programme costs and dedication were linked to ratings. As a result, there was a tendency to focus on larger audiences and to marginalize minority genres ('Hotelling effect'). Stories were selected for profitability rather than relevance. This has been a major criticism of traditional broadcasting, and it typically justified the privileged position of public broadcasting. The problem was also partially addressed through the imposition of content-related public service obligations on commercial broadcasters.

Has this changed with digital? One of the most salient features of the debate surrounding the digitalization of television is the increased number of frequencies and, subsequently, of available channels (and hence potential voices and choices). In recent years there has been a proliferation of regional and local private channels in most countries through terrestrial technology. Satellite technology has promised to deliver as many as 1,000 channels simultaneously,[20] while coaxial cable has demonstrated capacity to deliver with compression over 2,000 channels, in combination with telephone and Internet access services.[21]

Do more channels mean more choice? Clearly, the potential for greater variety in content is there,[22] and, indeed, the multiplication of regional and local private channels has encouraged multiple forms and models of stations that are trying to adapt themselves and respond to the existing diversity (cultural, linguistic, political, demographic, geographic) in what has been described as 'proximate television'.[23]

Undeniably, there has been an augmentation of programme choice and not all of it is necessarily 'bad'. Expansion of channels would seem to offer a solution to the issue of minority neglect.

Yet such a conclusion is much less straightforward than it seems. More outlets or more producers do not necessarily mean more choice. '[W]hat this technocratic optimism is ignoring is that the quantity of channels and interactivity available in the delivery networks does not itself guarantee free consumer choice'.[24] Content is still competing for the same eyeballs, which grow at a much slower rate. As the number of channels increases the average audience size for programmes and channels declines, and so do advertising revenues per channel, while programme costs per audience member increase.[25] Under advertising funding models old 'analogue' problems will remain and the preferences of the advertiser, not the consumer, will continue to determine programme choice. As Mark Cooper argues, 'advertising as a determinant of demand introduces substantial disconnection between what consumers want and what the market produces'.[26] In fact, the interests of media consumers are satisfied only in so far as these are coincident with the interests of the advertisers. What is more, the media not only satisfy consumer preferences but also form them.[27]

In short, media economics are as perverse in the digital world as they were before. 'Outlet diversity […] has been a poor replacement for content diversity'.[28] Advertising and the economic structure of television are, in digital as in analogue, the reason why we have a mediocre level of programme diversity: they need to serve large homogenous audiences. This will continue as long as programming is supported by advertisers and there are imperfect signalling systems from viewers to broadcasters.

Subscription TV models allegedly solve the problem of the disconnection between advertisers' values and viewers' values as some measure of preference intensities enters the realm of the broadcasters decisions. Mass programming will not disappear; but under price competition the duplication and imitation prevalent in advertising-supported models might be reduced. Does this mean that choice and diversity will be enhanced under pay TV models? To a certain extent the answer is 'yes', but this needs some qualifications:

- there is more content but there is more of the same;
- in effect, rather than providing new content, new channels have simply provided the same content but for an entire day (the so-called thematic channels such as MTV, National Geographic, and so on);
- greater channel capacity has not resulted in a corresponding increase of programme genres;
- choice between competing channels does not equal diversity of programming because of competing schedules;
- finally, when it comes to pluralism concerns, the crucial factor is not a potential lesser impact but the actual impact of the media on citizens. This is measured by audience reach rather than by the number of channels. In fact, viewing patterns do not seem to have radically changed in recent years, and certainly not enough to suggest that viewers are now completely emancipated from media manipulation.[29]

Few contest the case for intervention and there is a wide consensus about the need to adapt traditional media regulations to ensure a pluralistic offer. But

controversies and difficulties are paramount in discussions of alternative regulatory strategies. We strongly believe that public broadcasting should indeed continue to play a crucial role in this respect. Even though more channels are available than ever before, in particular through the Internet, the economics of high-quality news and entertainment production have not drastically changed. In the digital media world content needs to be acquired, edited and presented by a trusted brand; and arguably who would be better suited for this task than public service broadcasters? Yet we have serious doubts as to whether public service broadcasters can really address future pluralism and diversity challenges if they remain constrained by traditional understandings of broadcasting.

Public Service Broadcasting in a Digital Environment

In a market-based ecology of broadcasting, the legitimacy of PSB is a regular topic of debate. The commercialization of broadcasting, digitalization and convergence requires us to reconsider, if not its existence, then the models and funding mechanisms under which PSB operates. With the dismantling of public monopolies and the development of commercial broadcasting, concerns arose about the best way to protect pluralism and other public interest values that had so far been identified with the public service model. 'In essence, the West European fear [was] that the advent of commercial television [would] shift the emphasis from a *principled* to a *pragmatic* pluralism, yielding only that amount and those forms of diversity that are likely to pay.'[30]

Structural regulations and ownership rules became the key means of promoting media pluralism, the rather intuitive rationale being that maintaining a multiplicity of outlets was likely to better serve the public interest. The focus was on the external dimension of pluralism.[31] The distinction between public and commercial broadcasters became crucial for the understanding of pluralism regimes. Matters of pluralism and diversity are addressed differently depending on the character of the broadcaster. Stringent content requirements can be more legitimately imposed on public service broadcasters (internal dimension of pluralism) and are harder on commercial broadcasters that are inevitably constrained by their need to draw audiences.

In the digital environment, commercial and public service broadcasters alike are being forced to rethink their content production and distribution methods, their business models, their roles and their very nature. Adaptation to the new digital environment is more complex for public service broadcasters as a result of their specific mandate. Justifications of public stewardship to regulate the airwaves are being revisited and the revenue of public broadcasters is in the spotlight. In many countries across Europe the role and remit of public service broadcasting are currently under review. Most prominently, an important debate has been triggered in the UK by the renewal, in 2006, of the BBC's charter. In Spain, the new government of J. L. Rodriguez Zapatero has commissioned a report to a 'Committee of Wise Men' which is expected to serve as the basis for a comprehensive reform of the Spanish public television broadcasting system, the manipulative use of which before and after the terrorist attacks in Madrid in March 2004 has been widely criticized, and condemned by the Spanish Supreme Court. Similar debates are occurring in Germany, where the funding model of the public broadcaster is under scrutiny, in particular with respect to online services. The challenges are many and varied, mainly related to the definition of public broadcasting remits, the need for

real independence from governments (to avoid, as in Italy, an almost absolute identification of the two), and the design of appropriate financial support mechanisms.

These debates will continue to evolve. We argue that a debate restricted to the issue of whether or not public broadcasters are entitled to retain their privileges in the digital age most likely runs the risk of not adequately taking into account crucial structural changes in media usage and adoption. Reformulating the tasks of public service broadcasting will be much more crucial than merely deciding how much money a public service broadcaster will be allowed to spend on online services.

Preservation of an Audio–Visual 'Public Sphere'

Broadcasting, beyond its undeniable leisure and entertainment function, has contributed to creating in many countries an important socially inclusive public sphere, distinct from the state and going beyond purely economic considerations. The functions of broadcasting within the public sphere are twofold: 'the collection and dissemination of *information*, and the provision of a forum for *debate*'.[32] Within this public sphere, ideas flow and are contested, and the activities of those in authority are subject to scrutiny. From this perspective, broadcasting and other channels of public communication are essential to citizens' participation in democratic processes.

Today, fragmentation threatens to destroy the public sphere where people can discuss joint concerns. This fear has been at the forefront of discussions about the social consequences of the use of new technologies such as the Internet.[33] Some commentators have voiced their anxiety about the effect that such developments might have on the ideal of deliberative and participative democracy. Cass R. Sunstein, for instance, writes:

> […] people should be exposed to materials that they would not have chosen in advance. Unplanned, unanticipated encounters are central to democracy itself. Such encounters often involve topics and points of view that people have not sought out and perhaps find quite irritating. They are important partly to ensure against fragmentation and extremism, which are predictable outcomes of any situation in which like-minded people speak only to themselves. I do not suggest that government should force people to see things that they wish to avoid. But I do contend that in a democracy deserving the name, people often come across views and topics that they have not specifically selected.[34]

The preservation of a 'public space' is at the heart of current debates about the role of public service broadcasting. Advocates of PSB, especially in Britain, have traditionally used the Habermasian concept of 'public sphere', understood as a space or public forum between state and civil society available for rational and (ideally) undistorted communication and public debate, in order to defend the maintenance of a special regime for PSB.[35] There was an effort to assimilate public broadcasting to the realization of the public sphere while commercial television was portrayed as a threat to it. A PSB system would preserve the conditions of plurality of competing viewpoints and information sources that facilitate the creation (and continuity) of such a public sphere.

Therefore, beyond the market failure rationale, there is also a line of argumentation in favour of intervention based on the need to maintain a public sphere for

political and social debate. It has been argued that this is best achieved through regulatory intervention designed to maintain PSB, whatever its form.[36] This is related to the protection of 'internal pluralism' and remains as valid today as it was in the early days of broadcasting.

Public Service Broadcasting and the Imperatives of Markets

Is there a need for a public service broadcaster as a privileged, publicly funded institution that partly escapes general competition rules but competes, nevertheless, with private broadcasters? By and large, PSB was established to cater for the mass public. But when audiences are fragmented and when other operators compete for mass audience appeal, the scope for public broadcasting is reduced. Although public broadcasters are still expected to be the central guardians of the public interest, in the prevailing mixed broadcasting environment (i) that is no longer their exclusive domain and (ii) they have entered new domains. There is an inherent contradiction in gaining popularity. If PSB tries to compete more directly with its commercial rivals, it risks losing its niche. If it fails to go for a broader audience, it risks losing its relevance to the general public. One might wonder whether public service broadcasters have a *raison d'être* if in practice they distance themselves from their public service mission and come to resemble commercial channels.

Today, public broadcasters' dominance in terms of TV audience reach is decreasing, which certainly raises questions about the legitimacy of the licence fee. In some countries where public broadcasting is financed partly through advertising, problems of unfair competition have arisen.[37] The increased dependence of public service broadcasters on advertising is seen as harmful to the quality of general output and questionable from a competition law viewpoint. Public service broadcasters are competing for 'eyeballs' and at times have done so at the expense of their public interest obligations. One could argue that public service broadcasters cannot ignore the economic imperatives of markets and the competitive framework in which they operate. Some defend on that basis the efforts of public service broadcasters to draw audiences and attract advertising revenues.

Few observers expect a purely commercial environment in broadcasting, as there is widespread scepticism about the capability of market forces to preserve what are regarded as core public interest values, such as universality, quality, independence, variety, basic supply of programming, and media representation of national and cultural diversity. In principle these are perfectly valid grounds for the preservation of public service broadcasting. Unfortunately, experience has demonstrated that public television has often been used for much less laudable purposes and in a partisan manner. It is prone to manipulation, abuse and uncontrollable expenditure and, with few exceptions, it acts as the mouthpiece of the government in power, something that has seriously damaged the citizens' recognition of the social benefits of public television. It might be worth considering whether the whole debate on PSB is based on a false dichotomy between 'public service' and 'commercial' broadcasting. Should PSB be defined in relation to its commercial counterpart or should it be defined independently? Does its value lie in the audience size it commands? Classically, public service broadcasting is meant to 'inform, educate and entertain'. Franklin adds: 'in a way which the private sector, left unregulated, would not do'.[38] Otherwise, there might be no reason not to leave matters entirely to the private sector. The question remains: is public broadcasting merely a supplement to other broadcasters or a proactive forum for change?

We still advocate a dual system of private and public sector broadcasting, yet the foundations and purposes of each should be clearly distinguished. Private sector productions will not (and do not necessarily need to) always satisfy domestic or public interests. Public service broadcasting will certainly not disappear in the digital age but its mission should be to *add* programmes, not to restrict them. Public broadcasters should strive for a product of quality and diverse content arguably regardless of whether this involves mass production with mass audiences. PSB should not be about 'making money' but perhaps focus on those programmes of 'quality' (whatever that means) that their private counterparts might find unprofitable to produce or broadcast. Also, greater emphasis should be placed on the public service broadcasters' role as innovators; their leading character in testing and adopting new technologies should be accredited.

Finally, mention needs to be made of debates about a public service *remit* and a public service *institution*. These are different things, not necessarily logically linked. One could argue that public service *broadcasters* are not necessary, and that only serving the public interest is. 'Public service' provision is not unavoidably tied to 'public broadcasting'. Nothing, indeed, prevents the regulator from establishing and defining a public service remit, imposing obligations on commercial broadcasters and financially supporting them, under clear accountability separation. If the lack of 'good' programming is regarded as a market failure, the argument goes, then the problem could be solved via competitive-tender procedures for certain kinds of programming. The state would act as a 'commissioner' rather than as a 'regulator' of content. For instance, an 'arts council of the air' could be conceived as an organization to finance with public money a wide range of programmes from a variety of sources that could then appear on a variety of TV channels and other media too.[39] In turn this argument is used in support of voluntary subscriptions to PSBs.

Against this, however, is the fact that television represents a joint strategy of programming and that different channels and institutions do create special relationships with the public.[40] Privatization of public channels and auctions of standalone public service programmes might, in effect, ignore the fact that public broadcasting is not just one more aspect of our television systems, but has its own character and an important underlying philosophy that is not (and should not be) easily discarded.

Public Service Broadcasters: Still Broadcasting? The Challenges of an Online Environment

We have seen that today the very notion of broadcasting as a one-to-many passive communications media is changing. So are traditional understandings of 'broadcasters' as intermediaries. Problems with current definitions are particularly pressing when one considers Internet television, with its potential to *narrowcast*. The Internet is increasingly becoming another outlet for audio–visual products. It is possible to send and receive audio–visual content via the Internet, provided that sufficient capacity is available. Newspapers such as the *New York Times* or the *Guardian* now offer online coverage of major events like the Iraq war, including quasi-live voice comments as well as short movies illustrating the event. Internet radio is rapidly becoming a major service, while public broadcasters deliver all sorts of digital online content, even online teaching materials.[41] The media industry is starting to experiment with payment models for online audio and video content and with 'Internet TV stations'.[42] Some of this audio–visual content is little different from that delivered over traditional broadcast networks. Thus, the Internet allows for the

creation of relatively cheap Internet-based TV channels, global in reach, and is threatening to become a direct competitor for the delivery of broadcast quality video pictures. Today, anyone with a PC and the right web authoring software can potentially become a 'publisher'. Well, with the rapid development of audio and video streaming over the Internet, virtually, anyone could become a radio or a television broadcaster too.

While in the policy debate digital broadcasting refers to a reformulation of broadcasting and considers the extension of current regulatory regimes, Internet TV providers like *ebiscom* in Italy are in effect already narrowcasting audio–visual content directly into the home via high-speed optical fibre networks,[43] thereby circumventing traditional regulations.[44] This service is particularly remarkable because the picture quality is not substantially lower than that of other forms of transmission (something that has so far been the biggest obstacle to the delivery of movies and television via the Internet). Note that, unlike traditional over-the-air or cable broadcasting systems, video over the Internet would not be limited by physical or political boundaries, something that will create significant challenges for regulators and policy-makers.[45] It is not unrealistic to imagine a world in which channels themselves are eliminated to give way to video servers that could store programming libraries from which consumers could choose. There would be no more scheduling (except for live events) and broadcasters would look more like service providers that could either specialize in certain types of programmes or provide a wider range of general programming, competing among themselves, for instance, on the basis of their brands.

Thus, rigid definitions of what constitutes a 'broadcaster'—an institution providing audio–visual content to a large audience—seem increasingly meaningless. It makes little sense to regulate audio–visual content differently when it is broadcast through television networks from when it is transmitted over the Internet. In most countries there was for a long time no regulation for incipient Internet broadcasting services, either because Internet broadcasting was not caught within existing regulatory definitions or because regulatory agencies had chosen not to attempt to enforce existing rules. But as the Internet expands and the quality and popularity of video broadcasting over Internet networks increase, existing regulatory regimes, including rules regarding PSB programming, warrant review.

During the last decade, public broadcasters too have started to provide a wide array of online services with public funding.[46] They now deliver all sorts of digital online content, even online teaching materials, and plan to supply digital services across networks. The BBC has been given a general licence to experiment with and to deliver online services, which are now among the most widely used Internet services. This raises the question of whether they are acting within their public service remit, whose legal definition is based on broadcasting under analogue conditions.

Main criticisms include:

- the fact that the BBC is unfairly using public money in new online services and excluding competitors;
- the lack of a clear framework to evaluate whether or not those online services constitute public information and should therefore be funded by the licence fee; and
- the question of whether there is a need for a 'civic commons' online and, if so, how this should be financed.

There might be a need to redefine what constitutes public service communications in an online environment. There is a wide consensus that public broadcasters should stick to their traditional tasks, even on the Internet.[47] In essence, the question is whether an area of the Internet should be treated as a new public space and inter alia sponsored and nurtured by public service institutions. Some believe it is 'desirable and natural for PSB's to operate portal sites making such content available as widely as possible. Such sites should also include Internet search engines offering users better and easier access to European and national web resources'.[48] This approach would also enhance collaboration between public service broadcasters across Europe.

There is an enormous amount of studies, reports and papers on the future of public service broadcasting, and discussion will certainly continue in the years to come. It is widely suggested that PSB needs to redefine its role and its remit as the principles that justify its existence were simply designed for another age. We believe that the notion of PSB is (and must) not be restricted to traditional broadcasting, but should apply to new media as well.[49] Novel alternatives should be explored to transform PSB from a broadcaster into a 'public provider of digital entertainment and information services'.

Conclusion: Options for a Digital Policy

When one looks at the broader picture of convergence it becomes apparent that a multiplatform approach to digital policy, be it switchover or digital content production, and certainly including public service broadcasting, is urgently needed. The convergence debate is in fact a debate about whether the TV set or the PC will become the centre of the interactive multimedia experience in the home. Whatever the case, public service broadcasting should not be framed in a narrow way that is limited to the television screen on a linear basis. It should rather embrace horizontal and technologically neutral conceptions of content distribution that are informing regulation in other areas.

Our attention needs to shift to new pluralism concerns in advanced models of media freedom that suggest new conceptualizations of public service broadcasting. Whereas broadcasting was always a static, passive and synchronous form of communication, this no longer need be the case. And yet, driven by old-fashioned media paradigms, media companies try to put the genie back into the bottle and attempt to re-engineer artificial scarcity. A good example is the debate surrounding copyright of audio–visual digital content: the World Intellectual Property Organization (WIPO) in its most recent round of negotiations tried to introduce a mandatory 'broadcast flag', a digital watermark making the alteration and copy of content impossible by design.

There is a fundamental misunderstanding of the concept of interactivity, or so-called participatory design of the media. Ill-informed social scientists saw a great democratic potential in the existence of a feedback loop, transforming television into a technology of freedom,[50] but mostly limited their attention to 'television polling' or, in its more advanced version, to 'deliberative polling'.[51] However, we have seen that take-up of digital television is not occurring at the predicted speed. Abundance of channels and more or less sophisticated tools of content selection are not sufficient to drive consumers enthusiastically towards digital television.

This also points to a rather unexpected deficiency in the debate. Both broadcasters and policy-makers have failed to grasp the substance of the concept of 'digital

freedom', called by some *the freedom to tinker*.[52] One great advantage of digital media is that they not only decrease transaction costs in a simple way but give the user (or viewer) the power to be a producer. In the analogue paradigm, the ability to edit and change content was limited to the skilled and empowered few. With digital, real empowerment means not only that the content selection strategies will need to change but that the *modus operandi* of media production can change. Real interactivity could mean that users become engaged in producing content. This might seem like a wild fantasy at present, but many developments point in this direction. As initiatives like iCan or the BBC's digital archive suggest, even old-fashioned broadcasters think that digital does not merely equate to more channels but also necessitates critical thinking about media dissemination and production.

It follows that new funding models have to consider the production of 'content commons' that should be widely available to the public. This might defy the artificial economics of the 'age of access'[53] in which control is hardwired into our media devices. There is no need stick to the assumption that digital TV just means a broader selection of new content; one should recognize further that old content could actually be provided via a digital archive. The question then is not whether or not a broadcaster will be allowed to use public funding for online services but, rather, whether it ought to become an obligation.

'The future is not an overarching leap into the distance; it begins in the present'.[54] The choices of today will largely determine our digital future, our degree of digital freedom, the scope of our media access and its potential uses. While still worrying about pluralism, impartiality, quality and media ownership, we need to move away from traditional media paradigms, which, for example, concentrated mainly on regulatory safeguards of internal and external pluralism. Instead, it is desirable that we shift the focus of attention.

In the age of access there are new ways to deliver information and entertainment, and new potential for viewers. We suggest that the debate has to move away from switchover policies, or the appropriateness of using public money for online services, to a more imaginative discussion that is capable of re-engineering what 'public content' means. We must remember that broadcasting, whether public or commercial, is not an end in itself. It is just a technology, and technologies change. Just as the concept of authorship and copyright emerged alongside the development of the printing press, and was then adapted, the digital environment changes the conceptualization of the public element of 'information and entertainment' delivery to society. Finally, perhaps it would be a good thing not to think of broadcasting any more, but rather of content delivery and production as a public service!

Notes and References

1. Nicholas Negroponte, *Being Digital*, Vintage Books, New York, 1995.
2. The information society generally refers to the increasing centrality of information and communication technologies in all realms of social and economic activity. See European Commission, *Europe and the Global Information Society: Recommendations to the European Council*, The Bangemann Report, Brussels, May 1994.
3. Albeit often promoted as 'the future', the use of digital representation of signals and data transmitted as a string of 0s and 1s is in fact many decades old. It was already described by Claude E. Shannon, Bernard M. Oliver and John R. Pierce of Bell Labs in the US in 1948.
4. *Public Policy Issues Arising from Telecommunications and Audiovisual Convergence*, Report for the European Commission/KPMG, September 1996, at p. 8.

5. The case of electronic publishing is paradigmatic. When Stephen King published his first novel on the Internet in March 2000, about 400,000 people downloaded it within 24 hours. Perhaps for a moment some thought of it as the 'next new success'. Most people did not read it on their computer, nor did they print it out and carry it around. Since then, enthusiasm for electronic publishing has declined.
6. Perhaps the best example of market convergence was that of France's Vivendi with Canada's Seagram, the owner of Universal's film studio and Universal Music, the world's biggest record company. The merger brought together the film and music output of Universal with Canal Plus (the biggest pay TV firm in Europe), SFR (the second largest French mobile operator) and Vivazzi, a new portal that is a joint venture with Europe's biggest mobile operator, Vodafone.
7. Lawrence Lessig, *The Future of Ideas*, Random House Trade, New York, 2001.
8. Daniel Thomas, 'BBC offers Olympic Games via broadband', *Computing*, 10 August 2004; http://www.vnunet.com/news/1157266.
9. Ofcom, *Media Maket Report 2004*, http://www.ofcom.org.uk/research/industry_market_research/m_i_index/cm/overview/?a=87101.
10. For an analysis of how we can learn from the past when dealing with new media, see: John Carey, 'The evolution of TV viewing', Fourth Annual TV Meets the Web Seminar, Amsterdam, 2002.
11. Douglas Rushkoff, 'The end of the story: how the TV remote killed traditional structure', in Darcy Gerbarg (ed.), *The Economics, Technology and Content of Digital TV*, Kluwer Academic Publishers, Boston, 1999, pp. 103–24, at p. 107.
12. Behaviour trends have equally induced technological developments. The personal video recorder responds to increasingly busy lifestyles and limited time to watch television by making available to viewers the full 24-hour schedule of large-capacity cable and satellite services.
13. Nonetheless, these trends are, for the moment, minoritarian.
14. George Gilder, *Life after Television: the Coming Transformation of Media and American Life*, W.W. Norton & Company, New York, 1992.
15. Ashley Highfield, 'TV's tipping point: why the digital revolution is only just beginning', speech at the Royal Television Society, 6 October 2003.
16. An alternative to VOD is near-VOD, in which several programmes or movies are transmitted on different channels as part of a schedule, usually at staggered intervals of 10–30 minutes. This means consumers cannot access the service immediately but have to wait until the selected title next begins.
17. Beth S. Noveck, 'Thinking analogue about digital television? Bringing European content regulation into the information age', in Christopher T. Marsden and Stefaan Verhulst (eds), *Convergence in European Digital TV Regulation*, Blackstone Press Limited, London, 1999, pp. 37–63.
18. In fact, the most successful interactive service so far has not been e-learning or e-banking but betting, which has turned out to be the biggest single generator of revenues for both *BSkyB* in the UK and *Canal Satellite* in France.
19. Laetitia Wilson, 'Interactivity or interpassivity: a question of agency in digital play', *Ezine*, 17, 8, 2003; Slavoj Zizek, 'Will you laugh for me, please?', *In These Times*, 18 July 2003.
20. In 2003 satellite delivered 250 channels in the US and 210 in Europe.
21. Optic fibre could deliver over 13 million compressed video channels over a single strand. The problem is not one of technology, but of viable business models and consumer take-up.
22. In a world of hundreds of channels it is theoretically possible to watch, from anywhere in the world, cultural shows from Greece, game shows from Japan, sports from England and news from China. Yet most people still prefer to see local content in their own language and reporting that reflects their own values and outlooks.
23. Miquel de Moragas Spa and B. Lopez, 'Decentralization processes and the "proximate television" in Europe', in Georgette Wang, Jan Servaes and Anura Goonasekera (eds), *The New Communications Landscape: Demystifying Media Globalization*, Routledge, London, 2000, pp. 33–51.

24. Pertti Näränen, 'European digital television: future regulatory dilemmas', *Javnost-The Public*, 9, 4, 2002, pp. 19–34, at p. 29.
25. Allan Brown, 'The digital future of terrestrial advertiser-supported television', *Prometheus*, 21, 1, 2003, pp. 41–57.
26. Mark Cooper, *Media Ownership and Democracy in the Digital Information Age Promoting Diversity with First Amendment Principles and Market Structure Analysis*, Center for Internet and Society, Stanford University Law School, 2003, p. 36.
27. Edwin C. Baker, 'Giving the audience what it wants', *Ohio State Law Journal*, 58, 2, 1997, pp. 311–417.
28. Mara Einstein, *Media Diversity: Economics, Ownership and the FCC*, Lawrence Erlbaum Associates, Mahway, NJ, 2004, p. 218.
29. Thomas Gibbons, 'Pluralism, guidance and the new media', in Christopher T. Marsden (ed.), *Regulating the Global Information Society*, Routledge, London, 2000, pp. 304–15.
30. Jay G. Blumer, 'Vulnerable values at stake', in Jay G. Blumer (ed.), *Television and the Public Interest: Vulnerable Values in West European Broadcasting*, Sage, London, 1992, pp. 22–42, at p. 32.
31. In the global context, pluralism has been strongly associated with diversity of ownership, yet there is no direct link between diversity in the ownership of media outlets in fierce mutual competition and pluralism of media content. Nevertheless, even if pluralism of ownership does not only and automatically lead to diversity of views, it has been considered to be the closest proxy for it, especially when linked with various types of content regulation. Richard Hooper, 'United Kingdom', in *Global Report Series: Media Ownership and Control in the Age of Convergence*, International Institute of Communications (ICC), London, 1996, pp. 229–48.
32. Nicholas Garnham, *Capitalism and Communication: Global Culture and the Economics of Information*, Sage, London, 1990.
33. The Internet has been pessimistically described as the paradox of a social technology that made people lonely. Some view it as harmful, others as a revolutionary liberating force. For an empirical analysis of different utopian views see Hooper, *op. cit.*; Peter Dahlgren, 'The public sphere and the net: structure, space and communication', in W. L. Bennett and Robert M. Entman (eds), *Mediated Politics: Communication in the Future of Democracy*, Cambridge University Press, Cambridge, 2001, pp. 33–55.
34. Cass R. Sunstein, *Republic.com*, Princeton University Press, Princeton, 2001, pp. 8–9.
35. Garnham, *op. cit.*
36. Stefaan Verhulst, 'Coping with the new communications environment: are regulations still relevant?', in Iyer Venkat (ed.), *Media Regulations for the New Times*, Asian Media Information and Communications Centre, Singapore, 1999, pp. 1–21.
37. In Britain, Australia, Sweden and some other countries, public broadcasters are forbidden to broadcast any advertising at all. In Italy, Spain, Germany and France, on the other hand, public broadcasters rely heavily on advertising revenues; as a result, a brutal battle for advertisers has severely affected (and weakened) the programming of public broadcasters.
38. Bob E. Franklin, *British Television Policy: A Reader*, Routledge, London, 2001, p. 33.
39. This has already been tried in New Zealand. In 1988, the government, following an agenda strongly influenced by market principles, drew up a deregulation package for broadcasting. A main component was the separation of the social objectives of broadcasting (public service objectives) from the commercial ones. However, the experiment has been only partially successful. There is more competition, more local content in prime time and lower costs, but also less diversity in programming and more viewer dissatisfaction. Lealand Geoff, 'Regulation-what regulation? Cultural diversity and local content in New Zealand television', *Media International Australia: Incorporating Culture and Policy*, 95, 2000, pp. 77–89.
40. Enrique Bustamante, 'Contenidos de la televisión digital y retos de la política audiovisual europea', *Cuaderns del CAC*, 2, 1999, pp. 20–30.
41. In the UK, the BBC is digitalizing its archive in order to offer 'all their content' ranging from Beatles recordings to documentaries on a file-sharing service. In summer 2003, the BBC's Director-General announced plans to embrace Napster-style file sharing to make its archives free for licence payers. See John Naughton, 'Well done, Greg, you have just earned the BBC

the license fee', *Observer*, 31 August 2003, http://media.guardian.co.uk/broadcast/comment/0,7493,1032352,00.html. Also Danny O'Brien, 'Auntie's digital revelation', *Guardian*, 28 August 2003, http://media.guardian.co.uk/bbc/story/0,7521,1030286,00.html.

42. See: www.internetv.com and http://wwitv.com/portal.htm. Both webpage services offer access to traditional TV content such as the German 24-hours news channel NTV, or the BBC news. In addition they provide access to movies, which are viewable only upon subscription.
43. At a rate of 2Mbps and 4Mbps.
44. *ebiscom* has the advantage that no cable TV is available in Italy, thereby creating an incentive for viewers to migrate to their services as it allows much more choice than DTV via set-top boxes, because it makes a wide range of Internet services available. A demonstration of this in the 'Internet House', www.casacomoda.it/english/home.htm created by Cisco to give a flavour of the range of services that Fastweb could enable. Internet House is a real Milanese apartment showing commercially available products and services that work with Fastweb.
45. Robert Pepper, 'Regulatory concerns', in Eli Noam, Jo Groebel and Darcy Gerbarg (eds), *Internet Television*, Lawrence Erlbaum Associates, Mahway, NJ, 2004.
46. Richard Naylor, J. Cornford, S. Driver and D. Gauntlett, 'The BBC goes online: public service broadcasting in the new media age', in David Gauntlett (ed.), *Web.Studies-Rewiring Media Studies for the Digital Age*, Arnold, London, 2000, pp. 137–48.
47. Tarlach McGonagle, 'Changing aspects of broadcasting: new territory and new challenges', *IRIS plus*, Issue 10, 2001.
48. Bernd Holznagel, 'The mission of public service broadcasters', *International Journal of Communications Law and Policy*, 5, 2000, pp. 1–5, at p. 4.
49. This has been confirmed at the EU level by: Resolution of the Council and of the Representatives of the Governments of the Member States, meeting within the Council of 25 January 1999 concerning public service broadcasting of the European Union.
50. Ithiel de Sola Pool, *Technologies of Freedom: On Free Speech in an Electronic Age*, Belknap Press, Cambridge, 1983.
51. James S. Fishkin, *The Voice of the People*, Yale University Press, New Haven, 1997.
52. For example, Lessig, *op. cit.*
53. Jeremy Rifkin, *The Age of Access: The New Culture of Hypercapitalism where All of Life is a Paid-for Experience*, Tarcher/Putnam, New York, 2000.
54. Daniel Bell, 'The year 2000: the trajectory of an idea', *Daedalus: Journal of the American Academy of Arts and Sciences*, 96, 1967, pp. 639–51.